



**unido at work > selected stories from the field**



UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

**unido at work** > selected stories from the field



## making a difference

We are all familiar with the transformation process that is taking place in UNIDO. It has been recognised by donors, the UN System and of course by the developing world. This achievement and the collaborative effort it represents have been well documented in *Reforming the UN System: UNIDO's Need-driven Model*.

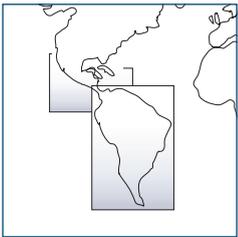


Now its time to take a field trip and have a look at some of our activities, where in our quest for sustainable industrial development, we have made an impact on the reduction of poverty and marginalization. We are a small organization and the challenges are immense, but we do make a difference. Working in partnership with others makes the difference bigger. Ultimately, it is in the field, in the transformation of the day-to-day life of ordinary people, where the result of our work has to show.

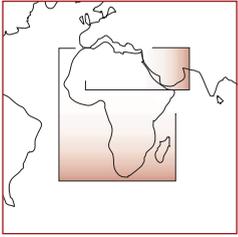
I do not believe that the progress of an international community can be judged on its ability to create wealth where there is enough, and this is what we have been seeing over the last years.

The progress of an international community should be judged on its capacity to provide enough where there is too little and I am absolutely sure that the work of UNIDO will help member states find a very useful and relevant tool to achieve that.

Carlos Magariños > Director-General



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unido at work > **vienna headquarters**



**nicaragua**

> clusters: competing and cooperating

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> unido/eclac footwear partnership

**ecuador**

> top - class chocolates

**central america**

> clean technology



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**> latin america and the caribbean**





## > clusters: competing and cooperating



unido at work > nicaragua

### > situation before

*Small and medium-sized enterprises (SMEs) frequently experience difficulties in achieving economies of scale and maximizing efficiency with limited resources and capacities. Against a backdrop of economic liberalisation, small enterprises in Nicaragua are attempting to compete, mainly by offering low wages and using cheap raw materials. As a result, their production and quality standards tend to be low and there is little product diversification. Under these circumstances many enterprises are forced into bankruptcy whilst others barely survive with very narrow profit margins and no growth. The ability of Nicaraguan SMEs to contribute to poverty alleviation and job creation has therefore been limited.*

*This UNIDO project is aimed at creating a basis for optimal mobilisation of skills, resources and capacities in the small and medium-sized industrial sector in Nicaragua within the framework of clusters and networks.*

### > situation after

As the project evolves, SMEs are being made aware that competitiveness can be achieved by working together and adopting joint strategies on issues such as procurement, common production facilities, marketing, training and accessing financial services.

Networking permits complementary use of resources and specialization, reduces production costs and improves quality levels within enterprises. The project has supported cooperation among enterprises including networks of producers, linkages between small and larger enterprises and the organization of regional clusters in cooperation with local institutions. Associations, cooperatives and groups of tanners, metalworkers, handicraft producers, woodworkers and dairy product manufacturers have been formed. This has enabled most of the participating enterprises to achieve better performances than those of similar enterprises in the same sector.

In many cases, profits were increased, losses could be limited or offset and environmental damage was reduced. Cooperation with larger enterprises has improved market access and profitability of SMEs and facilitated their technological upgrading.



<b>donors</b>
> austria

### concrete results

- Creation of 36 SME networks involving over 300 companies
- Development of 13 supplier networks between SMEs and larger companies
- Design of methodologies to promote SME networking, linkages with larger firms and clusters
- 23 local network brokers from eight local institutions trained to ensure sustainability and diffusion of project impact
- Promotion of Nicaraguan Dairy Sector Chamber (CANISLAC) involving farmers, small producers and agro-industrial cooperatives and large milk production factories

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## >top - class chocolates

unido at work >ecuador

### > situation before

*Ecuador, the sixth largest producer of cocoa in the world, has among the best quality grades available on the market. UNIDO, the Government of Norway and the non-profit foundation Ce-Mujer, saw an opportunity to increase the "value-added" of the cocoa, enhance the role of women in the industrial development of Ecuador and address the problem of high female unemployment in the country.*



### > situation after

Since late 1997, some forty women have come to master the craft of the artisan chocolatier using state-of-the-art equipment and recipes from Belgium and the United States. The factory is now entering its third year of self-sufficiency and shows considerable potential for expansion to export markets.

La Carmela's top-class chocolates and seasonal products are sold widely in hotels, airports and tourist shops, in the company's own boutique in Quito and directly from the factory. The income flows back into the enterprise or is used by Ce-Mujer to foster other employment or entrepreneurial opportunities for women. Women with no previous skills are now more professionally self-confident, independent and can make a vital contribution to the family income and their children's education. They are also now in a position to independently pursue other professional opportunities and fully qualified to work in trans-national companies or operate their own businesses. The project can serve as a model for other countries, not only in the field of manufacturing of fine chocolate products. The concept of La Carmela as an enterprise can be used whenever small-scale production units can be internationally competitive, high quality raw materials are available and there is a need to integrate the work of skilled women into the productive system.

donors

>norway

concrete results

- Creation of a fully equipped and staffed production unit for fine handmade chocolate products with a daily capacity of at least 80 kg
- Inter-regional transfer of skills through the provision of staff training by an established Brazilian chocolate producer
- Design and production of first-class marketing materials
- Training of at least 40 women employees in a highly demanded area of activity who are now in a position to conduct their own business.
- Employment of a full-time team of 7 women with reserve part-time staff for increased seasonal demand

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## > clean technology

unido at work  
> central america



### > situation before

*In the mid 1990s, countries in Central America experienced many political changes, which led to increased industrialization accompanied by a corresponding growth in industrial pollution. The quality of water and air had deteriorated and the discharge of toxic materials had increased to levels that raised considerable concern. In addition, the open market economy placed industry in Central America under pressure to improve its environmental and overall performance and comply with international environmentally sound production standards and trade regulations. In the region as a whole there was limited knowledge of or access to Cleaner Production (CP) technologies and a lack of policies, demonstration projects and local specialists to promote or back up enterprises in their efforts to introduce CP.*

### > situation after

In 1998 UNIDO started a Central American Network of CP Centres (CPCs) in Costa Rica, El Salvador, Guatemala and Nicaragua. The activities of these four CPCs cover in-plant assessments, CP training, information dissemination, policy advice to governments and promotion of CP technology investments.

The Centres act as independent national focal points for CP, performing a catalytic role in improving the environmental and economic performance of industry. At the regional level, they actively reinforce local co-operation and foster the exchange of CP expertise and information.

To date, savings of over US\$0.8 million are accruing annually to companies through reduced energy, water and raw materials consumption following the implementation of CP processes.

