

ENVIRONMENTAL UPGRADING OF COMPANIES IN MAGHREB AND MASHREK

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Sustainable Business Associates has launched the DELTA programme in 1996 to help companies in the Maghreb and Mashrek region with their environmental upgrading, by disseminating low-cost eco-efficiency tools that can reduce both the environmental impact of companies and lead to important economic savings. For instance, out of a 100 companies who implemented corrective measures, 80% spent less than 2'000 USD to improve their environmental performance and saved at least 2'500 USD in the first year following their action. An analysis based upon 60 case studies shows that simple tools can lead to easy-to-implement and low-cost corrective measures, improving both the eco-nomic and eco-logic performances of companies.

Companies located on the coastal areas of the Mediterranean Sea obviously contribute to the preservation or destruction of its natural environment. While international pressures and awareness grow, environmental concerns play an increasing role in the daily business operations of enterprises. Civil society in these countries is also becoming more aware of the national and international stakes related to the environment and thus calls upon business to assume wider responsibilities.

Eco-efficiency : a driver toward action

Environmental protection is generally perceived as a peripheral concern by SMEs in South and East Mediterranean countries (SEMC) and the drivers that usually lead companies towards implementing environmental management are insufficiently constraining. In order to encourage SMEs in this region to apply environmentally sound principles, SBA bases its efforts on the principle of eco-efficiency.

Developed by the World Business Council for Sustainable Development, eco-efficiency is a management philosophy, which encourages business to search for environmental improvements that yield parallel economic benefits. By linking economy and ecology, it translates the environment into economic value. Advocating that improving environmental performance offers an economic payback can be a serious incentive for companies who do not give value to environment as such. Eco-efficiency appears as the perfect idea: reducing waste and pollution, and using fewer energy and raw material resources is obviously good for the environment. It is also self-evidently good for business because it cuts companies' costs.

Sustainable Business Associates (SBA)

Founded in 1995, SBA is an international Swiss-based non governmental and non profit organisation. Its aim is to transfer to SEMC environmental management tools, knowledge & expertise, conduct training courses and offer a broad range of services related to environmental management with the active commitment of local users (i.e. companies, especially small and medium sized enterprises). In this respect, SBA has launched the DELTA Programme (*Developing Environmental Leadership Toward Action*) to sensitise industrialists to environmental risks and opportunities and to federate managers into national associations of Business & Environment, the DELTA Networks.

The DELTA Programme

The DELTA Programme, launched in 1996, has the global objective of environmentally upgrading companies in the Mediterranean basin so that they can attain certain levels of eco-efficiency and improve their environmental performance. It relies on the principle that sustainability ensures social and economic stability in the long-term by enhancing co-operation among countries and involving various stakeholders. Rather than promoting mere technology transfer, environmental knowledge transfer is primordial to ensure and develop environmental awareness and sustainability in the region. The DELTA Programme requires the voluntary participation of local actors. It also necessitates a skilled pedagogical team able to pass on environmental knowledge to its target audience. In fact, through capacity-building and training, this programme develops and disseminates new and easy-to-implement environmental management tools and instils a systematic approach to minimising waste, conserving water & energy, preventing pollution, reducing material use. It also offers technical assistance that can facilitate the transfer of cleaner technology & know-how and stimulates the launch of pilot projects to develop local competence and practical experience in integrating eco-efficiency principles & practices into industrial operations

The DELTA Networks

SBA has developed a network of collaborators composed of national associations of managers and environment consultants, the DELTA Networks, to plan, implement, and promote the activities of the DELTA Programme.

SBA's approach consists of organising seminars (more than 25 to this day) to train local experts, resource persons, and to introduce industrialists with the different eco-management tools. The aim is to hand out the necessary knowledge to the DELTA Networks and allow them to organise their activities independently. With the help of their respective DELTA Network, the resource person is responsible on the national level for the dissemination of eco-efficiency principles by documenting cases of application of the tools from several industrial sectors and replicating technical seminars. The target audience is composed of engineers, production managers of SMEs as well as consultants, representatives of local authorities, industrial associations and unions, NGOs, etc. Due to their professional position, these people are expected to have a multiplier effect. In this respect, SBA training courses are intrinsically sustainable, as individuals are considered the driving force toward action and the outcome is expected to be collective. At the same time, he/she provides technical assistance to SMEs who wish to implement the eco-management tools.

