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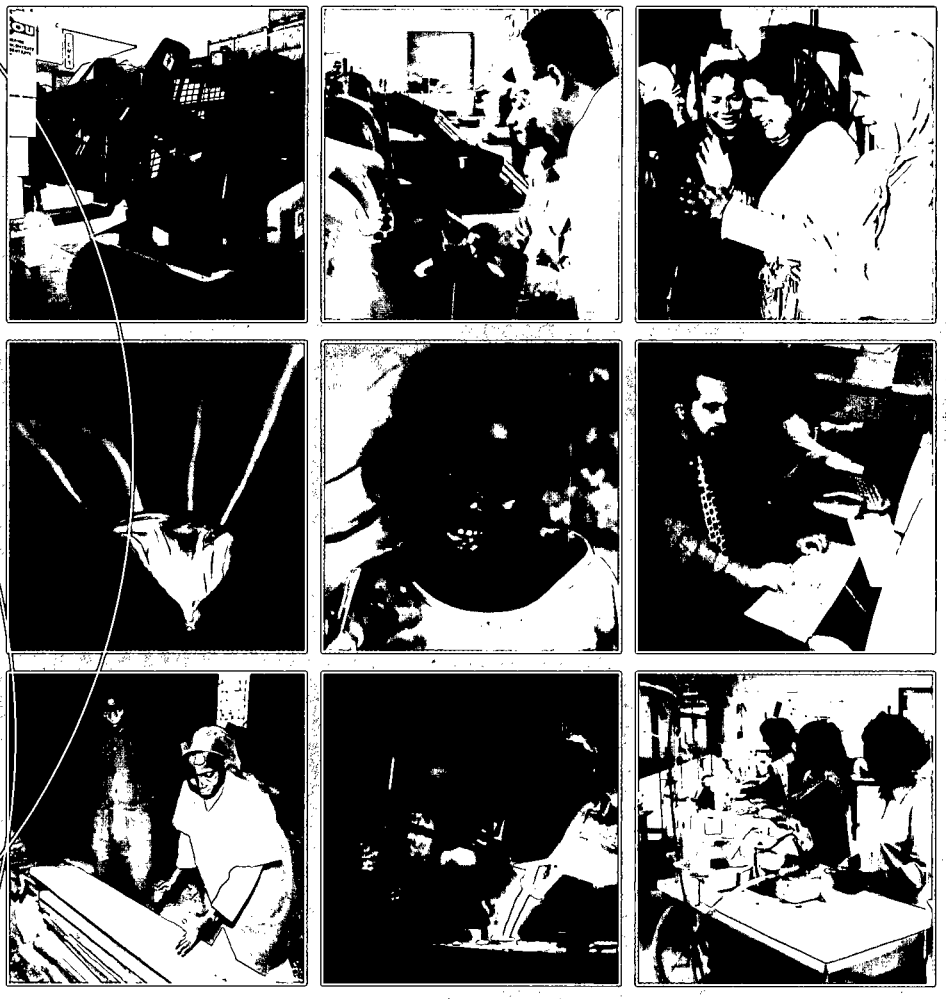
unido **at work**

selected stories from the field



UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

economy environment employment

I am very pleased that we are able to bring you this second edition of *UNIDO at Work*.

When the first edition came out two years ago, UNIDO had just gone through a process of transformation. That process paved the way for a period of consolidation and further success in our activities.

I believe we have made significant progress. The family of UNIDO Member States has expanded—we have had the pleasure of welcoming three new countries. The scope of UNIDO technical cooperation activities has been enhanced and the global forum function further developed.

By approving the strategic guidelines to improve UNIDO programme delivery, Member States reconfirmed their commitment to the Organization and have consolidated a culture of interaction and dialogue that will bring us closer to achieving our collective goals.

In this context, UNIDO took further steps to increase the impact of its operations and consequently, its contribution to achieving the Millennium Development Goals. The work to enhance UNIDO's activities based on the corporate strategy has been initiated. This will enable us to better promote sustainable industrial development and help developing countries and countries with economies in transition raise productivity, increase productive employment and participate meaningfully in the world production system.

The twenty-eight stories in this publication reflect the work of dedicated teams with members drawn from the industrialized and non-industrialized countries, from UNIDO headquarters, in the field and from donor and government institutions. They give a glimpse at the various ways in which UNIDO works to make a difference.

We believe we can do more. We have to do more to reach the Millennium Development Goals. The developing countries, particularly the least developed countries have made this clear. It is my hope that the recognition that UNIDO is now a more effective organization and this glimpse of UNIDO at work will bring us the means to do more.

Carlos Magariños
Director-General

productivity growth for social advance

Africa and the Arab region

Europe and NIS

Asia and the Pacific

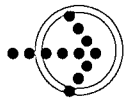
Latin America and the Caribbean

working

to make

a difference

AFRICA AND THE ARAB REGION



Refrigerant management plan

Perfume micro-enterprise goes global

New markets for Jordan's dimension stones

Women's olive oil business: profit, quality and productivity up

Helping SMEs to speed recovery

Good public-private sector dialogue attracts investment

Kilimanjaro Industrial Development Trust "alive and kicking"

Upgrading Tunisia's industrial sector

Japanese SMEs seek Middle East business partners

Skilled entrepreneurs helping other entrepreneurs in Uganda

Refrigerant Management Plan

Algeria

Donors:
Multilateral Fund
for the Implementation
of the Montreal Protocol

Situation Before *Climate change and the depletion of the ozone layer affect not only the human immune system, but also agriculture, fisheries and biological diversity and, therefore, life on earth. Among the chemicals recognized as ozone-depleting substances (ODS) are chlorofluorocarbons (CFCs), used as refrigerants and aerosol propellants and in the manufacturing of Styrofoam and industrial solvents.*

UNIDO has been active since 1987 in efforts to control and reduce the use of harmful chemical products, and has formulated and implemented projects in 62 countries. The Organization has been involved from the very start of its operation in Algeria, where control of these chemicals was found to be rather lax. The Refrigerant Management Plan (RMP) for Algeria was approved in July 2002.

Situation After The RMP, which is still in progress, was designed with two components. The first provided training for customs officers from the country's 62 entry points in implementing import regulations concerning ODSs and ODS-using equipment, and in intercepting illegal imports of these. As a result, there is now greater awareness of the illegal traffic in ODSs and vigilance has been stepped up.

The second component of the RMP provides training for technicians in the servicing of refrigeration and air-conditioning equipment. The aim is to spread good practice in refrigerant management, by assisting these service technicians to become trainers themselves. They receive both theoretical and on-the-job training on how to limit emissions of refrigerant gases during the service operation, thus reducing harm to the environment. The Algiers vocational training centre was provided with two sets of equipment for the recovery and recycling of refrigerants, one assembled and one in kit form. Expert assistance was provided to train the trainers at the centre on how to assemble the equipment.

This training course is an important capacity-building tool for the vocational training centre. As well as ensuring continuity in terms of training, it also means the centre is benefiting from the introduction of up-to-date maintenance techniques into its curriculum.

Concrete Results

- Some 170 customs officers trained to check imports of ODSs and ODS-using equipment and to prevent their illegal importation
- Every entry point provided with an instrument to identify ODSs
- Technicians trained to develop refrigerant recovery and recycling machines from parts available in Algeria
- The training course received very positive coverage in the national press and the approval of senior government officials

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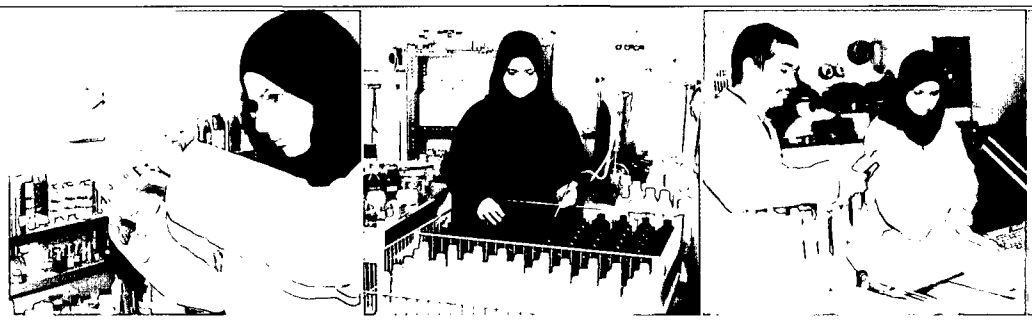
Bahrain

Donors:
Bahrain



Situation Before *Ameena Abbas Ghuloom Ridha, a housewife seeking a means of providing better support for her family, had set up a venture for manufacturing perfumes with initial loan support from the Bahrain Development Bank. Her micro-business proved very successful, to the extent that she was unable to meet the growing demand for her perfumes. She approached UNIDO-Investment Technology Promotion Office (ITPO) Bahrain and the Arab Regional Centre for Entrepreneurship and Investment Training (ARCEIT), which advised her to join the Entrepreneurship Development & Enterprise Creation Programme (EDECP) sponsored by ARCEIT, the Ministry of Industry and the Bahrain Development Bank.*

Situation After The training and subsequent business counselling that Ameena received through EDECP enabled her to work out an appropriate strategy and implementation plan for her business. The next step, with the assistance of UNIDO-ITPO Bahrain / ARCEIT, was to develop a business plan. Armed with this plan, Ameena made a formal request for a loan from the Bahrain Development Bank, which granted her the loan with zero collateral. Further support came as Ameena's project was accepted for the business incubator set up by the bank and managed by UNIDO. This link with UNIDO also helped Ameena to obtain a sales contract through the prestigious Bahrain Duty Free, and to gain market exposure in other Arab countries. Ameena's micro-enterprise has now grown into a small business, employing additional people and with good prospects for further growth.