#### donors

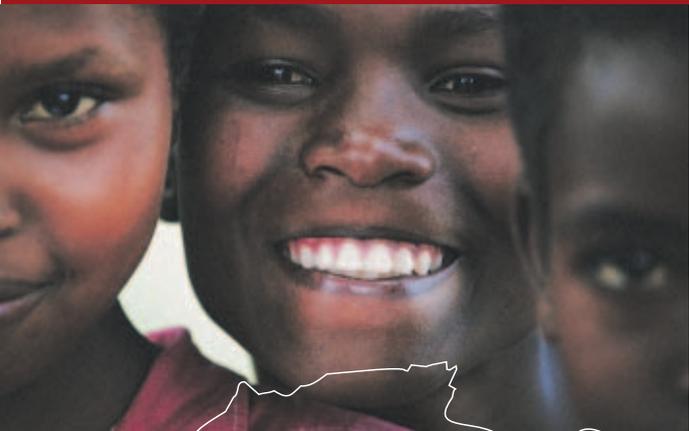
- > austria
- > switzerland

#### concrete results

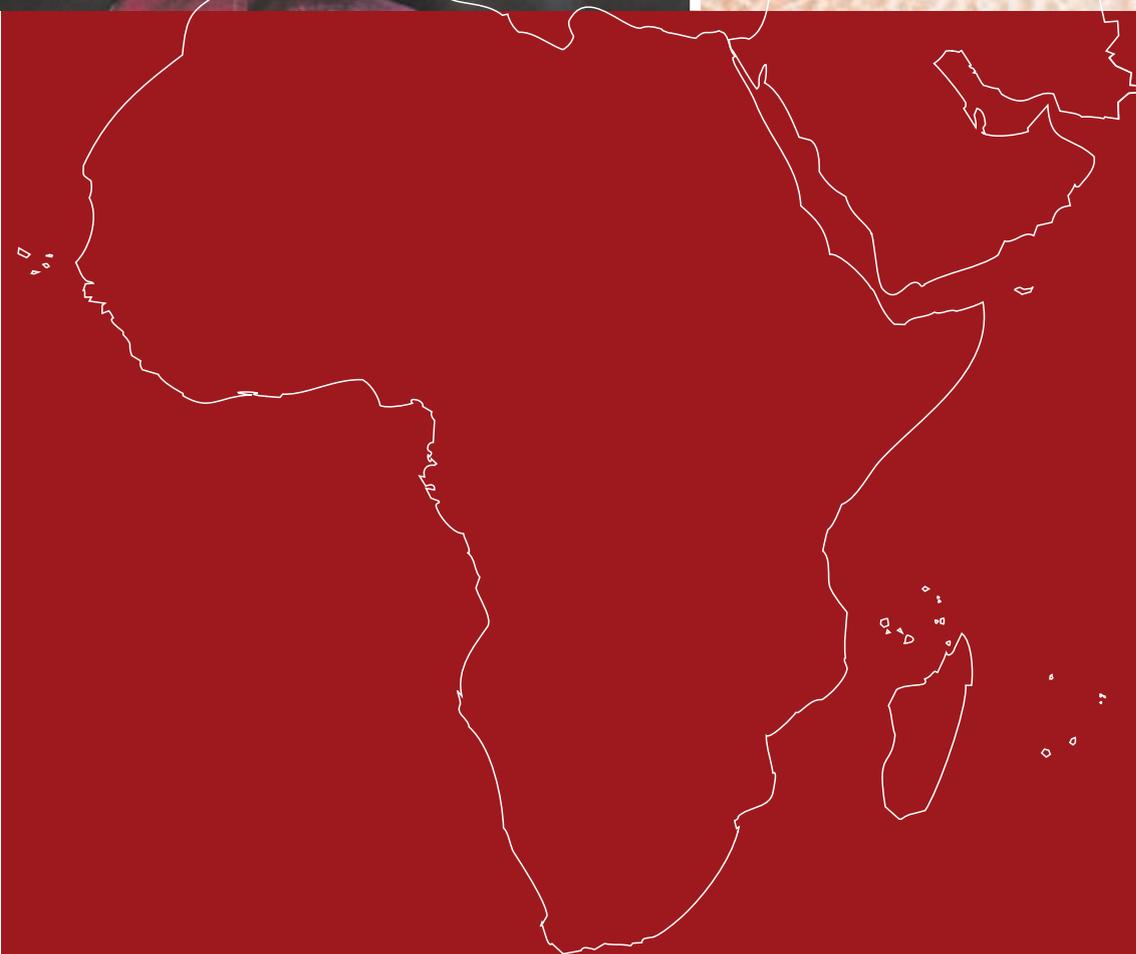
- 152 trained CP experts
- 54 in-depth CP assessments in companies from the following sectors: food production, agro-industry, plastics, metal finishing, tanneries, printing industry and tourism
- Short-term CP assessments in more than 220 companies
- National and regional CP policy working groups

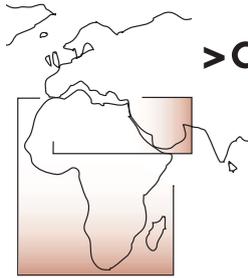
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- tanzania** > investment climate change
- sub-saharan africa** > for export
- lake victoria** > good fish
- gulf of guinea** > clearing the coast
- bahrain** > developing entrepreneurs
- tunisia** > business partnerships
- algeria** > facing competition



unido at work  
> **africa and the arab region**





## > attracting the private sector



unido at work > burkina faso

### > situation before

*Burkina Faso is a landlocked country in West Africa. Industry accounts for only 20% of the country's GDP and 45% of the population lives below the poverty line. Small and medium-sized enterprises are confronted with a technological vacuum and have virtually no access to markets and new technologies. Since 1991, the Government of Burkina Faso, supported by international institutions, has been trying to implement a new economic strategy based on the structural adjustment of the country and focused on liberalization of the economic environment and private sector development. An Integrated Programme initiated by UNIDO will contribute to building institutional capacities for investment promotion. As part of this broader initiative, UNIDO coordinated the organizing of a forum to draw the attention of the international investment community to opportunities in the country.*

### > situation after

The Forum "Invest in Burkina Faso 2001", organized by UNIDO, the Government of Burkina Faso and the Centre for Development of Enterprise (CDE) in Brussels, enabled the country to promote its image directly to companies from America, Europe, Africa and Asia. 6000 companies received an information package on the business and investment environment in Burkina Faso and the investment promotion forum and a specific web site was created to target potential investors. The Forum took place in June 2001 and facilitated individual meetings between businessmen from Burkina Faso and foreign investors and discussion of specific investment projects. UNIDO in cooperation with the Burkinabe General Department of Industrial Development (DGD) and the Burkinabe embassies used its network of Investment and Technology Promotion Offices (ITPO) and field representatives to distribute information about the country.

Promotional tours took place in France, Belgium, Luxembourg, UK and Canada to promote Burkina Faso as an investment destination and encourage participation at the Forum.