Eco-management tools

According to the principle of eco-efficiency, the environmental management tools presented in the frame of the DELTA Programme are tailor-made for SMEs, do not necessitate external assistance, and are free of charge. They mostly drive to direct financial benefits. This usually convinces managers of the usability and easiness of undertaking systematic environmental management. The DELTA environmental management tools generate savings without necessarily inducing the purchase of machines and new technologies. They are easy-to-implement & inexpensive and are a first step towards environmental certification such as ISO 14'001 or EMAS. They are available in Arabic, English, French and Turkish to facilitate dissemination.

- ***The Good Housekeeping Guide (GHK)***: This environmental management tool was developed by SBA and the German Technical Co-operation (GTZ/P3U). It is destined to companies that have limited financial resources, small scale operation, low technology level, untrained manpower and limited management capacity. It is set up in the form of checklists covering 5 areas (raw materials and supplies, waste, materials and products

transfer, water and energy) that can help managers identify significant environmental aspects of their activities. GHK also proposes calculation sheets to identify the potential savings and waste, the necessary investment and running costs for corrective measures.

- **Ecomapping:** Elaborated by the Association Belge des Eco-Conseillers (ABECE, Belgium), this visual tool enables managers and staff to assess the environmental performance of a micro-company. By drawing a series of maps (sketches of the plant), one can quickly locate the most significant environmental hazards in the company and pinpoint areas for improvement. The maps give an overall vision of the status of environmental management in the company.
- **Self-Appraisal Guide (SAG):** Elaborated by Entreprises pour l'Environnement (EPE, France), this self-appraisal methodology has been conceived for bigger companies who have already made a first step toward environmental upgrading. By systematically filling in technical sheets, the guide enables industrialists to identify the environmental impact of their company and its managerial practices, which will then lead to the setting-up of a structured and operational action plan.

Application of eco-management tools within companies

After the technical seminars and training of resource persons, knowledge transfer is meant to lead to tangible results and environmental improvements. In this field, the adopted strategy seems to be successful as more than 100 companies (we know of) have successfully applied Good Housekeeping measures over the past three years. The resource persons play a key role as they do not only assist enterprises but also collect information about the implementation stage. They have to document successful applications of the Good Housekeeping Guide as well as of the other environmental management tools. In this respect, the resource persons follow up with companies to obtain all information and figures on the application. With the help of SBA, they write the text and it is printed into a double-sided technical sheet. The objective of printing technical sheets is to broadly disseminate results that can serve as positive examples for other companies.

Implementation of corrective measures

With the help of the Good Housekeeping Guide, since 1998, more than 100 SMEs have identified 122 possibilities to improve their environmental performance. These improvements are basically good housekeeping measures, i.e. practical measures based on common sense, which do not necessarily involve mere technology changes. They can be classified in terms of eco-efficient options, as follows:

Eco-efficient options	Identified corrective measures Total:122	
	Number	%
1. Good Housekeeping (*)	28	23%
2. Input material change	3	2%
3. Better process control	18	15%
4. On-site recovery & reuse of waste (recycling)	27	22%
5. Equipment/hardware modifications/replacement	17	14%
6. Change of process technology	5	4%
7. Production of useful by-products	24	20%
8. Product modification	--	0%
Total	122	100%

Out of 122 identified possibilities of improvement, 67 lead to the successful implementation of corrective measures, which have been documented by SBA in the form of technical sheets (case studies). In terms of eco-efficient options, these 67 implemented measures can be sorted out as follows:

Eco-efficient options	Implemented corrective measures (67 out of 122)	
	Number	%
1. Good Housekeeping ^(*)	15	22%
2. Input material change	2	3%
3. Better process control	14	21%
4. On-site recovery & reuse of waste (recycling)	15	22%
5. Equipment/hardware modifications/replacement	8	12%
6. Change of process technology	4	6%
7. Production of useful by-products	9	13%
8. Product modification	--	0%
Total	67	100%

() The option 'Good Housekeeping' must be understood as activities related to general management and logistics, maintenance of the plant out of the process, health & safety, training of personnel, etc.*

Results reveal that most of the identified and implemented measures were managerial and organisational improvements (good housekeeping, better process control, on-site recovery). More complex and technical options, such as change of input materials, modification of end product and measures to upgrade the process technology, were scarcely considered by companies. This is not surprising, as such measures usually imply important initial investments and a long payback period.

