

Programme d'appui scientifique à la normalisation et aux réglementations techniques

GERMAINE (II)
ECOMAPPING: International case studies
and Training for Trainers kit

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SUMMARY

Globalization of the world economy leads towards fast growing standardisation. Therefore within world-wide supply-chain management small SME will have to show in the nearest future a track record of regular positive environmental management, even in the regions of emerging economies. Already today, global sourcing of goods and services imposes labels, standards, management tools and control systems. Furthermore greening of government programmes and cooperate green purchasing schemes underpin this trend.

But it is a fact worldwide, that traditional ways of implementing quality and environmental management, labels and standards do not fit into the reality a micro-enterprise (< 10 employees). Therefore it is needed to lower the barriers of access to tools and systems. Environmental management tools have to be simple, empowering and participatory, without requiring expensive consultancy expertise. In this way, the EMS helps the enterprise to become a learning organisation.

Introducing regular systematic environmental management that integrates environmental protection and sustainability into the day-to-day operations of a very small company is possible. "Light" management tools like Ecomapping proof this hypothesis.

Ecomapping is an easy, creative process of "scanning" environmentally relevant topics and practice directly in the physical reality of the shop-floor. It requires basically only observation, judgment, communication, patience and very little documentation. It helps in target setting and monitoring progress made in environmental performance as well as in the training and raising awareness of both employer, managers and workers.

Ecomapping has been developed by Heinz Werner Engel in 1998. From the very beginning, the Eco-mapping tool was intended to be "shareware" and therefore freely distributed by INEM (International Network for Environmental Management) worldwide. Conceived as a do-it-yourself-tool it is used in Europe and over the world now by a variety of actors.

The Ecomapping Brochure has been downloaded more than 20 000 times from the INEM server. There is a growing number of successful uptakes of Ecomapping worldwide. The need for a step by step training for trainers on Ecomapping was expressed by a lot of organisations worldwide.

Therefore, the overall aim of this project was to exchange information among the different users and build training capacity by :

- Compiling and publishing 12 international case studies
- Elaborating a training manual for trainers
- Communicating through a website

Ecomapping methodology and application was presented to the OECD, the EU, ISO TC 207, UNEP. This to lead towards the recognition of Ecomapping by standards setting organisations.

The Ecomapping Network has submitted an expression of interest for the 6th EU R&D Framework program and, another request to the Belgian Science Policy for integrating Ecomapping methodology into information technology (IT).

Key words

Environmental management, EMAS, ISO 14001, environmental management control panel, environmental performance indicators, public sector, services companies, Small and Medium sized enterprises

RESUME

Aujourd'hui, la globalisation entraîne une tendance croissante à utiliser des standards dans les produits, les processus, le management et l'information. Dès lors, intégrées dans des chaînes de fournisseurs mondiales, les PME devront démontrer dans un futur proche un antécédent crédible de management environnemental efficace et cohérent, même dans les économies émergentes. Déjà aujourd'hui, la globalisation des sources d'approvisionnement impose des labels, des standards, des outils de management et des systèmes de contrôle. De plus, les programmes de greening des administrations publiques et la politique publique d'achats « verts » renforcent cette tendance.

Mais c'est un fait au niveau mondial : les méthodes traditionnelles d'implémentation de gestion de la qualité et de l'environnement, des labels et des standards ne correspondent pas à la réalité d'une petite entreprise. (< 10 salariés).

Il est dès lors nécessaire d'abaisser les barrières des outils et des systèmes. Les outils de management doivent être simples, participatifs, accroître la capacité d'action, ne pas nécessiter l'expertise de consultance externe. De cette manière, le système de management environnemental aide l'entreprise à devenir une entreprise apprenante.

Introduire une gestion environnementale qui intègre la protection environnementale et le développement durable dans le travail au quotidien d'une petite entreprise est possible. Les outils de management « légers » comme Ecomapping le prouvent.

Ecomapping est un processus créatif et simple d'évaluation des pratiques, des aspects environnementaux directement liés à la réalité physique d'un atelier. Il requiert simplement de l'observation, du jugement, de la communication, de la patience et un peu de documentation.

Il aide à définir des cibles et à contrôler les progrès réalisés dans les performances environnementales autant que dans la formation et la sensibilisation des employés, cadres et travailleurs.

Ecomapping a été développé par Heinz Werner Engel en 1998. Il était convenu depuis le tout début que l'outil Ecomapping devait être un « shareware » et, dès lors, distribué gratuitement par INEM (International Network for Environmental Management) partout dans le monde.

Conçu comme un outil « do-it-yourself », il est aujourd'hui utilisé en Europe et dans le monde par un grand nombre d'acteurs.

La brochure Ecomapping a été téléchargée plus de 20000 fois sur le serveur de l'INEM. Le nombre d'applications réussies d'Ecomapping est sans cesse croissant. Le besoin d'un manuel de formation pour formateurs consacré à Ecomapping a été exprimé par un grand nombre d'organisations de par le monde.