Concrete Results

□ More than 150 potential Bahraini entrepreneurs have benefited from training and business counselling services provided by UNIDO-ITPO Bahrain/ARCEIT since the EDECP was started in February 2001 □ Some 36 of these entrepreneurs have already established businesses, in a wide variety of manufacturing and service sectors □ Bahrain has become a focal point for entrepreneurship development in the region □ Thanks to this success, the EDECP model has been adopted in Jordan, Kuwait, Saudi Arabia, Sudan and Yemen, with Lebanon and Oman soon to follow □ In Jordan, 40 potential entrepreneurs have received training and counselling through the EDECP, and 13 of them have already started up enterprises

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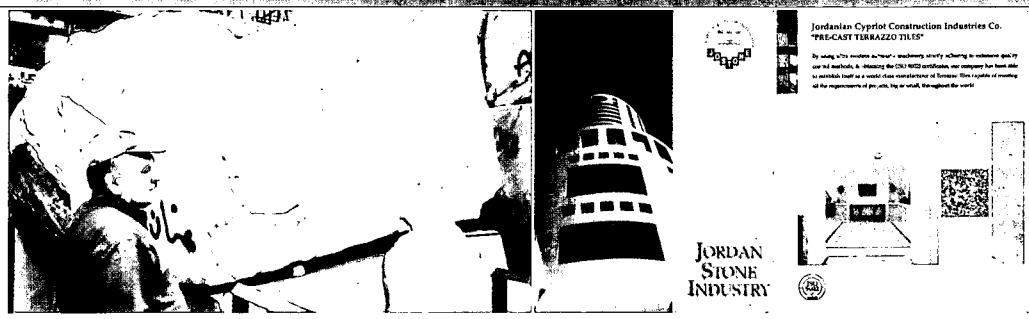
New markets for Jordan's dimension stones

Jordan

Donors:
Italy and UNIDO



Situation Before *One of the promising sectors in Jordan is the mining and processing of dimension stone—stone, such as marble and granite, for use in the construction industry. The Jordan valley has reserves of various types of stone, including desert stone and golden travertine, and there is strong potential for these on both local and international markets. Most Jordanian stone-processing companies started out by importing marbles and granites from Italy, Spain and Portugal, processing the stone and then selling it on the domestic and regional markets. However, they face problems in exporting their products because they are uncompetitive in terms of both price and quality.*

A preparatory study carried out by UNIDO's Investment Promotion Unit (UNIDO IPU) Amman identified several significant shortcomings in the way the industry operated. In particular, it highlighted: high production costs due to the length of time it took to process the stone; too much wastage during the processing; a poor level of technical know-how; lack of knowledge of international quality standards; and difficulty in getting access to export markets.

Situation After UNIDO IPU Amman launched a technical assistance programme aimed at strengthening the capabilities of Jordan's dimension stone sector. The programme laid particular stress on improving production methods and on helping the companies to break into international markets. A diagnostic study of 14 companies was carried out in order to identify their needs. The import of grinding and polishing machines from Italy allowed the transfer of technical know-how on quality production, and companies operating in the sector received training on quality standards and marketing. The Jordanian dimension stone sector was promoted at the Marmomacc and Marmotec international fairs in Italy, and a conference was organized in Jordan in July 2002 to highlight the industry's potential.

Concrete Results

□ 22 Jordanian companies received technical assistance □ 23 Jordanian companies attended international specialized fairs □ Three promotional seminars organized during international fairs □ Technical and co-operation agreement signed between the Jordanian dimension stone industry's association and the Italian association of marble and stone equipment suppliers (Marmomacchine) □ Sales of Jordanian stones and tiles in 2002 were worth US$ 3 million compared with US$ 1 million in 2001 □ Negotiations are currently under way for the establishment of an Italo-Jordanian joint venture to open a new quarry in Ajloun and to export tiles

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Women's olive oil business: profit, quality and productivity up

Morocco

Donor:
Spain

Situation Before *Women entrepreneurs in Chefchaouen produced olive oil with laborious, unsafe methods. They picked the olives, from the trees and off the ground, and crushed them by turning a heavy millstone for hours and hours by hand or, if they could afford it, with a donkey or horse. The olive paste was then placed in a hole in the ground and covered with water, which had to be carried there. The oil rose to the surface and was skimmed off with spoons and bottled. About 25% of both the oil and the water was lost through soaking into the earth. Once the oil was bottled, the women waited for customers who came to their doors. The olive oil had a very high degree of acidity and posed potential long-term health risks to consumers.*

Situation After UNIDO introduced a mechanical olive oil production unit using locally available technology. Women producers can now better harvest the olives, produce healthy oil, and control its quality and acidity. Marketing skills have also improved. The oil produced during the training sessions was sold and the proceeds transferred to the target group of women, who are now building premises where they will install new equipment. The women have been assisted in purchasing packaging materials, registering trademarks, preparing labels and promotional materials. Women can now sell their oil from kiosks in town instead of from their homes.

A strong network of local support institutions has been built up with the backing of the Ministry of Industry, Commerce and Communications, as well as a network of trainers in production technology and in business management and marketing. By the next harvest season, these institutions and trainers will have taken over responsibility for coaching, and the project will then concentrate on other target groups of women entrepreneurs.

Concrete Results

□ Some 320 women taught to produce olive oil of improved, safe quality (54 men were also trained) □ Price obtained for oil 10% higher than before □ Productivity increased by up to 40%, thanks to modernized production methods □ Two pilot groups organized themselves in associations, registered a trademarks and developed labels □ Five other groups joined the first association which grew into a federation and the groups naturally developed into a cluster □ Kiosks in town provided by UNIDO have helped sales increase by at least 85% □ Overall earnings have as much as doubled, thanks to improved quality, better marketing and higher productivity

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Helping SMEs to speed recovery

Rwanda

Donors:
Japan, Denmark, UNIDO

Situation Before *Following the destruction caused by the genocide in Rwanda in 1994, little attention was paid to the institutional infrastructure needed for socio-economic recovery. In particular, the promotion of small business development was neglected. Little assistance from government and the international community was directed towards developing the capacity of small and medium-sized enterprises (SMEs) or that of business development service providers.*

The country needed a new industrial policy framework to create an environment conducive to business development. The ministries responsible for industrial reconstruction and rehabilitation lacked the capacity and capabilities to respond to the industrial sector's needs. Key organizations such as the Chamber of Commerce and Industry, the Investment Promotion Agency, the Association of Industrialists, and private-sector business associations all needed restructuring. Entrepreneurs did not have the means to resume and rebuild their businesses, improve managerial and technical skills, and obtain information on technology, marketing and finance.

Situation After Within the framework of the UNIDO Integrated Programme for Rwanda, the Centre d'Appui aux Petites et Moyennes Entreprises au Rwanda (CAPMER) was established in 2000 to support SMEs. CAPMER provides expertise on project analysis, marketing and exporting, technology development and business training provides information and advisory services to SMEs, and organizes information-sharing and skill-development programmes. The Information and Documentation Service Centre (SIDOTEC), run in cooperation with the Rwanda Investment Promotion Agency (RIPA), provides information on SMEs in Rwanda and elsewhere.

CAPMER helps SMEs directly with the preparation of business plans and identification of potential partnerships with local and foreign investors. It also helps them to obtain funding from commercial and development banks to rehabilitate and/or expand their businesses. It raises awareness among SMEs of the legislative framework concerning business development, and among policy-makers of the need to consolidate assistance to SMEs. An inventory of small businesses has been drawn up. In addition to UNIDO, CAPMER cooperates with a number of organizations, including the World Bank, the International Fund for Agricultural Development (IFAD), the Netherlands Development Cooperation (SNV), and Kigali Institute for Science, Technology and Management (KIST).

Concrete Results

- More than 400 SMEs assisted with business advice and information on equipment selection and purchase, marketing, finance, project analysis and business plan preparation
- More than 12 enterprises producing goods such as fruit juice, tomato paste, soap and energy-efficient fuel-wood, obtained loans ranging from US$ 250,000 to US$ 1 million
- Training modules, manuals and guidelines translated into local languages
- Training programmes for specific subsectors and groups, including women entrepreneurs, on topics such as feasibility studies, quality control and project analysis

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Good public-private sector dialogue attracts investment

Tanzania

Donors:
UNDP, Denmark

Situation Before *In the late 1990s the private sector still played very little part in the development, implementation and monitoring of government policies. Not surprisingly, the particular concerns of the private sector were not properly addressed. Because there was a lack of debate on contentious issues relating to governance, economic management and overall national development, the efficacy and appropriateness of government policies were always called into question. But the private sector was weak and lacked the capacity to engage in constructive dialogue with the Government. Any attempts at joint public-private endeavours were sporadic, rather than springing from established strategic alliances based on a common national vision.*

Situation After UNIDO raised awareness of the need for a sustained public-private consultative mechanism, and helped to define the organizational structure, objectives and functions of the consultative council that was established as part of the Integrated Industrial Development Programme for Tanzania (approved in 2000).

The consultative council, known as the Tanzania National Business Council (TNBC), was launched in April 2001 and is now fully operational, with the President of the United Republic of Tanzania and the President of the Private Sector Foundation as, respectively, its Chairman and Vice-Chairman. The public and private sectors are equally represented on all the TNBC's organs, including the Council, Executive Committee, Investors' Round Table and Working Committees. An initial task of the TNBC was a review of sustainable industrial development and competitiveness, based on the UNIDO-funded competitiveness analysis for Tanzania.

The public sector now has a better understanding of the private sector's concerns, and in turn is perceived as fostering a positive environment in which the private sector can develop and business can thrive. The public and private sectors now have a national consultative process through which they can reconcile their differences before policy decisions are made.

Concrete results

□ Improvement in dialogue between public and private sectors □ Credible strategic alliance in place, encouraging the sharing of information and transparency in addressing critical socio-economic issues, especially those concerning industrial development □ First Investment Round Table organized by the TNBC attracted international investors from Europe, Asia and the United States and resulted in identification of a number of projects for foreign direct investment/joint partnership

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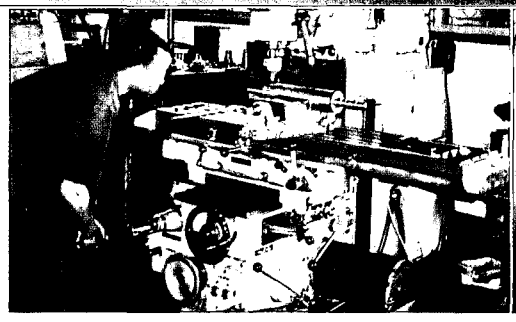
Kilimanjaro Industrial Development Trust "alive and kicking"

Tanzania

Donor:
Japan



Situation Before *The Kilimanjaro Industrial Development Centre had operated as a Tanzanian public sector project, with the assistance of Japan, from 1978 to 1993. Its main function was to transfer technology and technical skills to the Centre's staff and to SMEs, in the context of an integrated regional development plan for Kilimanjaro Region. The Centre was handed over in 1993 to the Government of Tanzania, which from then on funded its operating costs.*

By 1999 the Centre was inactive, with most of its machinery lying under dust and almost no production or training taking place, and no management and financial control system. The local business community referred to it as the "dead institute".