#### donors

> austria  
> unido

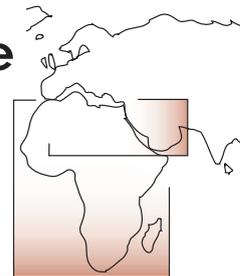
#### concrete results

- "Invest in Burkina Faso 2001" was attended by 123 local companies and 106 foreign companies Belgium, Canada, France, Morocco, and the United Kingdom
- 22 international financial and other institutions participated in the Forum: World Bank, African Development Bank, European Investment Bank, European Union and the French Development Agency
- Some 600 meetings were organized using SHARE software developed by UNIDO EXCHANGE
- 104 projects were identified in the agro-industry, transport, textiles, and construction sectors
- Loans from Spanish companies to upgrade technology of Burkinabe enterprises are under negotiation
- Four joint-ventures and two factory projects with Belgian and French companies are in progress or under discussion
- Creation of "Burkina Initiative", an investment club in Ouagadougou, the capital of Burkina Faso

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## > investment climate change



unido at work >tanzania

### > situation before

*Tanzania's profile as an investment location among the international business community needed attention. A number of pressing issues hindering the flow of investment into the country were identified and analysed. These included contradictory government policies and regulations for investors, complicated and non-transparent investment clearance processes, lack of information to facilitate investment decisions, an excessively complex taxation regime and weak infrastructure.*

### > situation after

During the three years of implementation of the Integrated Programme for Tanzania, the core objective was to improve the investment environment in the country. In particular, various activities related to national policies were coordinated and synergies between them were exploited. Sub-sector profiles were formulated and investment opportunities identified with special emphasis on the food, leather and textile sectors. Environmental assessments were used in the screening of investment proposals.

Cooperation among local stakeholders was given an important momentum through the establishment of the Tanzania National Business Council. UNIDO drafted new Investment Regulations, recommended changes to the existing Investment Code and organized a workshop bringing together all national stakeholders in investment issues. As a result of the workshop recommendations, an inter-ministerial Investment Steering Committee (ISC) has been established to resolve problems at the highest level of Government and initiate the legal changes necessary to improve the investment environment. In addition, the Government has raised the status of the Tanzania Investment Center (TIC) and its ability to drive national investment promotion policy by doubling its budget allocation and enhancing its capacities with additional staff.

The investment project profiles prepared with the TIC were promoted through the UNIDO international network of Investment Technology Promotion Offices (ITPOs), which also hosted TIC staff, providing them with training and facilities for promotion of their projects.

To strengthen the information side of the promotion efforts, UNIDO has prepared sub-sector profiles for leather and textiles sub-sectors and assisted TIC in updating the Investment Guide to Tanzania as well as upgrading their computer systems.

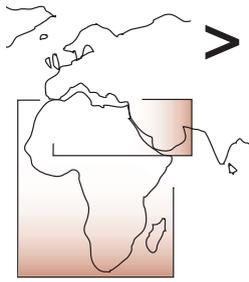
#### donors

>denmark

### concrete results

- Expressions of interest in projects received from 27 companies in France, India, Japan, Malaysia, the Netherlands and UK
- A very successful country tour organized by ITPO France has generated interest in Tanzania among large sections of the French business community
- Support programme planned for TIC to organize meetings between prospective partners and provide pre-investment assistance such as technology transfer and joint venture agreement formulation, negotiation mediation, feasibility studies, accessing financing, etc. ■ ■ ■ ■

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unido at work  
 > sub-saharan africa,  
 kenya, ethiopia

**> situation before**

*Most of the nine countries of Sub-Saharan Africa (Ethiopia, Kenya, Malawi, Namibia, Sudan, Uganda, United Republic of Tanzania, Zambia and Zimbabwe) had excellent potential as major local producers and exporters of semi-processed leathers and finished leather products. The sector was using renewable resources, appropriate technologies and skills and a low-cost workforce.*

*Some countries, such as Ethiopia, had in fact already established an international reputation for leather products. Despite these advantages and the strong growth in the local markets for footwear and leather goods, a number of internal and external problems hindered the development of the industry.*

*Specific problems included low-quality hides, skins, finished leathers and end products as a result of poor slaughtering and handling conditions, obsolete tanning, finishing and production technologies and a general lack of management, design and marketing expertise in the sector. Other problems were associated with the overall business environment and included the lack of competitive financial services for companies, poor transport and communications infrastructure and tariffs on imported raw materials for the industry.*

**> situation after**

A number of both country-specific and regional programmes for the **Sub-Saharan Leather industry** were launched by UNIDO in collaboration with the United Nations Development Programme (UNDP), the United Nations Food and Agricultural Organization (FAO), International Trade Centre (ITC) and the Industrial Development Decade for Africa (IDDA).

The Regional Africa Leather and Footwear Industry Scheme (RALFIS) aimed at addressing some of the problems facing the sector and assisting companies region-wide to adapt their production operations to exploit market opportunities.

Following the completion of the Scheme, national leather industry associations are now operating in all nine Sub-Saharan countries and some are already providing considerable assistance to their members.

All national associations are full members of the Eastern and Southern Africa Leather Industries Association (ESALIA) that is also cooperating with such reputable counterparts as the Confederation of National Associations of Tanners and Dressers of the European Community and Italy's National Association of Tanners. ESALIA has recently established a single leather system in the region with the Common Fund for Commodities.

donors
> regional africa leather & footwear industry scheme (RALFIS)
> austria
> czech republic
> denmark
> finland
> germany
> italy
> japan
> the netherlands
> switzerland
> unido
> IDDA





This Programme had a highly visible impact in the creation of new employment and investment opportunities. The whole leather sector is benefiting from its existence and the overall reputation of the African leather industry is improving both within the region and abroad.

The project has created additional employment in the industry – benefiting rural women in particular – and opened up new markets and opportunities for Kenyan producers.



In **Kenya**, at the request of the Kenya Footwear Manufacturers Association, UNIDO assisted in the establishment of a Kenyan Training and Production Centre for the Shoe Industry. This centre offers specialized training courses to manufacturers and support services to small and medium-sized producers. Course fees are made as attractive as possible, being set at levels which will recover center operating costs.

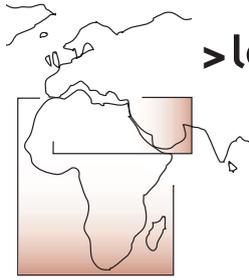
In another initiative in **Ethiopia** the local Rash Dashen Shoe Factory underwent an upgrading programme to raise its quality and productivity levels.

As a result of the improved manufacturing processes, workmanship and design standards of the company, its capacity had to be increased to meet the growing demand for its products on export markets.

concrete results

- Expansion and strengthening of network of leather industry associations and creation of Revolving Fund Operations (RFO) for direct support to industry
- Technical training was provided to over 2,000 persons in tanning, finishing, product development etc .
- Creation of Eastern and Southern Africa Leather Industries Association
- Introduction of a quality grading and pricing system for raw hides and skins
- Total benefits of US\$ 2,327,000 accrued in the hides and skins areas due to improved quality and collection following an initial investment of approx. US\$ 1 million in the nine participating countries
- Increased production of crust and finished leather following project support to upgrade tanneries
- Assistance was provided to upgrade a number of manufacturing operations to industrial-scale production and serve as model footwear plants (for example, Ethiopia: Rash Dashen; Kenya: Sana Shoes; Zimbabwe: Superior Footwear)
- Creation of two component factories, in Zimbabwe and Kenya to supply very small-scale leather products manufacturers
- Cleaner technology options were introduced in 11 tanneries
- Guidelines and recommendations on gender issues were prepared for the sector and training provided to over 150 women
- Shoe exports valued at over US\$ 1 million were generated to Italy, France, the United Kingdom, Denmark and Spain as a result of the Programme

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## > lake victoria - good fish



unido at work >uganda,  
kenya, tanzania

### > situation before

A major fish industry had developed around Lake Victoria, shared by Tanzania (51%), Uganda (43%) and Kenya (6%), with revenues from fish exports amounting to over US\$ 200 million per year. Over half a million people were earning their living from the fishing and processing of Nile perch from the lake and local supplier companies were also deriving considerable benefits from the fish industry. In 1999, after suspected fish poisoning, an EU export ban was imposed on Lake Victoria fish.