Dès lors, l'objectif global de ce projet était d'échanger de l'information entre les différents utilisateurs et d'enrichir la méthode par :

- La compilation et la publication de 12 études de cas internationaux
- L'élaboration d'un manuel de formation pour formateurs
- La communication à travers un site web

La méthode Ecomapping fut présentée à l'OCDE, l'Union Européenne, l'ISO TC 207, l'UNEP. Tout ceci dans le but d'aller vers la reconnaissance d'Ecomapping par des organisations de standardisation.

Le réseau Ecomapping a soumis une expression d'intérêt pour le 6^{ème} Programme Cadre R&D de l'Union Européenne, et une autre auprès de la Politique scientifique fédérale pour l'intégration de la méthodologie Ecomapping dans les technologies de l'information (IT).

Mot clés

Management environnemental, EMAS, ISO 14001, tableau de bord environnemental, indicateurs de performance environnementale, secteur public, entreprises de services, PME

SAMENVATTING

Globalisering leidt tot een groeiende tendens om normen toe te passen voor producten, procedures, management en informatie. Van nu af aan moeten de KMO's die zijn opgenomen in het kader van wereldwijde leveranciers, op korte termijn een kredietwaardig en efficiënt milieubeleid moeten kunnen aantonen, zelfs in ontwikkelingslanden. Reeds vandaag de dag worden door de globalisering bij het leveranciersgebeuren labels, normen, managementbeleid en controlesystemen geëist. Bovendien wordt deze tendens nog versterkt door "greening" programma's van overheidsinstellingen en openbare "groene" aanbestedingen.

Maar het is een wereldwijd bekend gegeven, dat de traditionele methoden van het invoeren van een kwaliteits- en milieubeleid, labels en normen, niet corresponderen met de dagelijkse realiteit van een kleine onderneming (< 10 werknemers).

Het is dus noodzakelijk de drempel te verlagen en meer toegankelijker middelen en systemen toe te passen. Managementmiddelen moeten simpel, opbouwend en participatief zijn, zonder dat deze een externe raadpleging vereisen. Op deze manier kan een milieubeleidsysteem het bedrijf ondersteunen en een "lerende" organisatie worden.

Het is mogelijk een systematisch en consequent milieubeleid in te voeren, waarbij milieubescherming en duurzame ontwikkeling in het dagelijks functioneren van een kleine onderneming wordt opgenomen.

Ecomapping is een simpel, creatief proces van "milieuscanning", relevante items en praktijken in de fysische realiteit van de werkvloer. Dit vraagt eigenlijk alleen maar observatie, beoordeling, communicatie, geduld en heel weinig documentatie. Het ondersteunt zowel het bepalen van doelstellingen en monitoringprocedures van milieuprestaties als de milieuopleiding en verhoogt de waakzaamheid van werknemers, managers en arbeiders.

Ecomapping werd ontwikkeld door Heinz Werner Engel in 1998. Vanaf het allereerste begin was Ecomapping bedoeld als "shareware" en in dit kader wereldwijd verspreid door het INEM (International Network for Environmental Management). Opgezet als een "doe-het-zelf" middel, wordt het momenteel in Europa en wereldwijd door vele betrokkenen toegepast.

De Ecomapping brochure werd meer dan 20.000x gedownload van de INEM website. Wereldwijd is er een groeiend aantal successtories gemeld dankzij het gebruik van Ecomapping.

In dit licht gezien, was de algemene tendens meer en meer gebruik te maken van het uitwisselen van informatie tussen gebruikers en een trainingsprogramma op te zetten:

- Samenstellen en publiceren van 12 internationale "case studies"
- Ontwikkelen van een trainingsmethode voor formateurs
- Communicatie d.m.v. een website

De Ecomapping methodologie en toepassing werd gepresenteerd aan het OECD, de EU, ISO TC 207, UNEP.

Dit in het kader van een erkenning van Ecomapping door norminstututen.

Het Ecomapping Network heeft haar belangstelling getoond voor deelname aan het 6^e EU R&D Framework programma, alsmede het verzoek aan het Federaal wetenschapsbeleid om de Ecomapping methodologie op te nemen in de informatie technologie (IT).

Sleutelwoorden

Milieubeleid, EMAS, ISO 14001, boordtabellen voor milieubeheer, indicatoren voor milieuprestaties, openbare sector, dienstverlenende bedrijven, kleine en middelgrote ondernemingen.

1. INTRODUCTION

As the world economy leads towards fast growing standardisation, in the world-wide supply-chain also small SME will have to show in the nearest future a track record of regular positive environmental management, even in the regions of emerging economies.

Empower SME's, adapt management tools, enable SME's to participate in supply chain management and in green procurement programmes.

- **Small is beautiful ?**
SME's and micro enterprises are the economic backbone of most economies. Among the 80 million SME's worldwide they account for 90% of industrial fabric and contribute in a significant way to economic growth, social cohesion, employment, regional and local development. The majority of these companies employ less than 5 people .
- **Biodiversity in management tools ?**
Today the global world economy leads towards fast growing standardisation in products, processes, management and information. Global sourcing of goods and services imposes labels, standards, management tools and control systems. Furthermore greening of government programmes and cooperate green purchasing schemes underpin this trend. In the global marketplace and the world-wide supply-chain this will impact directly the day to day reality of small SME 's.
- **Remote workplace control**
Global sourcing, sustainable procurement and supply-chain management by major economic players will dictate and impose from remote decision making centres the exact working and operating conditions as well as product profiles in millions of shop floors and workplace.
- **Reshape the market : from buying green to sustainable procurement**
A growing number of small companies have to demonstrate already today or in the nearest future a recognized track record of regular positive environmental management, even in the regions of emerging economies. Furthermore health, safety, working conditions and social aspects are as well object of growing public scrutiny from consumers worldwide.