Situation After Following a request by Japan to revitalize the Centre, UNIDO implemented a transformation project, financed by Japan and the United Republic of Tanzania. The legal status of the Centre was changed to that of an autonomous trust, Kilimanjaro Industrial Development Trust (KIDT), governed by a Board of Trustees. Since September 2002, when the new management took over, impressive results have been achieved. KIDT is now a vibrant institution with all workshops open and functioning, and most of the equipment and production facilities repaired and rehabilitated. Investment in the marketing of KIDT products has enabled maximum utilization of the existing product capacity.

Concrete Results

- The previously loss-making ceramics factory at Same was revitalized by the new management, and accounted for 20% of KIDT's income during a six-month period in 2002
- KIDT's income in first the quarter of 2003 exceeded TSh 42 million, and the plan is to generate TSh 145 million by the end of the year
- Growth in production activities has led to the creation of 27 new jobs, representing a 50% increase in staff since the project started
- KIDT now has modern computerized management and financial control systems, computers, internet connections, an internal communication system and a fax machine
- A private company has just proposed a joint venture with KIDT for the production of briquettes

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Upgrading Tunisia's industrial sector

Tunisia

Donors:
Italy and UNIDO

Situation Before *Until a few years ago, Tunisian industry operated under strong protectionist policies, including import restrictions, tariffs, etc. Although these measures contributed to the economic development of Tunisia, the country suffered from numerous structural weaknesses: an inadequate institutional infrastructure; predominance of small and medium-sized enterprises in the industrial sector; an industry heavily dependent on low-tech skills; weak inter-industrial relationships.*

After Tunisia signed the Uruguay Round Agreement and in 1995 the Association Agreement to establish a free trade area with the European Union, these weaknesses proved to be considerable obstacles, which the country had to overcome in order to develop a competitive industry at the international level.

In response to the new challenges, the Tunisian government started the National Programme for Upgrading the Economy and the Industrial Sector. It was the first large-scale programme of its type to be developed and launched in Africa. The Programme aims to help companies increase their productivity, reduce costs and improve quality, in order to become more competitive, increase their market share, boost exports and create employment.

An Office for Upgrading was founded in 1995 to raise awareness and to inform the various partners on the upgrading process, regulations and procedures. UNIDO was approached to assist with the National Upgrading Programme.

Situation After The Agency for Industrial Promotion, together with eight sectoral Technical Centres that provide continuous services to industry, and a number of banks were all involved in the implementation of a pilot Upgrading Programme for 40 enterprises.

In 1999, the UNIDO Integrated Programme, prepared in cooperation with the Ministry of Industry, undertook to assist Tunisia in implementing the Upgrading Programme through strengthening the capacities of the Office for Upgrading and the Technical Centres, upgrading 120 enterprises on a pilot basis, and promoting foreign investment.

Concrete Results

□ By the end of 2002, with UNIDO's assistance, three Technical Centres (textiles and clothing, leather and shoes, and food) had been strengthened □ Some 70 companies helped to establish diagnosis and upgrading plans (30 in textiles and clothing sector, 30 in leather and shoes and 10 in the food sector) □ Hazard Analysis Critical Control Point (HACCP) introduced in 10 food companies □ Some 22 future trainers trained □ Nine national consultancy firms strengthened □ Two laboratories prepared for accreditation □ Databases improved at the Office for Upgrading

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Japanese SMEs seek Middle East business partners

UAE, Oman, Kuwait

Donors:
Government of Japan,
UNIDO ITPO Tokyo and
the Government of Oman

Situation Before *Decreasing oil revenues and the need to meet the challenges of globalization mean that many countries in the Middle East are seeking to diversify their industries and create job opportunities for their fast-growing populations. Until recently, they had been trying to attract investors from Japan by mainly targeting large Japanese companies, such as Toyota, Matsushita and Sony. There was a misconception that all companies in Japan were large whereas, in fact, 93% of all Japanese companies are small and medium-sized enterprises (SMEs). In 2000 UNIDO ITPO Tokyo decided to promote Japanese SMEs as potential business partners for companies in the Middle East.*

ITPO Tokyo began by organizing several programmes in Japan for delegates from Middle East countries, including Saudi Arabia, Oman, Lebanon and Jordan. The aim was to show Japanese SMEs the business and investment opportunities that were available in the Middle East. ITPO cooperated with institutions in Japan such as Japan Cooperation Centre for the Middle East (JCCME) and Japan External Trade Organization (JETRO).

Situation After As a follow-up to these programmes, several business missions were organized for Japanese SMEs to visit selected countries in the Middle East for fact-finding, company visits and business negotiations. A mission to the UAE, Oman and Kuwait was organized in October 2002, for SMEs active in fisheries (especially tuna), the food industry (dates) and the manufacture of perfumes and incense (using frankincense).

The visit highlighted potential business opportunities in these sectors, and raised awareness among Middle East companies of the need to improve processing and packaging to meet stringent Japanese import requirements. Japanese SMEs found many opportunities for sourcing the products they required, and also for transferring their technologies and for possible joint ventures.

Concrete Results

- Seven Japanese SMEs participated in the mission to UAE, Oman and Kuwait
- Some 44 meetings held (35 with private companies, 9 with ministries and public-sector organizations)
- Technical advice and discussions on product processing and packaging held during factory visits
- Five Japanese SMEs have shortlisted candidate companies for further business negotiations
- Two Japanese SMEs are considering technology transfer programmes for processing and packaging of dates
- One Japanese SME is planning to negotiate a joint venture and technology transfer on tuna fishing and processing
- Two Japanese companies are planning to source dates from new partners and to transfer technology for product treatment and packaging
- One Japanese company seeking to source frankincense is planning to visit the region again in 2004

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Skilled entrepreneurs helping other entrepreneurs in Uganda

Uganda

Donor:
Japan

Situation Before *Micro and small-scale enterprises play a dominant role in rural districts of Uganda. Despite a driving business spirit, the growth and competitiveness of these enterprises is hampered by a lack of technical training and business advisory services. Donor-supported advisory services cease once funding stops and most new enterprises stagnate soon after. Entrepreneurship is inhibited by the tendency to presume that growth and improvement in productivity requires increases in capital and investment. The Uganda Small Scale Industry Association (USSIA), Northern Uganda Manufacturers' Association (NUMA) and the Uganda Gatsby Trust (UGT) were eager to establish self-sustaining advisory services and promote a culture of innovation, better use of existing resources and less dependence on cash inputs. The UNIDO Master Craftsman Programme (MCP) was tailor-made to address these issues.*

Situation After Within the framework of the programme, selected members of USSIA, NUMA and UGT who are skilled entrepreneurs themselves were trained as MCP Advisers to assist other small-scale enterpreneurs. Today, MCP Advisers are active in the districts of Masaka, Mbarara, Kabarole, Mubende, Lira and Mbale.

The success of those who have participated in the MCP is clear for all to see. Micro and small-scale operators are now willing to pay for training. MCP Advisers provide both individual counselling and group training, and they also help groups of entrepreneurs to collectively develop self-help solutions. Among other services is the training of instructors from local vocational schools and training of orphans. The assistance is geared to establishing effective self-help mechanisms and developing resourcefulness. MCP advisers are able to show that in many cases, lack of money is not the major source of problems, and nor are additional financial resources always necessary for finding workable solutions.

The programme has trained 102 MCP advisers. The majority of them are now actively and independently providing support to entrepreneurs without receiving any subsidy. By 2003, a total of 1,500 entrepreneurs had benefited from the programme and the number is steadily rising. At their own initiative, MCP Advisers hold monthly District Management Committee meetings to exchange experiences. 'Lessons learnt' are used to continuously update and improve the MCP advice and training programmes.

Concrete Results

□ Some 75 MCP Advisers active in six districts □ Technical skills of over 1,500 entrepreneurs upgraded □ Substantial improvements without any capital investment (Metalworking: profits up 50%, productivity up 150%; Tailors: profits 250%, productivity 60%; Carpenters: 360%, 100%; Grain mills: 180%, 100%) □ Product quality has improved □ Entrepreneurs join forces to find better markets □ Grain mills have reduced wastage by 7%

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EUROPE AND NIS

Hungary
Regional technology foresight programme for CEE and NIS

Macedonia
Cleaner Production Centre for Macedonia

Poland
Managing Technology and technology transfer negotiations

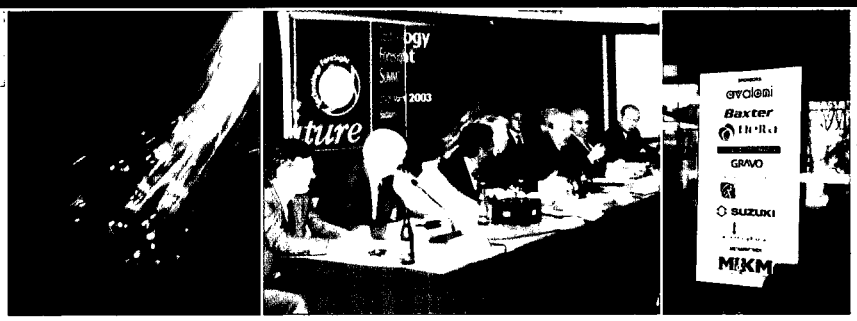
Tisza River
Tisza river environmental management and pollution control

Ukraine
"Bread basket" revival

Regional Technology Foresight Programme for CEE and NIS

Hungary

Donor:
Hungary



Situation Before *Technology development planning in Central and Eastern Europe and the newly independent states (CEE/NIS), was traditionally carried out by the state. Political developments have presented the possibility of a new approach at national and regional levels that would allow the countries in this region to increase their capacity for innovation and thus their productivity and competitiveness.*

In parallel there is increasing concern about the interaction between economic competitiveness and social factors such as unemployment and working conditions, inequality and social cohesion, environment and sustainability and risks associated with new technologies. New national scientific and technological (S&T) policies that balance competitiveness against unemployment, inequality, sustainability and risk were needed.