The three countries – in particular Tanzania and Uganda - suffered a tremendous loss. Fish exports from Uganda alone dropped dramatically by 50% in value between 1996 and 2000 and exports from Tanzania fell by almost the same level in 1999.

In addition to the lost export earnings, one-third of the some 200,000 persons employed in the fishing industry lost their jobs.



Many others saw their earnings fall to less than one-third of their normal income. Several fish factories either closed or were operating at as little as 20% capacity.



### > situation after

An integrated remedial approach and strategy laid the ground for a reliable fish safety assurance system. Steps were taken in parallel to improve the organizational and regulatory framework for the industry and to strengthen the capacities of fish inspection services, technical support institutions and in the private sector, at all stages of the industry from fishing to factory. Particular emphasis was placed on the establishment of working tools, guidelines and methodologies (fish inspection manual, code of practice, inspection guides and records, etc.).

#### donors

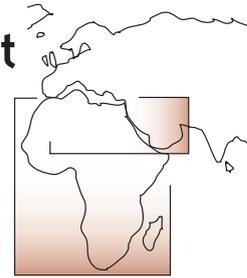
- > austria
- > denmark
- > italy
- > japan
- > norway
- > united kingdom
- > unido

#### concrete results

- Major upgrading of fish safety and quality assurance systems at all levels of the production chain
- Role of central regulatory authorities streamlined and strengthened
- fish inspection system implemented in accordance with international requirements
- technical support institutions enhanced with newly formulated working guidelines and tools
- national experts trained
- GHP (Good Hygiene Practices) and HACCP (Hazard Analysis Critical Control Points (HACCP) implemented on boats, landing sites and in processing plants to ensure safety of exported fish products
- EU ban lifted on all counties by the end of 2000 and Lake Victoria fish has regained its EU market share and is expanding to new markets (e.g. USA)

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## >clearing the coast



unido at work  
>gulf of guinea



### > situation before

Over the last 40 years the countries bordering the Gulf of Guinea (GoG) - Benin, Cameroon, Côte d'Ivoire, Ghana, Nigeria and Togo - have experienced rapid increases in population, industrialization and urbanization. Inadequate treatment of sewerage and wastewater has contributed to a significant degradation of the natural resources and biodiversity of the coastal and international waters of the GoG and adjacent freshwater catchment areas. Problems in the region include: erosion and siltation; environmental damage from pollutants; waste; increasing use of fertilizers and pesticides; oil and chemical pollution; uncontrolled discharge of human and domestic waste into the ocean; no minimum industrial pollution control measures in place; and no information available on the overall state of the environment of the GoG as an integrated ecological system

### > situation after

Regional capacity in conservation has been enhanced significantly and progress made in establishing regional and national water quality norms, productivity and fisheries assessment and management capabilities have improved, based on standardised methodologies. Support for regional collaboration at senior ministerial level has increased.

Environmental awareness has been raised both among the coastal communities and in cities and villages. The original six-country consortium has now developed into a sixteen-country partnership in a successor project entitled the Guinea Current Large Marine Ecosystem to combat the degradation of coastal areas and depletion of living resources.

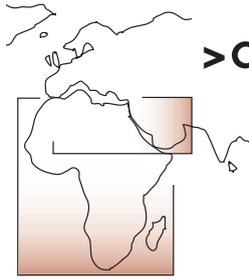
concrete results

■ 900 participants in 40 technical assistance and capacity building workshops ■ Regional network of 300 technical experts ■ National Steering Committees created ■ Integrated Coastal Area Management Programme adopted ■ Regulatory policy to conserve fisheries adopted, closed and open fishing seasons introduced ■ Mangrove reforestation programmes initiated ■ First fish bottom trawl survey in completed in 1999 using a regional vessel ■ Low craft coastal erosion prevention technologies transferred from Ghana to Benin ■ Cost-effective waste stock exchange management programme for municipal and industrial solid waste established in Ghana which will be extended to the other GEF recipient countries ■ Country master plans formulated for novel low-cost a technology options for sewage treatment, waste sorting etc. ■ New regional effluent regulation and standards created for industries in the coastal area ■ Regional coordination centre established in the Centre for Oceanographic Research in Abidjan, Côte d'Ivoire ■ Accra Declaration adopted to institutionalize a new ecosystem-wide paradigm consistent with the GEF Operational Guideline for joint actions in environmental and natural resources assessment and management in the GoG ■■■■■■■■

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#### donors

> benin  
> cameroon  
> ghana  
> côte d'ivoire  
> nigeria and togo  
> global environmental facility (GEF)



## >developing entrepreneurs



unido at work >bahrain

### > situation before

*The Government of Bahrain recognised a need for a local institution to develop and strengthen the indigenous capacities of entrepreneurship development and investment promotion. They wished to make the country a regional centre for education in the area of private sector development.*

A series of training programmes on entrepreneurship development and investment promotion were carried out and helped establish a cadre of well-qualified professional trainers and contributed to new enterprise creation in the form of small and medium-sized enterprises (SMEs) and partnerships.

### > situation after

In 1998, Bahrain was identified as the Regional Focal Point Country for the Arab Region for the Entrepreneurship Development Institute (jointly sponsored by UNIDO and the Government of India).

In February 2001, the Arab Regional Centre for Entrepreneurship and Investment Training (ARCEIT) was formally opened. It sees its role in the region as a repository of knowledge and information on industrial investment issues, a forum for the exchange of experience and insights into entrepreneurship and organizer and supporter of entrepreneurship development and investment promotion initiatives. It has already selected focal point institutions in Jordan, Lebanon, Palestine, Sudan and Syria. Its programmes to date have benefited entrepreneurs and professionals from: Bahrain, Egypt, Jordan, Kuwait, Lebanon, Qatar, Saudi Arabia, the Sultanate of Oman, Sudan and the Palestinian Authority.

In 1999, capacity-building activities were initiated at the University of Bahrain and the Bahrain Training Institute.