As a rule, managers of the companies have tried to find home-grown and easy-to-implement solutions. The DELTA Networks' and SBA's consultants only contributed by giving the incentive to consider environmental issues, highlighting the areas to be tackled first and sharing their regional experience. In most of the cases, the main assumption for the managers was the financial and technical short-term capacity of the company.

In terms of financial results, a total investment of 97'000 USD has been made by 60 companies to implement Good Housekeeping corrective measures. The global annual savings so far amount to 250'000 USD (cf. illustration 1). When analysing each company individually, initial investments are normally comprised between 0 and 20'000 USD. It is relevant to note that 80% of the companies invested less than 2'000 USD (cf. illustration 2).

This shows two things: first, companies are not willing to spend important amounts of money for their environmental management, and second the Good Housekeeping Guide does allow significant savings with low initial investments.

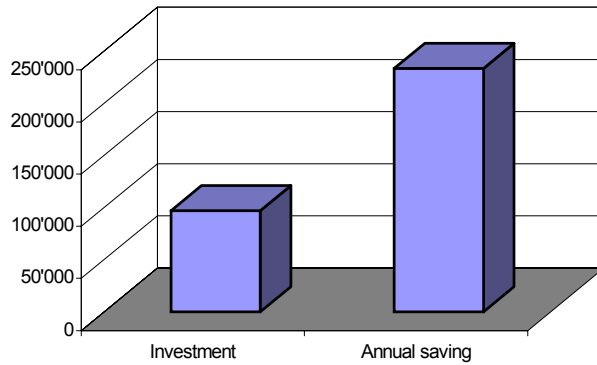


Illustration 1:

Good Housekeeping applications in companies

Total amount of Investment and annual saving (in USD), 1999-2000

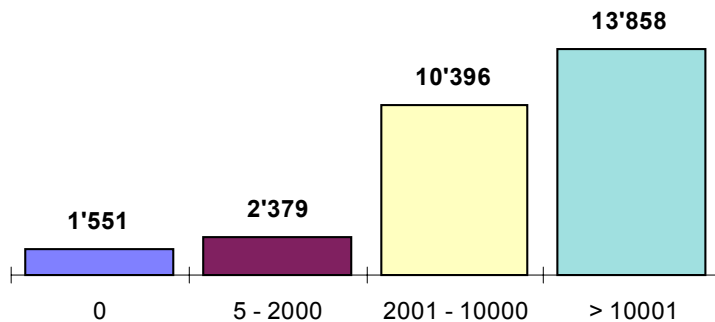


Illustration 2:

Good Housekeeping applications in companies

Average annual savings per initial Investment (in USD), 1999-2000

Conclusion

SBA transfers environmental technology and knowledge by actively involving users, i.e. industrialists and managers structured in the form of 'Business & Environment' associations, the DELTA Networks. In fact, SBA plays the role of the animator, which consists of stimulating creativity and change by blowing energy and ideas to the DELTA Networks from outside. In this respect, SBA actively contributes to the overall transformation of the identity of the private sector in South and East Mediterranean Countries.

After 7 years of existence, the success of the DELTA Programme is indubitable. Indeed, it has provided encouraging results which lead to the belief that the selected methodology offers a good alternative to classical technology transfer methods. The concept of eco-efficiency is perfectly adapted to Mediterranean countries as it is a major incentive. Exchange of experiences and word-to-mouth advertising both contribute to multiply voluntary actions based on eco-efficiency principles and create a wider and permanent environmental conscience at medium term.

More than 100 companies have reported their results to SBA. They identified 122 eco-efficient options and implemented within a short period 67 of these options. Most of the

measures were managerial and organisational improvements. More complex and technically advanced options were scarcely considered by the companies. The main assumption for the managers is the financial and technical short-term capacity of the company.

On several occasions, SBA has noticed that, no matter how motivated the foreign experts are, a programme for sustainable development has no chance of success as long as the project is not supported by local personalities. For this reason, and in order to avoid mistakes made by others, SBA puts local participation on top of its priority list and regularly adapts its activities to local needs expressed by the beneficiaries of the programme.