Technology Foresight (TF) has increasingly been recognized as a powerful instrument for establishing common views on future development strategies among policy-making bodies. Its unique feature stems from a wide participation of large number of stakeholders, namely, the government, science, industry and civil society.

In the region of CEE/NIS, Hungary was an early adopter of TF three years ago. A few other countries such as the Czech Republic, Slovenia, and Poland have undertaken first steps to promote TF at the national level.

Situation After In 2001 UNIDO launched its Regional TF Programme for CEE/NIS with an awareness building conference and meeting of experts. The Programme has now entered its implementation stage with training seminars, technical assistance projects and research. In March 2003 UNIDO in cooperation with the Hungarian Government organized in Budapest the TF Summit, a regional event for high-level government decision makers, top business leaders and outstanding scientists in the fields of technology policy, research and development.

The summit had four components:

- Ministerial Round Table on European Union enlargement and pre-accession countries' industries.
- Best practices in developing and applying TF, and ideas on developing strategic industrial production chains in the region.
- Biotechnology Prospective Forum encouraging key biotechnology players in the region to work together to shape their future.
- Fair of the Future for presentation of products.

Concrete Results

■ Enhanced awareness of the impact of TF on competiveness and innovation. ■ Practical recommendations for high-level decision makers to encourage, initiate and implement TF exercises. ■ Identification of specific and relevant "hot" issues. ■ Two TF studies started for agro-food and automotive industries. ■ Network of ministerial level for developing national and regional technology policies and strategies. ■ Involvement of more than 30 companies and enterpreneurs' chambers in the regional TF initiative. ■ Training courses launched: in Prague on TF methodologies and in Ankara on organizing TF programmes

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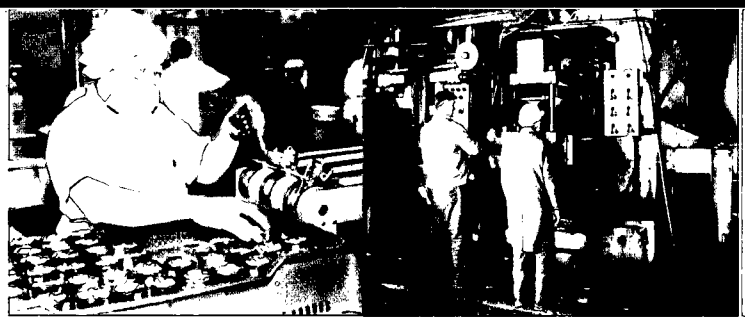
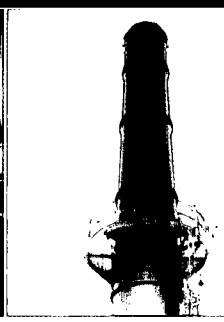
Cleaner Production Centre for Macedonia

Macedonia

Donor:
Czech Republic





Situation Before *While there has been a reduction in environmental pollution in the former Yugoslav Republic of Macedonia over the past few years, the main reason for this is the decline in industrial and other economic activities since 1991. The Government recognizes that simultaneously with the steps it takes in the transition to a market economy, there is a need to address the causes of environmental degradation. That is, there is a need to improve the performance of the country's industry in terms of detrimental impact on the environment and at the same time, increase competitiveness.*

The UNIDO cleaner production (CP) approach looks at the entire production cycle to simultaneously increase productivity and environmental performance by ensuring more efficient use of raw materials, energy and water. The cleaner production approach is to promote better environmental performance through reduction of waste and emissions, that is, to reduce pollution at its source rather that collect it at the "end of the pipe".

The Government of Macedonia requested UNIDO's assistance to enhance national capacity in the application of CP methodologies. A three-year UNIDO trust fund project, financed by the Czech Republic, was launched in mid-2001.

Situation After The project has increased awareness of CP and developed knowledge and skills among Macedonian professionals, who are now in a position to implement CP production projects independently without further assistance from foreign experts.

Twenty demonstration projects have been undertaken and have convinced host companies to look seriously at cleaner production as a factor in their economic decision-making processes.

The Macedonian National Cleaner Production Centre (NCPC) is established and operating. Located in the Ministry of Environment and Physical Planning, the NCPC offers the following services to industry and government: waste identification assessment and waste reduction; training of managers, experts and national consultants in advanced continuous improvement methods; the identification of cleaner production technologies; advice on standards for CP in national legislation.

Phase III of the project includes further demonstration projects (supervised by national experts), the drafting of a financial support system for CP projects and a draft National Cleaner Production Programme. Phase III activities will also assist Macedonia to comply with the European Union's Integrated Pollution Prevention and Control Directive.

Concrete Results

■ More than 30 national professionals trained in CP ■ Some 20 demonstration projects implemented in selected industrial enterprises ■ A special seminar held on European Union's Integrated Pollution Prevention Control (IPPC) Directive ■ Macedonian Cleaner Production Centre established ■ National Cleaner Production Programme, including financial support systems for CP projects, drafted

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Managing technology and techology transfer negotiations

Poland

Donors:
Italy and Poland

Situation Before *Facing the challenge of EU accession and of adapting its economy to the much more competitive and demanding EU market, Poland needs to make its economy more innovative, and to work towards replacing labour-intensive industries with modern, high-tech industries.*

Poland has a very well-educated population and an established network of research and development (R&D) institutes, with highly skilled personnel. The main problem is how to transform the inventions and technological solutions produced by these institutes into practical applications and marketable products. There is still little awareness in Poland about management of technology and technology transfer, in the form proposed by the UNIDO-International Centre for Science and High Technology (ICS) in Trieste, Italy.

Situation After In late 1999 UNIDO ITPO (Investment Technology Promotion Office) Warsaw and ICS organized a very successful and well-attended seminar in Poland on technology management. A second seminar, in March 2001, also covered technology transfer negotiations. The seminars were led by top international experts, and the aim was to create a group of Polish experts who would themselves be able to conduct training of this kind, using materials issued by UNIDO and ICS.

An idea that came out of the March 2001 seminar was to introduce lectures on technology mamagement and technology transfer negotiations (TM and TTN) in selected Polish universities and business schools. The Warsaw School of Business and the University of Ecology and Management started lectures based on materials provided by ITPO Warsaw and this encouraged others, including Warsaw University and the Warsaw School of Economics, to follow suit. Most of those who attend the lectures are already working in industry, so can immediately put their newly acquired knowledge into practice.

The programme seems to be now self-sustaining and growing, and should help to change attitudes, encourage a longer-term perspective, and contribute to making the Polish economy more innovative and competitive.

Concrete Results

■ A group of 5 Polish lecturers established to conduct training courses on TM and TTN; 3 took part in TM experts meeting in November 2001 in Trieste, organized by UNIDO and ICS ■ 12 training courses conducted by Polish lecturers and organized by ITPO Warsaw, in various regions of Poland ■ Classes based on UNIDO/ICS programmes held in 5 high schools ■ 8 additional universities and business schools will offer TM and TTN courses ■ Over 800 students and professionals have attended lectures and classes ■ Polish version of the UNIDO/ICS manual on TM published by ITPO Warsaw

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Tisza River

Donor:
Hungary

Situation Before *In early 2000 several spills of hazardous chemicals from mines in northwest Romania poisoned rivers in Romania, Ukraine and Hungary, in the catchment area of the Tisza River. The most serious accident occurred on 30 January 2000 when heavy rainfall and melting snow caused the tailings dam of a mining lagoon to collapse, spilling almost 100,000 cubic metres of toxic wastewater with high concentrations of cyanide and heavy metals. As a result, about 200 tons of fish were killed and the water supplies of many towns were rendered unsafe. Following these catastrophic events, the Hungarian Government appointed UNIDO as executing agency for a Tisza River Environmental Management and Pollution Control Project. The aim of the project has been to promote an integrated approach to risk management, and to tackle the underlying causes of water pollution in the Tisza river basin.*

Situation After The UNIDO project developed methods for improving emergency preparedness and response in companies operating in the mining and metallurgical sector in the region. It provided public emergency response organizations in the Tisza river area with technical advice on improved their systems of monitoring and emergency preparedness. Last but not least, UNIDO has initiated a carefully targeted exercise aimed at broadening participation in a programme for the revitalization of the Tisza River and the restoration of its habitat.

Concrete Results

■ In-plant risk assessment to check existing emergency preparedness response measures conducted at companies in the mining, metallurgical and petrochemicals sectors ■ A manual on emergency preparedness and response prepared for these industries ■ Regional monitoring systems assessed for compliance with European Union standards and changes recommended to national institutions ■ Results of assessment disseminated through a regional workshop ■ Expert group meeting organized for promotion of remedial technologies at contaminated industrial sites

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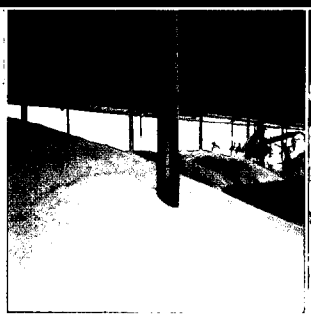
"Bread basket" revival

Ukraine

Donor:
Hungary



Situation Before *Ukraine was once known as the "bread basket" of the former Soviet Union, but its agricultural production has declined by over half since independence, and many of its industrial food processing plants have closed. The reasons for this, mainly arising from a poorly developed private sector, are many: outdated food-processing technologies and equipment; low levels of quality and product safety; weak product preservation and processing systems (because of poor linkages between agriculture and the food industry); insufficient quality and quantity of agricultural raw materials; inefficient energy utilization—high energy costs. In addition to this, the national support services, such as research and development, training, technical advice and information, are inadequate.*

In May, 2002, UNIDO began a project designed to increase the competitiveness of the food industry sector in the Trans-Carpathian region.