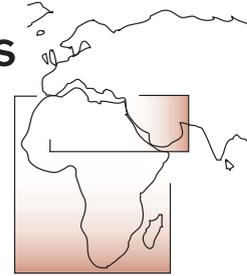
donors
> india
> bahrain

### concrete results

- Completion of eight-week Entrepreneurship Development Programme on planning and management of small businesses for 35 Bahraini entrepreneurs
- A course on Marketing Management
- Ten SMEs created and others in the process of establishment
- Seminar on Industrial Project Preparation and Appraisal for 22 representatives from the public sector, financial institutions and consulting companies
- Growth-cum Counselling Programme for 11 entrepreneurs and 3 business counsellors
- Programme on Industrial Project Identification, Formulation and Screening for 16 development officers
- Trainers Training Programme on New Enterprise Creation for 17 professionals in entrepreneurship development

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## > business partnerships



unido at work >tunisia

### > situation before

The Government of Tunisia was concerned to diversify the source of incoming investment by attracting investors from outside Europe and in particular, from Asia and North America. In its initiative, the Government is placing emphasis on investment into higher-value added industry sectors, such as automotive components, telecommunications and information technologies. To date, the presence of Asian companies in Tunisia has been minimal and there is little awareness of Tunisia as an investment destination among the Asian business community. The need for an appropriate platform to highlight business and investment opportunities in Tunisia to Asian business executives and encourage partnerships between them was identified as an immediate priority.

### > situation after

In cooperation with the Foreign Investment Promotion Agency of Tunisia (FIPA), UNIDO singled out India, Japan, Malaysia and Singapore as potential sources of investment for Tunisia. The objective of the work undertaken was to inform Asian industrialists on the business and investment climate in Tunisia and on specific areas of potential interest to foreign investors.

UNIDO established networks of governmental agencies, industry associations and international site location consultants to distribute information about the country and organized a number of regional seminars to promote Tunisia and the Carthage Investment Forum directly to business executives.

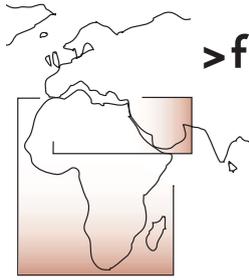
donors

> unido

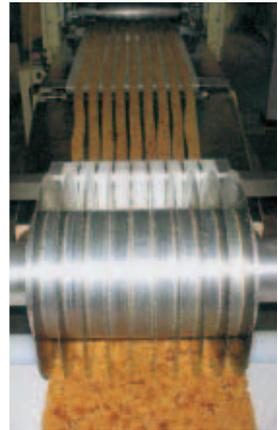
concrete results

- The Carthage Investment Forum was attended by 44 Asian delegates representing 28 companies, 4 government agencies and one industry association from India, Japan, Malaysia and Singapore
- Over 70 individual meetings took place and a number of business transactions were concluded between Asian business executives and Tunisian companies before the end of the Forum
- A database of almost 1,500 Asian companies was created for future FIPA promotional efforts
- Three interested companies identified for concrete business projects in Tunisia

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## >facing competition



unido at work >algeria

### > situation before

*Algerian industry had for many years been protected from international competition. As part of the liberalization of its economic policy, the Government adopted several structural adjustment reforms prior to entering into negotiations for the conclusion of the Euro-Mediterranean Association Agreement.*

*The success of the liberalization policy will depend largely on Algeria's ability to improve the competitiveness of its industries, promote small and medium-sized enterprises (SMEs) and upgrade the programmes and services of its investment promotion institutions.*

### > situation after

In collaboration with the Algerian authorities, UNIDO developed an Integrated Programme with five components, including the design of a National Upgrading Programme to address specific problems affecting industrial performance in Algeria.

These include under-utilization of capacities, obsolete production facilities, low-quality products and inadequate cost control, weak management and marketing expertise and lack of government capacity to coordinate the industrial upgrading programme.

**The first upgrading activities are underway with approximately \$2,000,000 in funding from the United Nations Development Programme (cost-sharing with the Governments of Algeria, Italy and UNIDO seed capital)**

donors

>italy

concrete results

- Preparation of a National Programme for Upgrading and creation of a Fund for Development of Competitiveness
- Launch of National Programme for Upgrading at national conference
- Organisation of 2 regional seminars to present the Programme to SMEs
- Establishment of The Industrial Upgrading Unit and provision of staff training
- Preparation of diagnostic and action plan for upgrading capacities of 3 industry support institutions: technical centre for textile and leather industry, institute of productivity, legal metrology bureau
- 20 companies assisted in the preparation of strategic diagnostic, upgrading programmes and implementation of immaterial investments
- Organization of 6 seminars with over 200 participants in Algiers to strengthen national capacities in the field of quality and production management and upgrading technologies
- Organization of 4 study tours to learn from foreign experiences in the field of industrial upgrading

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**kazakhstan**

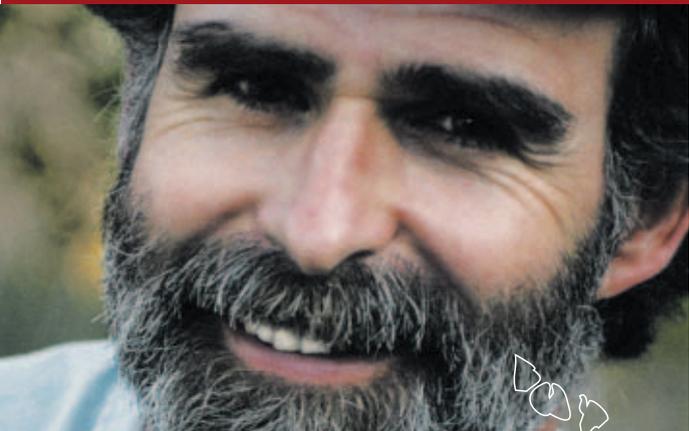
> atyrau business development centre

**uzbekistan**

> environment-friendly enterprise

**danube river basin**

> gef in the danube basin

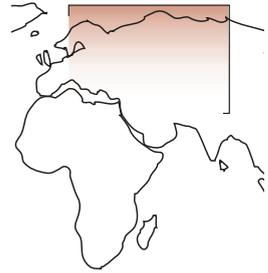
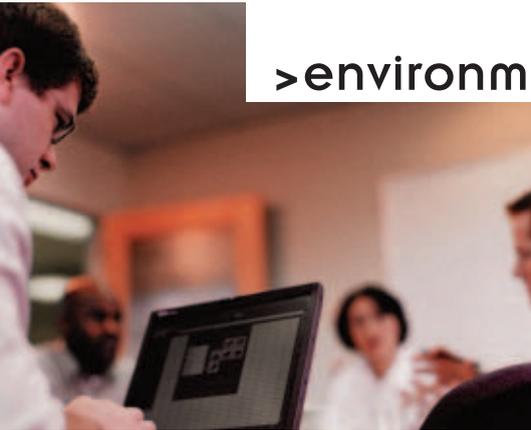


unido at work  
> europe and nis





## >environment - friendly enterprise



unido at work >uzbekistan

### > situation before

*A significant number of industrial enterprises in Uzbekistan were operating with outdated technologies and working practices, adversely affecting both the environment and the individual companies' performances. The concept of cleaner production had not been introduced to Uzbek industry and relevant government agencies. Against a background of tight corporate finances, companies needed to be able to meet the challenge of upgrading facilities to stimulate productivity, restore and maintain profitability whilst reducing pollution and other health and safety risks.*

*To ensure the sustainability of the work undertaken by UNIDO in Uzbekistan, the basis for the formulation of a National Cleaner Production Programme had to be provided.*

### > situation after

The concept of cleaner production was introduced to Uzbek industry and relevant government agencies by demonstration projects in selected industries and training a group of local specialists in cleaner production measures. The enterprises were assisted in identifying their cleaner production options and their practical implementation for the benefit of both the enterprise and the environment. International experts provided on-the-job and classroom training to local specialists in the technical skills required for the continued implementation of cleaner production practices.