Situation After The project, which started in May 2002 and will be completed at the end of 2003, strengthening the capacity of the Zakarpatsky Institute of Agro-industrial Production (ZIAP), through staff training and laboratory upgrading.

At company level, food-processing technologies were upgraded in a pilot group of small and medium-scale food enterprises. These technologies, as well as increasing value added, enable production to meet international standards through the application of Good Manufacturing Practices (GMP) and the Hazard Analysis and Critical Control Points (HACCP) system.

A seminar on Nutrition and Cereals Technology, organized by ZIAP in October, 2003, a very new experience for the institute, gave a favourable indication of the sustainability of the Project. The Seminar attracted speakers from Czech Republic, Hungary, Russian Federation, Switzerland, United Kingdom and Ukraine. To assist with the financing of the seminar, ZIAP organized an exhibition of cereals laboratory and milling equipment, with exhibitors from Germany – Brabender; France – Tripette & Renaud Chopin; Sweden – Perten; Switzerland – Sefar; and Ukraine (Kiev) – Syta. The seminar is the first of a series.

Concrete Results

■ Food industry experts from Beregovo District and ZIAP trained as trainers in food safety, good hygiene practice and HACCP ■ HACCP plans developed for each participating company ■ Risk of contamination of reduced ■ Awareness of need for carefully drafted legal framework, reliable control and inspection service and well-equipped support organizations ■ New products under development ■ ZIAP organized seminar and exhibition on nutrition and cereals technology

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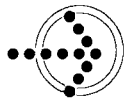

Asian Countries

Donors:
UNIDO Technical Cooperation Funds

Situation Before *Corporate social responsibility requirements are perceived as a threat by exporting small and medium-sized enterprises (SMEs) in developing countries. They fear that the cost of meeting the social and environmental criteria stipulated by global buyers and supply chains will mean losing competitive edge in international markets. At the same time, however, they must comply with these requirements if they are to access new foreign markets. UNIDO therefore decided to explore the question of what support could be given to SMEs in developing countries to help them overcome this dilemma.*

UNIDO's experience with the "Triple Bottom Line" (TBL) approach in Cleaner Production (CP) projects pointed to a likely solution. When industries adopt a TBL approach, they pay attention not only to profitability but also to environmental and social concerns. TBL was crafted to suit SMEs, pinpointing opportunities for improving the environmental and social impact of their activities, which would not only help them to meet corporate social responsibility requirements, but also lead to better financial performance by reducing costs.

Situation After To test the TBL approach in this context, UNIDO undertook a demonstration project in four Asian countries: India, Pakistan, Sri Lanka and Thailand. The aim was not to establish a process by which SMEs would follow a particular code and obtain some sort of certification. Rather, a generic assessment system was developed, based on the method of assessing CP performance that is designed to bring about continuous improvement. A simple system was worked out for monitoring progress and generating compliance reports for presenting to international buyers. National technical institutions (such as national CP centres) in the countries concerned were helped to build their TBL capacities through training and on-the-job experience, to help ensure that TBL efforts would be sustained.

Concrete Results

The project demonstrated that SMEs can improve their environmental and social performance (especially regarding labour practices), leading to better financial outcomes, thanks to reduced costs as well as international export orders Results strongly suggest the TBL approach should be promoted on a much wider scale than was possible in this demonstration project The software programme Responsible Entrepreneurs Achievement Programme (REAP), being developed as a tool to support SMEs in their TBL efforts, will be offered as a practical and effective tool for use in new TBL projects

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Industrial motor systems made more efficient

China

Donors:
UNIDO, USA, China

Situation Before *Industrial motor-driven systems are a major user of electricity in China. In 2001, the country consumed approximately 1,400 billion kWh of electricity, and about 60% of this was used by motors, mostly driving industrial fans, pumps or compressors.*

There is considerable scope for making systems operate more efficiently. Better equipment design, system integration, and operations and maintenance practices can reduce the amount of energy they use by at least 20%. This means not only lower factory operating costs, but a substantial reduction in emissions.

To assist in the realization of these benefits, a three-and-a-half-year project adapting the United States Department of Energy (USDOE) Motor Challenge Programme is underway. The project is a joint venture between UNIDO, the "Ted Turner Fund" (United Nations Foundation), the USDOE, the American Council for an Energy Efficient Economy, and the United States-based Energy Foundation.

Situation After In the first half of 2002, national counterparts—the China Energy Conservation Investment Corporation (CECIC) and the Shanghai and Jiangsu energy Conservation Centres—prepared the training programmes for the international teams. By the end of March 2003, a three-step sequence of activities—preparation, system optimization training, and factory training—was completed for the three systems (pumps; motors/fans/drives; compressed air). Factory training sessions, conducted by Chinese trainers, will continue over the next two years of the project.

The project has developed education materials, analysis tools and standards for promoting motor system optimization and for helping factories in the two provinces achieve greater efficiency. This is an important first step in a planned ten-year effort by the Chinese government to establish and train a network of motor system optimization experts throughout China.

Concrete Results

□ Chinese experts are applying engineering best practices and readily available technology to reduce system energy consumption and "greenhouse gas" emissions, at the same time improving industrial productivity and reliability □ The host company for the pump system optimization training saw an opportunity for energy saving. The project produced annual energy savings of 1.06 million kWh and its cost was recouped in 1.8 years. Total carbon savings will be in the order of 20,000 tons of CO_2, assuming a 15-year project life and that saved electricity is coal-based □ Significant savings are also expected to follow implementation of recommendations made during the compressed air system optimization training □ If China could achieve a 5–10% cut in motor system energy use by 2010, this would result in an annual reduction of 14–28 million tons of carbon emissions (51–102 million tons of annual CO_2 emissions)

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User-friendly water treatment technology transfer

India

Donor:
Government of Japan/UNIDO ITPO Tokyo and Government of India

Situation Before *Water pollution is a major environmental problem in India, especially pollution of rivers, caused by people's daily activities but also by industry. India has been tackling the problem since 1985, and in 1995 created the National River Conservation Authority. A wide variety of technologies to combat water pollution are available worldwide, but they are not always easy to identify or to obtain. This is especially true of those developed by small and medium-sized enterprises (SMEs) in Japan. UNIDO therefore invited a senior official of India's Ministry of Environment and Forests to take part in the first "Environment Delegate Programme for Industry" held at UNIDO's ITPO Office in Tokyo in 2002. The programme's aim was to facilitate contacts with Japanese government authorities and companies with a view to finding potential solutions to problems regarding river pollution.*

Situation After The programme promoted the application in India of Japanese water treatment technologies, particularly those concerning microbial pollution and decentralized sewage treatment. The Indian delegate visited 16 Japanese companies to observe the application of the technologies, and learn how prefecture governments, private companies and universities in Japan cooperate in tackling the problems of river pollution and waste management. A number of technologies with potential for application in India were identified, these were cost effective, energy saving, easy to operate and maintain, and relatively uncomplicated, and thus suitable for decentralized operations.

Concrete Results

- Some 17 Japanese water treatment technologies introduced to India
- Transfer to India of know-how regarding management of water pollution problems, especially through coordinated efforts of local government, private sector, and university/research establishments
- Participation in several exhibitions and fairs in Japan, including an environment exhibition in Osaka
- Visit to eight sites where water treatment systems are applied
- India's water pollution problems and potential solutions discussed at several round tables in Japan
- Outcome of the programme exhibited at the Third World Water Forum in Japan (see http://www.unido.or.jp/wwf/wwf3exm5e.htm)
- Opportunities for further promotion of identified Japanese technologies (ITPO Tokyo mission to "Water Asia" in New Delhi in September 2003)

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Ludhiana knitwear cluster expands market

India

Donor:
Italy

Situation Before *The knitwear industry of Ludhiana in the Indian state of Punjab enjoyed a strong position in the protected domestic woollen market. However, a study found that this century-old cluster was having difficulties responding to the liberalization of India's economy. Problems included a severe shortage of skilled workers; a very limited product range, too much focus on domestic preferences; poor information on foreign markets; and lack of responsive support institutions. With India's entry into the World Trade Organization (WTO), the outlook was bleak for the more than 12,000 units that operate in the cluster, employing some 400,000 workers. From 1997 to the end of 2002, the UNIDO Cluster Development Programme went to work on a solution.*

Situation After The programme helped cluster stakeholders to jointly address the above problems. As the key challenge for the cluster was to conquer new markets, a group of six local exporters were helped to create the Apparel Exporters' Association of Ludhiana (APPEAL). Membership grew to 54 exporters, which now account for over 80% of the cluster's total exports. APPEAL participates regularly in foreign fairs. Subsequently, the local association of knitwear manufacturers, the Knitwear Club, was strengthened and supported in carrying out activities such as training of workers and supervisors, introduction of new yarns, broadening of members' product range, supporting technical upgrading and quality improvement, and energy conservation. UNIDO also worked to strengthen the local governance framework through the creation of an umbrella association, Federation of Knitwear and Allied Industries Associations (FEKTAA).

Concrete Results

□ Over 150 firms directly benefited from the activities implemented through APPEAL and the Knitwear Club, while many more benefited indirectly □ Cost-cutting and productivity improvements, with the introduction of new energy-saving and store-management techniques, resulted in savings of over US$ 1 million □ Ventures into new markets, domestic and foreign, produced a US$ 4 million increase in sales shared among 25 firms □ Regular joint participation in trade fairs and buyer–seller meetings □ Some 45 new yarns introduced, triggering additional investments worth US$ 8 million □ Some 400 people (300 of them women) benefited from five innovative training programmes, and 280 subsequently gained new employment □ Through FEKTAA, the cluster has approached several large-scale Indian support institutions and the local government to create the Ludhiana Apparel Park, thus forging a public–private partnership with investment of nearly US$ 10 million

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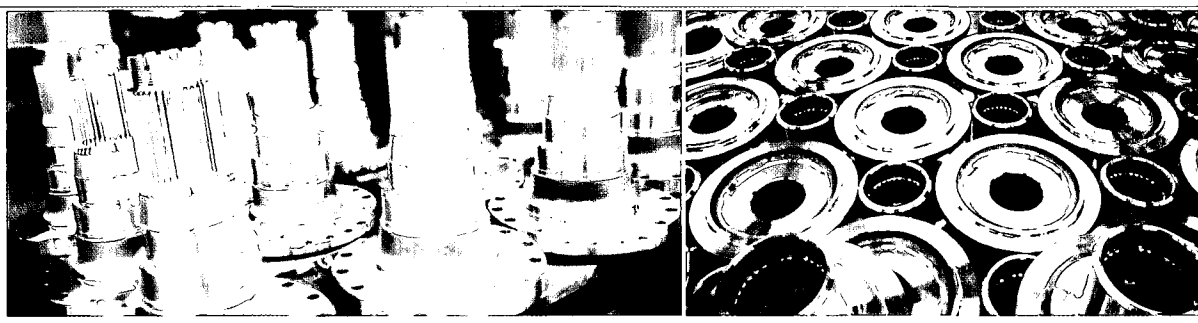
Machine tools export bonanza

India

Donor:
India



Situation Before *The effects of economic liberalization brought it home to the Indian Government and Indian machine tool manufacturers that urgent action was needed on the quality and productivity fronts. A host of new production techniques and manufacturing technologies introduced in the industrialized countries to increase competitiveness had passed them by. The Indian machine tool industry is considered crucial for the long-term industrial development of the country. It was imperative that small and medium-sized tool manufacturers receive institutional support to update their management and manufacturing practices. If assisted properly, the industry believed, it had the potential of becoming a significant global player.*

The National Programme for the Development of the Machine Tool Industry NPDMI was launched in September 2001, as a cooperative effort between UNIDO, the Indian Machine Tool Manufacturers Association (IMTMA) and the Government of India.

Situation After The first goal of the NPDMI was to gain respect for the "Made in India" brand in the global market. Latest trends in machine tools technology were studied at EMO 2001 in Milan, Italy and gaps between Indian technologies and European technologies were assessed. Based on the study, improvements were made in selected units. This was followed by first ever group participation of Indian machine tool manufacturers in BIMU 2002 at Milan, Italy under the India-UNIDO banner business of around US$5.5 million was generated from the exhibition, representing 70% of the annual exports of the sector.

The NPDMI did not forget the Chinese machine tool market! Delegations attended the China International Machine Tool Show (CIMTS) and Canton Fair in 2002 and then CIMTS 2003, in Beijing. Commitments were made for orders worth US$ 1.3 million.

A technology survey was conducted during the International Manufacturing Technology Show (IMTS) 2002 at Chicago in September. Improvements needed in Indian machine tool design and quality were passed on to Indian industry. The National Manufacturing Technology Show (NMTS 2002) at Bangalore in August 2002 also provided a platform for small-scale Indian units to showcase their latest developments in machine tools and manufacturing solutions. To bring machine tool manufacturer and their sub-systems suppliers closer together, an interactive "Machine Tool Manufacturers and Vendors meet" was organized during NMTS 2002. Around 35 machine tool units participated in this meet.

Ongoing activities of the NPDMI to enable India's small and medium units to manufacture world class machines include technology upgrading for 30 manufacturers in the Punjab and Gujarat regions. These units will be part of the delegation to EMO 2003. A five month advanced machine tool design course is also being conducted at ICAMT headquarters, Bangalore. Participants have the opportunity to utilize high powered CAD workstations and state-of-the-art design and analysis software. Six courses have been conducted so far with over 170 engineers having been trained. This regular course is creating a new breed of machine tool technologists and having a noticeable effect in improving machine design. Training programmes on foundry technologies and materials engineering,

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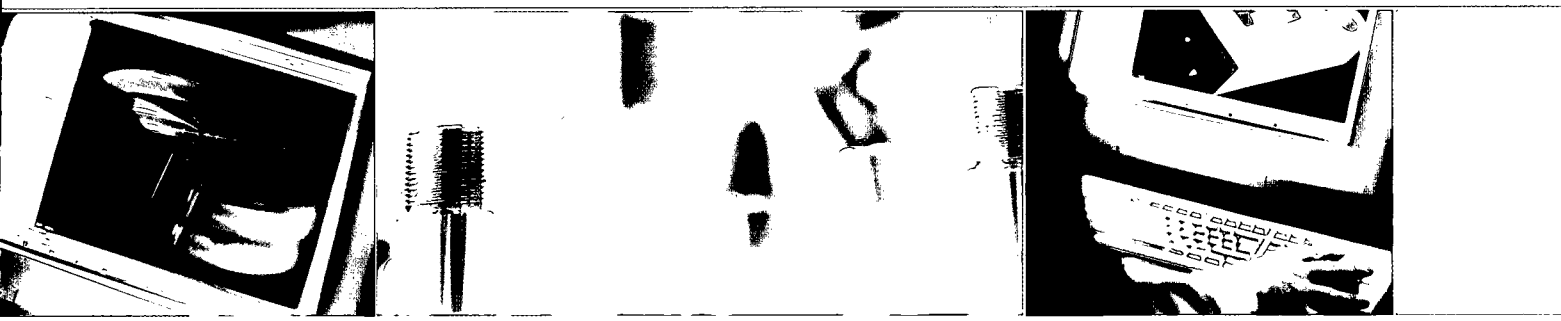


quality management systems, precision measurement and calibration equipment, heat treatment, machine tool ergonomics and aesthetics etc. also take place on a regular basis.

Another event to promote "cost competitiveness" and expose India to innovations and trends in the metal-cutting machine tool industry from all over the globe was a two-day International Seminar on Machining Technologies held in February 2003, focusing on three major aspects of manufacturing – volume production; machines and processes for die and mould making; and emerging technologies in machining processes.

According to India's Small Scale Industries Development Commissioner, Shri Suresh Chandra, "These national programmes have provided a much needed momentum in improving the productivity and efficiency of the sector to become globally competitive. The visible impact of these programmes has also caught the attention of industry representatives in other sectors. As a result, requests are being received regularly from different industry groups / representatives for technological interventions to improve their performance."

A spokesperson for the Indian Machine Tool Manufacturers Association summarized the achievement of the NPDMI in this way "Today no one, not even machine tool users, has doubts about the Indian machine tool industry. It has survived the onslaught of competition. Attrition has been arrested, change in demand patterns to CNC machine tools well mastered and a new foundation laid on which to exponentially grow further. This speed of change was possible, due to NPDMI".

India's Ministry of Small Scale Industry (SSI) selected the machine tool sector as a theme in the Fourth SSI Convention to be held on 30 August 2003.

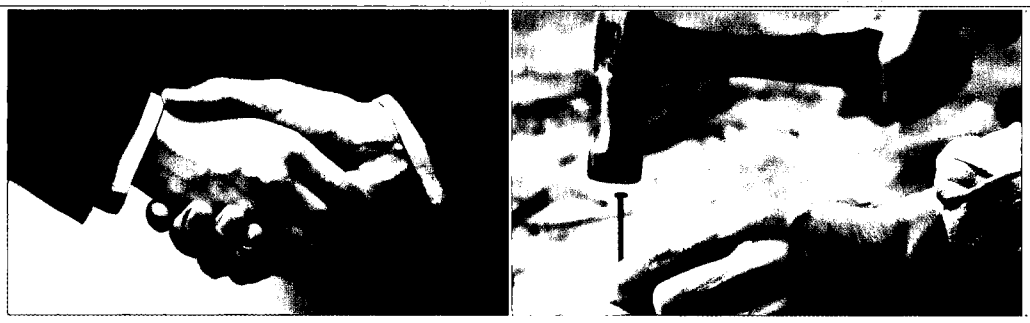
Concrete Results

□ "Made in India" brand on machine tools has gained respect, sector more competitive BIMU 2002 generated US$5.5 million in orders (70% of annual exports of sector) □ Commitments for orders worth US$1.3 million resulted from fairs in China □ Some 6 out of 10 manufacturers have appointed dealers in Italy, the other four negotiating □ Impact of NPDMI has resulted in requests from other sectors for similar programmes

SME Decree boost for industrial development

Lao People's Democratic Republic

Donors: Luxembourg, France, Republic of Korea



Situation Before *For a socialist country, Lao PDR's industrial sector has a relatively large incidence of private entrepreneurship. However, industrial organization in Lao PDR remains very weak. The Business Law defining the legal framework for conducting business in the country is incomplete, in some parts obsolete, and often inconsistent. Enterprise and industrial associations are still limited in scope, outreach, and lobbying capacity.*

As a result, there is no true partnership between Government, industry and civil society where a national consensus on industrial development objectives and strategies could be forged. Earlier attempts by prominent donors such as the German Government or the Asian Development Bank to establish an effective negotiation platform had been thwarted by the Lao Government's lack of interest in—if not outright aversion to—the idea of private industry having stronger bargaining power.

In July 2002 UNIDO, which had recently helped neighbouring Viet Nam to draw up a Decree on small and medium-sized enterprises (SMEs), provided similar assistance to the Lao authorities in drafting a proposal for an SME Decree.

Situation After The Decree provides for government support for the development of SMEs, focusing on the following:

- Creating an enabling regulatory and administrative environment for SMEs
- Enhancing SMEs' competitiveness
- Expanding domestic and international markets for SMEs
- Improving access to finance
- Encouraging and creating favourable conditions for the establishment of business organizations
- Encouraging entrepreneurial attitudes in society as a whole.

The Decree proposal has been keenly debated in government circles, particularly at the level of the National Committee for the Promotion of Commercial Production chaired by the Vice-Prime Minister for Economic Affairs, who recently gave it his final endorsement. The Decree is now poised to usher in a new era of public-private cooperation in industrial development in Lao PDR.