The results of the cleaner production measures implemented in Uzbek enterprises clearly confirmed the potential for improving both the economic and environmental performance of the companies. It also highlighted the overall benefits for the Uzbek economy and society of wide dissemination of industrial cleaner production methods, particularly in view of the general scarcity of financial resources in the country.

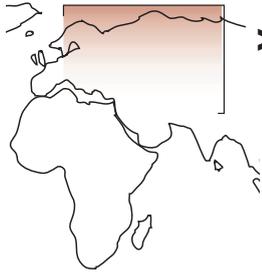
#### donors

>japan

### concrete results

- Eight demonstration projects were conducted in seven selected enterprises throughout Uzbekistan, yielding an overall economic benefit for participating enterprises of five times UNIDO's project budget expenditure
- air emissions, waste generation and water consumption in production processes substantially reduced
- the National Environmental Plan of Action incorporates promotion of cleaner production techniques
- A National Cleaner Production Centre in the process of being established

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## >gef in the danube basin

unido at work  
>danube river basin

- bulgaria,  
croatia,  
hungary,  
romania,  
slovakia



### > 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. GEF provided US \$1 million in addition to UNIDO's US \$150,000 to implement its Programme on Transfer of Environmentally Sound Technology (TEST), which aims at reducing the barriers perceived by enterprises to compliance with environmental norms. The Programme, started in April 2001, 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.

### > situation after

The UNIDO TEST Programme was used to select 18 companies 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 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.

#### donors

>global environment facility (GEF)

#### concrete results

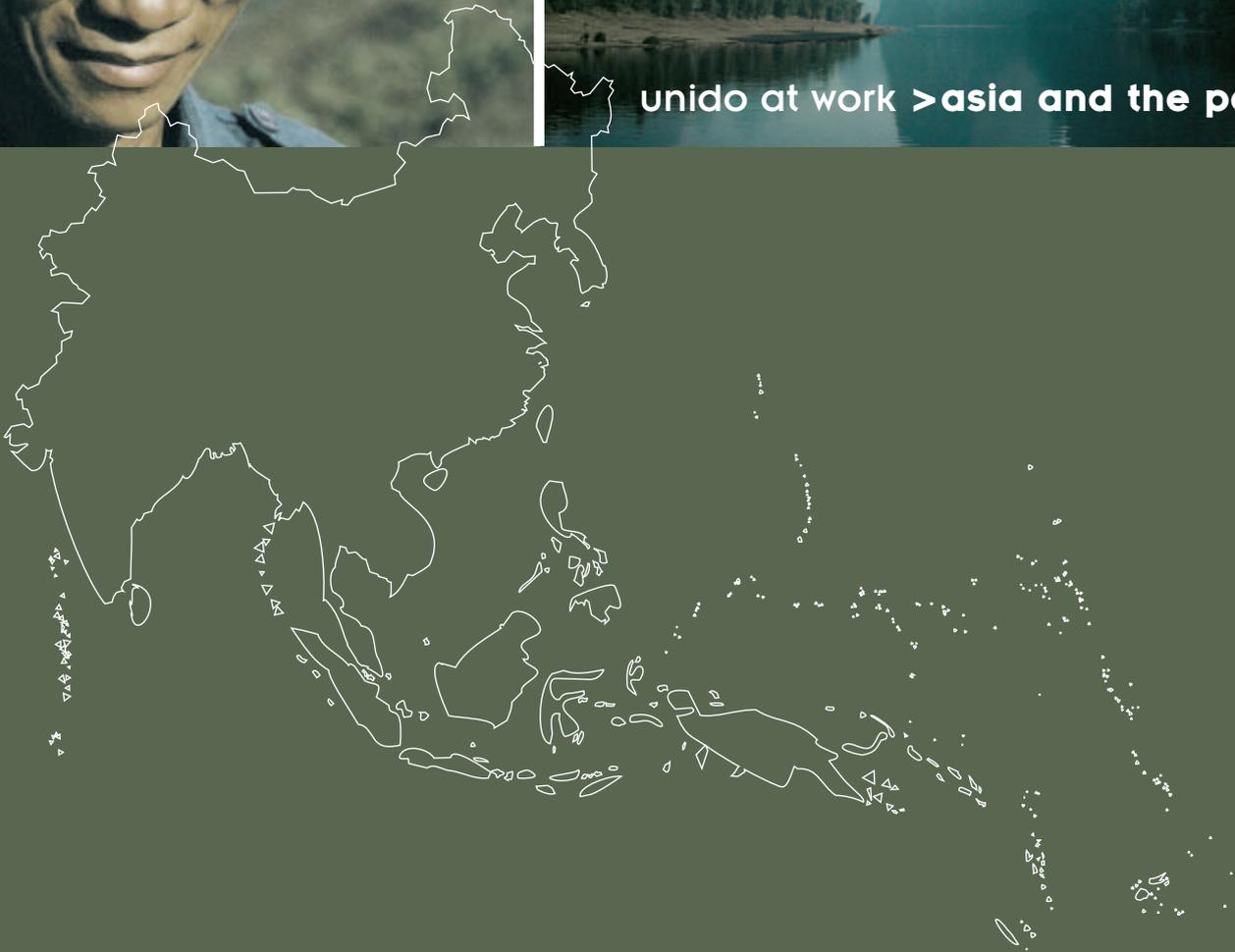
- National counterparts identified and initial programme implementation phase in process
- 18 enterprises identified and formally committed to undergoing TEST Programme
- Preliminary environmental reviews undertaken in 18 selected enterprise
- Environmental Management Systems seminar
- Cleaner Production assessment initiated in the 18 selected enterprise

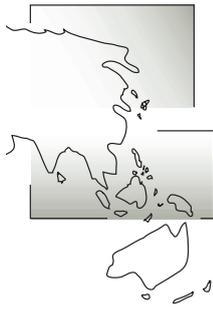
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- viet nam** > urban environment strategies
- viet nam** > sme policy support
- india** > supply chain upgrade
- china** > mapping sustainability
- asean** > pathway to excellence
- sri lanka** > removing trade barriers

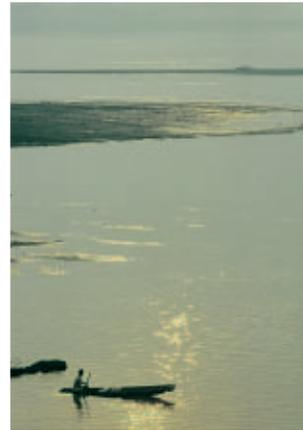


**unido at work > asia and the pacific**





## > urban environment strategies



unido at work > viet nam

### > situation before

*Viet Nam's acknowledgement of the importance of environmental protection as a key issue for the well-being of the population is reflected in recent economic policies favouring light and less pollutant - intensive industries and the need for decentralization of environmental regulatory responsibilities. The proliferation of smaller-scale manufacturing activities, rapid growth in urban areas with an inadequate infrastructure and increased demand for energy and raw materials, required a reorientation of environmental protection efforts in the country. In particular, Ho Chi Minh City, the largest city in Viet Nam with a concentration of some 30% of the country's industrial output, needed to address several environmental issues: the high level of industrial pollution; poor water quality from inadequate sewerage and waste disposal facilities; and deteriorating air quality as a result of rapidly increasing motorized transport in the city. There was a need to develop the environmental management and monitoring capacities of the Department of Science, Technology and the Environment (DOSTE).*

### > situation after

Local staff developed a better understanding of environmental management and the skills necessary to resolve environmental issues of immediate local concern.