Concrete Results

The new Decree has been welcomed by stakeholders including the Lao Government, the Lao National Chamber of Commerce and Industry and affiliated business groups, and provincial government authorities The Republic of Korea has contributed US$ 200,000 for UNIDO's work in supporting the implementation of the SME Decree The Asian Development Bank, the World Bank and the International Monetary Fund have taken account of the new "SME Development Framework" in their respective programmes for Lao PDR Bilateral donors, including Germany and Japan, have indicated strong support for SME development in Lao PDR by making it one of their priority areas for cooperation

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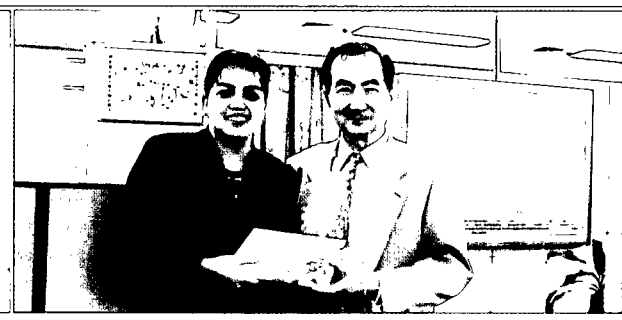
Delegate programme promotes investment

Philippines

Donors:
UNIDO ITPO Tokyo,
Philippines



Situation Before *The Government of the Philippines recognized a need to make the Japanese business community aware of the latest investment opportunities in the Philippines. The Board of Investments (BOI) of the Philippines wished to promote the country's comparative advantages in certain sectors, especially IT software. The BOI had only limited resources, so it asked UNIDO ITPO Tokyo for assistance and support so that it could meet with Japanese companies and persuade them to invest in the Philippines.*

Situation After Between April and May 2002, an investment promotion official from the BOI was invited to Japan under the ITPO Tokyo's Delegate Programme. The programme facilitated a series of face-to-face meetings between the delegate and potential investors during her eight-week stay in Japan. She also gave presentations on the latest investment opportunities at round table meetings organized in four cities.

There had been little awareness in the Japanese business community, particularly among small and medium-sized enterprises (SMEs), of the potential of the Philippine IT sector. The delegate remedied that situation by providing detailed information about the Philippines' IT capabilities. She also succeeded in changing the Japanese companies' general perception of the Philippines, which had been somewhat negative because of reports of increasing unrest in the country.

During the short programme period, the delegate carried out intensive investment promotion. Individual business meetings proved to be more effective than large-scale seminars because they enabled each company's queries and concerns to be dealt with. More than 10 potential projects have been identified, including both new investments and expansion of existing projects.

Concrete Results

□ Ten sectors promoted, with particular emphasis on IT software □ Meetings with 47 private companies and 28 organizations/institutions □ Round tables organized in four Japanese cities □ Delegate received 200 visitors at Philippine stand at JETRO Business Fair □ Seven companies identified as prospective new investors □ Four companies already present in the Philippines expressed intention of expanding operations there

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Clothing industry: measuring up to international standards

Sri Lanka

Donors:
Norway, Japan

Situation Before *The clothing industry is Sri Lanka's largest export sector, embracing over 800 companies and 300,000 employees. With the gradual abolition of the Multi-fibre Arrangement (MFA) by 2005, studies predict that as much as 60% of the Sri Lankan clothing industry could be in danger. It faces three major challenges:*

(a) Without the benefit of the MFA quota, the industry will have to become more efficient, through reduced costs, improved quality and rapid delivery capability; (b) In an increasingly rules-driven global trading system, access to export markets means compliance with WTO agreements, exporters have to prove conformance with international product, quality, safety and environmental standards, i.e. the country needs an internationally recognized conformity assessment infrastructure; (c) Today's global clothing market must respond to rapidly changing fashions, so flexible production systems and the ability to deliver at short notice are now important factors in determining competitiveness.

The UNIDO Integrated Industrial Development Programme, with the strong support of the Sri Lankan Government and significant funding from the Governments of Japan and Norway, set about helping the country's clothing exporters meet these challenges.

Situation After A study of the sector was jointly undertaken by UNIDO and Japan International Cooperation Agency (JICA) to assess the macro-level challenges facing the clothing industry. A pilot restructuring project was launched, covering 20 companies, to address production efficiency and marketing issues.

The Textile Training & Services Centre (TT&SC) testing laboratories were upgraded and obtained international accreditation. The TT&SC can now issue the credible test certificates that are mandatory for participation in international trade. Subsequent demand for TT&SC's services was so strong that its income increased by 51% and the Centre is now on the way to becoming self-sustaining.

Sri Lanka is also in a better position regarding the ISO 14000 series of international standards on environmental management. The national capacity for ISO 14000 development and certification was enhanced through the training of auditors, consultants and a pilot group of 10 enterprises.

Concrete Results

:: TT&SC assisted in establishing a "Quick Response Centre" (QRC), demonstrating benefits of the Modular Production System (MPS) :: Training programmes on MPS :: Sectoral study on competitivenes :: Enterprise competitiveness enhanced :: Some 100 middle mangers trained in operations management, costing, marketing and quality :: TT&SC textile testing laboratory upgraded and internationally accredited :: Technical Barriers to Trade overcome through accredited laboratory :: ISO 14000 national certification capacity developed :: Some 20 auditors and 20 consultants trained in ISO 14000 :: Ten enterprises assisted to comply with ISO 14000

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Viet Nam

Donors:
Switzerland
(Swiss Secretariat for
Economic Affairs)

Situation Before *Following decades of war and international isolation, Viet Nam's "doi moi" (renovation and modernization) programme gained momentum during the early 1990s, and rapidly boosted the fortunes of thousands of state-owned enterprises and small businesses. Manufacturing output grew nearly three-fold over the decade, a feat unmatched by any other economic sector.*

However, growth came at a severe cost to the environment: in the national drive for rapid industrialization, firms often disregarded the environmental consequences of their activities. Wastewater and untreated effluents from industrial enterprises flowed into lakes, rivers, canals, and ultimately the sea: 90% of enterprises established before 1995 had no wastewater treatment facilities. Factories routinely spewed out lead and nitrous oxides, sulphur dioxide and carbon monoxide.

Situation After To tackle these huge problems, UNIDO founded the Viet Nam National Cleaner Production Centre (VNCPC) in 1998, and endowed it with capacities to raise awareness on cleaner production (CP) principles and benefits, deliver academic training courses on CP and undertake in-plant assessment of CP options.

VNCPC's list of achievements is impressive. It has conducted training sessions on CP, organized seminars, and carried out in-plant assessments. By implementing the Centre's recommendations on CP, 12 textile enterprises cut their costs by an estimated US$ 500,000 and reduced by about one-third their wastewater discharge, chemicals use and fuel consumption.

Trung Thu Textile in the suburbs of Hanoi is just one example of the many companies to have benefited from VNCPC's assistance. In 1999 it faced an uncertain future: its second-hand machinery was obsolete; energy consumption and materials waste were high; production costs were running out of control. Thanks to a comprehensive training programme and a detailed in-plant assessment of CP options, the company successfully re-engineered itself and greatly improved its bottom-line results. Higher-quality products and a general environment-friendly attitude helped it to win a large order from a Korean company in June 2003.

CP is now firmly on the country's policy-making agenda, thanks to VNCPC's seminal contributions to the National Environment Strategy 2000–2010 and the CP National Action Plan 2000–2005.

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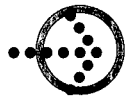
Concrete Results

□ Some 35 in-plant assessments, of which 12 in the textile sector and 9 in the pulp and paper industry, conducted between 1999 and 2002 □ Public awareness of CP raised through seminars in 16 provinces, attended by 1,150 participants □ Training conducted by VNCPC amounting to 2,327 person-days □ CP introduced as an independent subject in five national universities □ Some 86 future consultants coached in sector-specific CP assessment



Colombia
Achira biscuits find export market

Guatemala
MINECOnet web portal for SMEs

Mexico
Chiapas Entrepreneurship Programme: model for other states

Peru
Camelid herders moving up value chain

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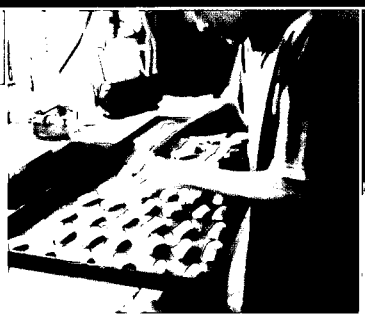
Colombia

Donors:
UNIDO and Colombia



Situation Before *The achira biscuit is a traditional product that until recently was scarcely known outside the Colombian regions of Cundinamarca, Huila and Tolima. It is made by one of the* minicadenas, *or small local business chains spread throughout these three regions. The achira producers were not well organized. The product had a very limited market and was not realizing its full potential as an alternative to illicit crops.*

In late 2000, the Integrated Programme for Colombia made an assessment of 54 producer groups in Colombia. The achira minicadena *came to the fore as a worthy candidate for assistance. A SWOT (strengths, weaknesses, opportunities, threats) analysis was carried out and a programme was designed to support the small producers in these* minicadenas.

Situation After The main ingredient of achira biscuits is extracted from the tuber of the achira plant. The price of achira is much higher than that of maize, yucca or similar crops. The UNIDO project has helped to increase the market for the biscuits, which in turn is encouraging growers to plant more achira. Already the effects have been seen in Cundinamarca and Huila, where in some places, thanks to this higher demand, achira is replacing illicit crops. Through the project, a national financial insititution has opened credit lines for the achira producers. In order to boost productivity, a manual on improved processing of the achira tuber has been published by UNIDO in collaboration with a national rural research institute. People involved in all aspects of this business have been brought together in national and regional committees. This has resulted in coordinated efforts towards increasing the efficiency of production, better marketing and better relations with suppliers.