Their ability to assess environmental impacts of developments and formulate appropriate environmental strategies was also enhanced through technical training. Recommendations were made on possible cooperative measures between Ho Chi Minh City and other surrounding urban centers to ensure that the overall environmental impact is addressed in all development projects in the region.

An Urban Environmental Management Plan, drawing on the earlier experience of the neighbouring Dong Nai province, will enhance project sustainability by providing a framework for identifying regulatory, policy and management issues, by defining clearly the role of DOSTE and other departments and by identifying specific implementation requirements for DOSTE.

#### donors

- > denmark
- > sweden
- > UN development programme (UNDP)

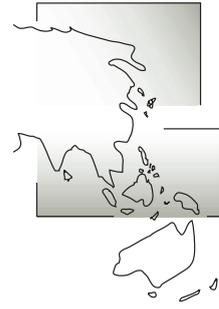
#### concrete results

- study tours for 55 staff members
- management training to 24 staff members from city agencies
- over 1,200 person weeks of technical training
- 11 groundwater monitoring stations and initiation of regular monitoring programme
- 4 air monitoring stations – regular monitoring reports now available
- environmental data center – first Environmental Report published 2000
- mechanisms for improved local environmental management
- partnership with other provinces to cooperate on region-wide water management

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## > sme policy support



unido at work >viet nam

### > situation before

*The important role of small and medium-sized enterprises (SMEs) in economic and social development was recognized when Vietnam shifted from a centrally planned to a market-oriented socialist economy. Nonetheless, the prevailing business environment with external constraints such as the transitional legal and administrative framework, scarcity of financial resources, intensifying competition and the internal constraint of inadequate company management expertise, continue to pose great challenges to SME development.*

*Despite the political willingness to foster SMEs, to date there has been no clear promotion strategy and a lack of effective support institutions. An assessment of the needs of SMEs and of the constraints faced by the Government and support institutions revealed an incomplete legal and regulatory framework, low general level of technology, inadequacy of SME training systems, poorly developed enterprise linkages (subcontracting) and weak capacity to prepare business plans.*

### > situation after

The project coincided with SMEs assuming a more prominent place on the agenda of decision-makers. Despite relatively limited resources, a broad range of activities was carried out in two fields: policy framework and business development services (BDS). The project was timely in providing assistance to the Government of Vietnam in the relatively new field of SME promotion. It led to a road map for policy actions and a forthcoming Government Decree on SME Support Policies and Structures (definition of the institutional framework: Private Sector Promotion Council and National SME Promotion Agency).

Regarding capacity and market development of BDS, the project triggered a shift in thinking on these issues in Vietnam towards state-of-the-art techniques. It contributed to the creation of a BDS market by fostering both demand and supply and to the promotion of cooperation and networking among partner institutions and a wide range of support providers.

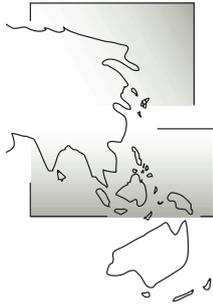
#### donors

>germany

#### concrete results

- The project achieved its objective to facilitate the development of an enabling environment for SMEs in Vietnam through
- Direct support: formulation of specific recommendations for the Government on improvements to the policy and regulatory framework
- Policy-level capacity building: strengthening of relevant policy bodies to plan, monitor and coordinate efforts in support of SMEs
- Service capacity building: strengthening selected public and private institutions to provide effective market-led business development services (BDS); creation of SMELINK, a network of BDS providers for SME's with 21 members in 8 provinces

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## >supply chain upgrade



unido at work >india

### > situation before

Major international car producers have already established production facilities in India. According to WTO agreements, the automotive components sector will be open for international competition within the next few years. The sector in India is characterized by a large number of small manufacturers (some 6000) with low-volume and poorly equipped production units. This has been an inhibiting factor on the evolution of effective linkages between component suppliers, resulting in a highly fragmented supply-chain for foreign automobile manufacturers. It was therefore of prime importance for the sector to increase the number of top-class small and medium-sized component suppliers.

In response to these challenges in India and other major markets, UNIDO launched an innovative approach to establish partnerships between major private actors (industrial corporations and civil society organizations) and developing country governments and institutions. In 1998/1999, UNIDO initiated the first business partnership between FIAT S.p.A of

Italy, the Automotive Component Manufacturers Association of India, the Automotive Research Association of India, the European Management School INSEAD, the Ministry of Commerce & Industry of the Government of India and the UK-based Prince of Wales International Business Leaders Forum.

### > situation after

Twenty SMEs introduced changes in their production facilities through specific shop-floor interventions, seminars, workshops and study tours on manufacturing and marketing techniques. After less than one year, this unique private / public sector undertaking has resulted in increased productivity, cleaner production methods, better use of technology and enhanced awareness of the need for constant improvement of standards. Seven SMEs participated in Equip-Auto 99, where they identified a number of European companies interested in sourcing arrangements. For India-based foreign automotive manufacturers, the benefits will accrue over time in gradually being able to more cost-effectively integrate their activities with domestic production capabilities and build up local supply chains. Consideration is being given to the replication of the programme in other countries.

donors
>india >Fiat S.p.A

### concrete results

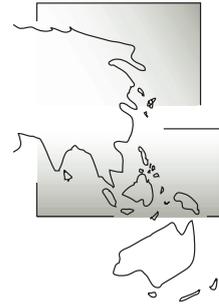
- 40% reduction in product throughput time by reorganizing work areas and production flow
- 75% reduction in die and cast changeover times on machines
- 25% improvement in delivery time for many products from the plastic and metal die sectors by adopting the single-minute die exchange principle
- 75% reduction in production lead-time by introducing detailed drawings and standard operating procedures
- 30% reduction in machine downtime through preventive maintenance practices

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商業

## >mapping sustainability



unido at work >china

### > situation before

Over the last ten years, the Chinese Government has been formulating and revising industrial policies in light of the rapidly changing international economic environment, particularly in terms of greater reliance on the market economy and participation in the global economy. However, the present industrial policies do not adequately take into account the serious environmental and regional balance (employment or unemployment) consequences of rapid industrialization, which is likely to continue in the future. It is essential therefore, to map out paths of sustainable industrial development that explicitly attempt to balance environmental, social and environmental concerns. The simultaneous pursuit of all three, while difficult, is a central requirement for moving towards sustainable development.

### > situation after

The project has developed an approach and methodology for more systematic estimation of the impact of trade liberalization on industrial competitiveness, employment and the environment in China. Development of the capacity of key government agencies to react to change is the major outcome of this project, which will be of benefit not only to the State Development Planning Commissions' Department of Development Planning, but also to the State Environment Protection Administration, the Ministry of Science and Technology, the Development Research Centre under the State Council, the State Information Centre, and the Energy Research Institute, in their evaluation and implementation of industrial planning and policies supportive of sustainable development.

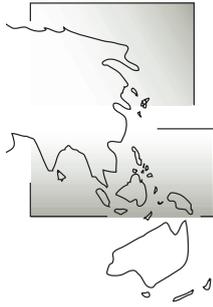
concrete results

■ Policy insights incorporated into 10th five-year plan (FYP) ■ Computational General Equilibrium (CGE) model for trade and environment ■ Analytical work on China and international approaches to policymaking related to competitiveness, employment, environment and technology ■ Application to China's Western Strategy—extension of CGE modelling to Shaanxi province to evaluate development alternatives ■ Five study tours to Europe, North America and South America and 30 fellowships for long-term training ■ Development of methodologies and their application for sustainable development planning and policy formulation for (1) regions and (2) industrial sectors and their application to respectively, Shaanxi Province and the building materials sector. These methodologies are adaptable to other countries and regions and could usefully be employed there with UNIDO support. ■■■■■■■■

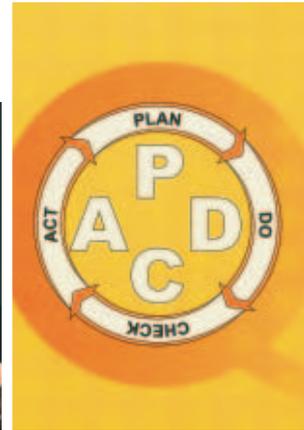
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### donors

>the netherlands



## > pathway to excellence



### unido at work > asean countries

- Brunei Darussalam,  
Indonesia, Malaysia,  
The Philippines, Singapore,  
Thailand and Viet Nam

#### > situation before

*Companies in developing countries have to compete in both price and quality with the best companies in developed countries. To do so they have to continuously improve the quality of their products but frequently lack the quality management systems to do so.*

*Total Quality Management (TQM) has proven itself over the last few decades as a way of managing and continuously improving quality. The introduction of such a wide-ranging technology however is no easy matter, since TQM covers all aspects of a company's life, from long-term policy to storage procedures. In 1995 the Japanese Standards Association and UNIDO set up the ASEAN/Japan/UNIDO TQM Project to introduce and establish TQM in twelve model companies in seven ASEAN member states – Brunei Darussalam, Indonesia, Malaysia, The Philippines, Singapore, Thailand and Viet Nam.*

#### > situation after

The project has now been completed. A wide range of activities have been undertaken in all of the participating countries, ranging from seminars in Japan for top executives to workshops in the model companies for the participating managers and employees. A great number of lectures, seminars and workshops have established a widespread awareness of TQM principles and the new systems are taking firm root in the model companies. What has distinguished the project has been its in-company mode of engagement. Project experts have not simply handed over new technologies with sets of instructions, but have worked closely with management and staff in dealing with the practicalities of introducing the new TQM systems in each of the model companies. Concrete benefits are for the companies are seen in the improvement of a number of key indicators including profit, complaints, delays, absenteeism, and the ratio of sales to the number of employees. The Project clearly demonstrated that TQM is a very suitable vehicle for introducing improved management practices in small and medium sized enterprises in developing countries. Full case studies of the model companies' experience in the project and "Summary Handbooks" of those used by JSA experts for the implementation of TQM, are presented in a UNIDO publication "A Pathway to Excellence: The UNIDO/ JSA Approach"

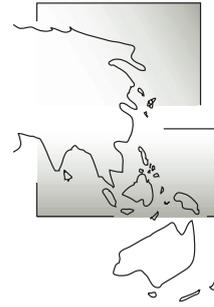
<b>donors</b>
>japan

#### concrete results

- Institutional mechanisms for the dissemination of TQM have been established in the ASEAN countries
- First generation of model companies has successfully begun the process of implementing TQM
- National committees in the ASEAN countries have presented strategic plans for the further dissemination of the know-how acquired

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## > removing trade barriers



unido at work > sri lanka

### > situation before

*Sri Lanka has made significant progress in diversifying the economy from a predominately agricultural export crop based one, to a manufacturing oriented one. The industrial sector has posted healthy annual growth rates of around 8% in the recent past. "Globalisation" and related trade liberalisation is viewed by developing countries such as Sri Lanka as an opportunity to expand the industrial base and venture into an export-led growth, utilising lower wage costs as a comparative advantage. However, the equity of "Globalisation" has been challenged in recent years in relation to its trade implications for developing countries. In the context of trade in industrial goods, countries must have institutional capacities for standards formation, adoption and dissemination; laboratory capacities for precision measurement and testing; capacity to comply with international conformity assessment requirements; and abilities to improve product quality and productivity. A further requirement for market access is the compliance with the Environmental Management System (EMS) standard ISO14000. Much of this capacity is not available in Sri Lanka.*

### > situation after

The UNIDO Integrated Program for Sri Lanka put major emphasis on developing testing laboratories in Sri Lanka. Specifically to the microbiology and chemical testing laboratories at the Sri Lanka Standards Institute (SLSI) and the Industrial Technology Institute (ITI) and to the development of the chemical testing laboratory at the Textile Training & Services Centre (TT&SC).

Key equipment was acquired and the capacity of the laboratories and laboratory staff enhanced by advice from international experts in laboratory development, training and fellowships and the development of laboratory practices in accordance with ISO 17025 guidelines. It is expected that the laboratories will soon receive international accreditation by SWE-DAC, the internationally recognised Swedish Accreditation Authority. The UNIDO intervention has also focused on the development of a National capacity for ISO 14000.

#### donors

> norway

concrete results

- Two microbiology-testing laboratories (SLSI & ITI) equipped, strengthened and prepared for international accreditation
- Three chemical testing laboratories (SLSI, ITI, TT&SC) equipped, strengthened and prepared for international accreditation
- Industrial metrology laboratory equipped and set up at ITI
- The first ever laboratory accreditation launched in the country and a national capability developed to apply the know-how and procedures to other laboratories
- National consultants and auditors trained on implementing ISO 17025
- EMS programs and EMS pilot programs launched in ten enterprises
- Manufacturers (particularly exporters) have access to testing laboratories and EMS schemes, facilitating exports and market access

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concept + design: **[cdc]** communicationdesignconsulting

photos: p. 6: buenos días, p. 7: andrew peters, photosdisc, unido, n. falcon



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