Concrete Results

■ Number of people employed in the achira *minicadena* increased by 30% ■ Achira biscuits on sale in most supermarket chains all over Colombia, and exports started to Canada, Cuba, Ecuador and the United States ■ Marketing strategy drawn up, and domestic market expanded ■ Four new products developed and now on the market ■ Integrated management technologies developed and implemented ■ New achira variety developed, "Clon Verde 1" ■ Impurities in the product reduced by 50% ■ Packaging improved, to increase product's shelf-life

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MINECOnet web portal for SMEs

Guatemala

Donor:
UNIDO

Situation Before *Small and medium-sized enterprises (SMEs) in Guatemala, as in most of the less-industrialized countries, find it difficult to stay up to date on the latest developments relevant to their business. They lack the necessary resources and knowledge to search for appropriate and reliable information that would help them become competitive in local and international markets.*

Support available to the private sector, and particularly to SMEs, is inadequate and sources of support are scattered around the country. In general, the flexibility and dynamism of Guatemalan SMEs enables them to survive even the sharpest fluctuations in the country's economy, but they need access to support services in order to enhance their productivity and reach new markets. It became clear that there was a need for a national information network for SMEs.

Situation After To initiate the network, UNIDO's Integrated Programme for Guatemala set up MINECOnet, a web portal for SMEs. MINECOnet, inaugurated in November 2002, is managed by the Ministry of Economy's Informatics Department.

A Thematic Content Committee, comprising technical and professional staff, meets periodically to discuss what kind of information should be made available through the portal.

The MINECOnet portal has entry points and gateways to national and international information resources and services. Local SMEs have been provided with a place on the Internet where they can promote their products and services

In the next phase, MINECOnet will be enlarged with the participation of several additional stakeholders, including national SME support institutions. It is also planned to provide training for SMEs, through the UNIDO CD ROM "E-readiness" SME training tool.

Concrete Results

■ Integration of national industry, business and public-sector information resources and services, with links to other national and international agents ■ Networked resources and services have been made available to a wide range of industrialists and other entrepreneurs ■ Training in connection with MINECOnet is provided at three levels: awareness and orientation for top decision-makers; training for users; and training for system developers and administrators ■ Optimum use has been made of the country's existing infrastructure, so that the network was quickly set up to provide useful, cost-effective services to a large potential community of SMEs

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Chiapas Entrepreneurship Programme: model for other states

Mexico

Donors:
UNIDO and Mexico

Situation Before *Despite the Mexican Government's efforts to bring about economic and social recovery during the 1990s, many areas remain marginalized: the south eastern state of Chiapas most of all. To add to an already desperate situation, it was severely affected by Hurricane Mitch in November, 1998.*

Food processing and handicrafts are important activities in Chiapas, characterized by micro and small-scale enterprises, many of them owned and run by women. To escape the poverty trap, these enterprises need to produce goods that can be sold competitively on national and international markets.

Market forces have not produced an entrepreneurial class able to do this and many basic steps need to be taken before such a point is reached. Coordination between the relevant public and private sector agencies needs improving. Modern management methods and international practices in food safety and quality need to be introduced. Most enterprises lack the knowledge and skills needed for successful marketing.

UNIDO launched a project to develop entrepreneurship in Chiapas through capacity-building for public and private institutions in all aspects of production, management and marketing.

Situation After Twenty two institutions have attended training courses and been given assistance in the drafting and concluding cooperation agreements. Fifty-four representatives were trained as trainers in marketing, management and technical aspects of production.

The ability of women entrepreneurs to move their operations from the informal to the formal sector was improved by developing their skills in organizing supply chains for textile raw materials and enhancing their marketing capabilities.

A sustainable food safety network was set up, targeting women in food-processing enterprises. Several cooperative arrangements have been established between entrepreneur groupings and institutions. A group of women operating in the food business are developing their own skills with the intention of providing managerial services to support enterprise development.

Training programmes are organized for food-processing enterprises, covering production techniques, food technology, hygiene, safety, quality, product development, business management and marketing.

Concrete Results

■ 100 entrepreneurs trained in production, entrepreneurship and marketing ■ Competitiveness of women entrepreneurs improved ■ Permanent technical support available to selected groups of women, addressing individual problems ■ 262 rural women entrepreneurs have been trained ■ Ability to prepare a business plan gave better access to credit ■ Assistance in improving business and financial management capacities now available ■ Handicrafts presented at international fairs ■ Handicrafts in greater demand by tourists ■ A market opportunity study presented to financing institutions ■ Direct marketing processes through commercial channels are in place ■ The programme will be repeated in other states

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Camelid herders moving up value chain

Peru

Donor:
UNIDO

Situation Before *Camelid herders make up the majority of the population in Peru's high altitude areas, between 2,700 and 4,800 metres above sea level. There are 167,000 families in scattered communities, 100,000 of these families live in conditions of extreme poverty. Peru has over 8 million camelids, representing 54% of the world's total.*

Almost 80% of the country's camelids (comprising llamas and vicuñas) are owned by small herders, the remainder by private companies. The marginalized nature of the herders's lives limits their ability to maintain and improve the genetic quality of their livestock, and many of the best specimens are lost through smuggling.

Many camelid herders are also artisans, who transform both the fibre and the skins. Problems facing these artisans as well as micro and small enterprises include: limited mechanization, low productivity, low product quality, poor design and lack of research and development facilities. Moreover, the commercialization of products based on camelid fibres is underdeveloped, resulting in low incomes for local producers.

In May, 2002, a UNIDO project was initiated to help artisans and micro and small enterprises enhance their productivity and their competitive position on local and international markets, and thus increase their incomes.

Situation After UNIDO established two Technology Innovation Centres (Centros di Innovatión Technógica (CITE)) for camelid-fibre textiles at Puno and Huancavelica.

Individuals and enterprises have access to new technologies, tools and processes and information on best practices on production, processing, storing and commercialization of camelid fibres. This enables them to increase their productivity and performance, improve design and quality of products, and apply improved management and marketing practices.

Camelid herders are forming groups and sharing their new knowledge with other micro and small enterprises and individual herders. Linkages are also being established between local producers and partners in both industrialized and developing countries.

The next important step will be to establish a well-organized, sustainable procedure for taking these locally made products on to international markets.

Concrete Results

■ Two Camelid Technology Innovation Centres – CITEs established ■ Two mobile testing and quality control laboratories providing micro and small enterprises and individual farmers with on-site quality control ■ 3,300 herds improved: 10% total alpacas in breeding programme, with indirect effect on 60% of all alpacas in Peru, technology transfer directly benefits 8,000 farming households ■ Stockpiling and Fibre Sorting Facility at Huancavelica increased revenues of 250 livestock breeding households by 40% ■ 100 producer associations in Puno and Huancavelica with exporting capabilities ■ "Huancavelica to the World" exhibition has resulted in first export order

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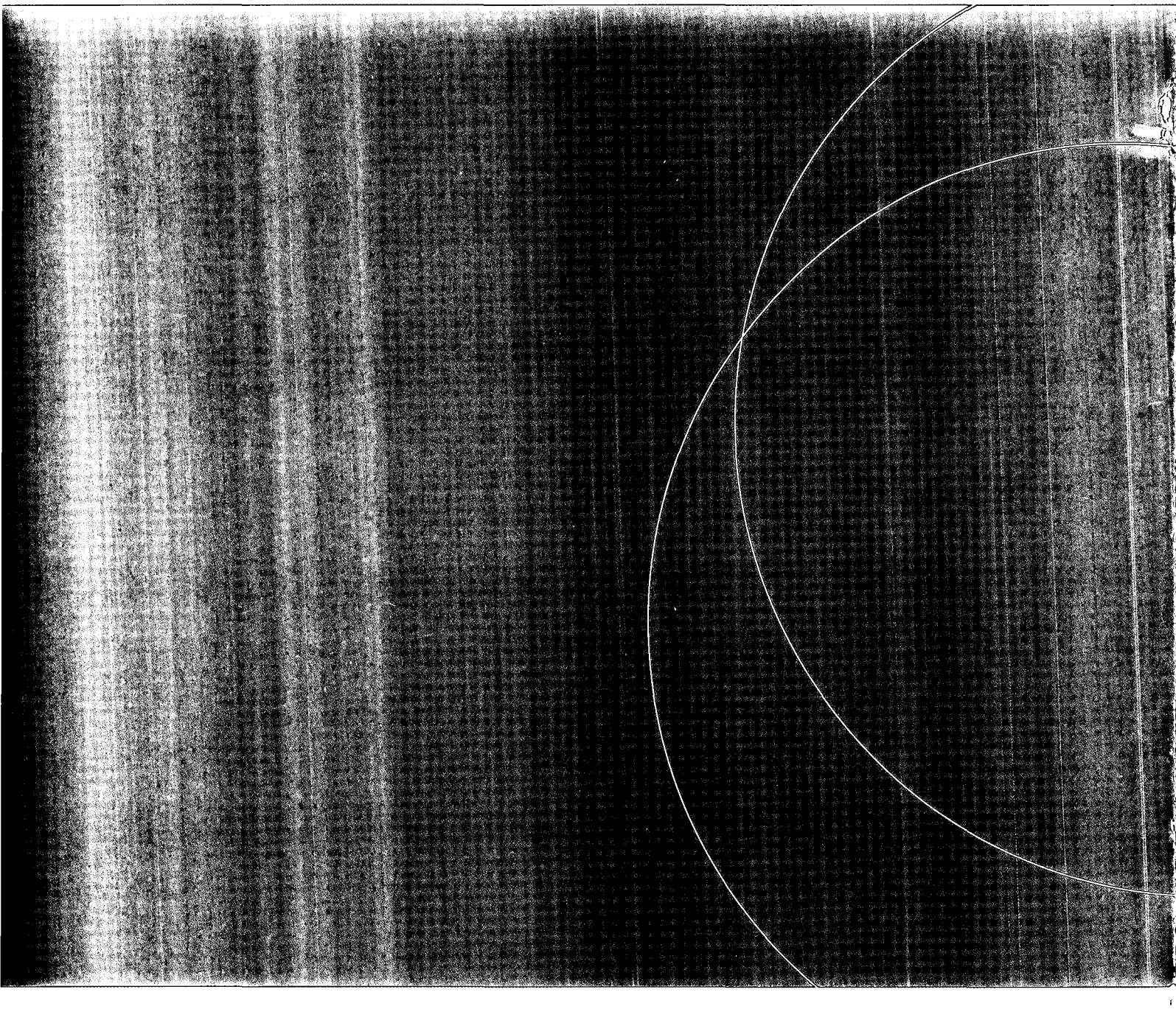

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