Therefore business of tomorrow is not only about product or processes but also about how business is done

Today a number of Multinational companies in production, service and retailing impose already their different standards, tools and certification systems (ISO 14001, EMAS, ISO 9000.) or streamline their reporting worldwide using the GRI.

As the sustainability agenda was mainly driven in the last years by the environmental component the more recent discussion and evolution in management is addressing social and ethical issues and making things more complex. SA 8000 and other burdensome standards will be added on and required by the SME's worldwide.

But the traditional ways of quality and environmental management tools do not fit into the reality of a micro-or small company (< 10 employees).

Therefore what is needed is a new generation of adapted environmental management and reporting tools with appropriate recognition in the marketplace. They have to be simple, empowering and participatory, without requiring expensive consultancy expertise. They must be able to function in a 2 dollar a day economy but be recognized as valid by a 1000 dollar a day economy.

Furthermore adequate **training and education** has to be delivered not only to company staff but furthermore to significant stakeholders like trade unions and shop stewards, civil servants, pressure groups.

Building Capacity for sustainable markets has therefore to focus on empowering participatory tools, holistic adult learning and training as well as reporting and recognition systems. Those initiatives should be **community based**, function in delimited consumption and production clusters, public private partnerships and include South North components.

Management tools, empowerment of the public sector, step by step approaches transparency and recognition are the ingredients of capacity building in the market in the context of sustainable procurement.

Initiatives and tools have to lower the technical barriers of access to those market requirements for micro and small SME's, not the standards.

What is Ecomapping ?

Ecomapping is a creative and simple tool that helps small companies to implement environmental management, ISO 14001 and EMAS

- an inventory of environmental practices and problems
- a systematic method of conducting an on-site environmental review and audit
- a tool that allows employee involvement and participation
- support for training and awareness, and to assist with internal and external communication
- an easy way to document and track environmental improvements

The development of ecomaps for water, soil, air, waste management, etc. is not the end goal. The main interest lies in the fact that it is a process that accompanies a review of environmental performance, and in the positive actions that result.

2. METHODOLOGY

2.1. Gathering information to write 12 international case studies :

2.1.1. An international exchange seminar took place in Brussels, in march 2001 (see annexe 1). This seminar has gathered ecomapping users from Europe and Eastern countries during 3 days to exchange information about the use and the methodology of ecomapping.

- Követ, Hungary
- Unica, Italy
- INEM, Germany
- SBA, Switzerland
- ABECE, Belgium

2.1.2. An international survey on Ecomapping existing experiences was conducted from January 2002 to May 2002.

- A 4-pages brochure (annexe 2) and a website (www.ecomapping.org) (annexe 3) helped us to reach the organisations that had already included ecomapping in different environmental protection programmes.
- The survey permitted to compile enough information to write down 16 case studies about the use of ecomapping in various sectors and countries. These case studies are presented on a « one page » description (see annexe 4).

Belgium : Ecomapping, an adult learning and training tool to involve workers in environmental management

ABECE, the Belgian Association of Eco-Counsellors, and other organisations experimented Ecomapping as a participatory tool, to improve environmental knowledge and awareness in a company. 8 short stories are provided :

1. 15 minutes training with a fast visual learning tool for Catering workers
2. Ecomapping helped to elaborated the thinnest documented ISO 14001 certified EMS in Belgium
3. A time saving tool for eco-counsellors of chemical federations
4. Eco management at the Opera - workers participation in a cultural institution
5. Ecomapping in the « School of Tomorrow »
6. Ecomaps on the shopfloor
7. Recycling parks and waste prevention for local authorities
8. A smart teacher on EMS for adult learning

Belgium : Ecomapping to help public environmental coordinators implementing sustainable development programmes

Belgium has engaged its federal government in a strong action plan for sustainable development. One of the objectives of this action plan is to implement environmental management systems in the Belgian federal ministries and administrations. In order to help the federal environmental coordinators in implementing EMS, ecomapping has been adapted by eco-counsellors to the specific means of an administration.

France : Ecomapping as a dynamic 'GIS' tool to manage industrial estates

Orée, a French NGO, promotes partnership between business and local authorities through the development of tools for SME's and the exchange of

experiences.

Ecomapping can be used as a visual approach to improve environmental management within industrial estates and to apply ISO 14001 cooperatively.

Hungary : Ecomapping can assist in improving environmental performance in industrial sectors

The technical advisers of KOVET, the Hungarian Association for Environmental Management, use Ecomapping to improve the environmental performance of SME's across all industrial sectors in five regions of Hungary. Ecomapping is used mainly for the first environmental assessment of small companies.

Russia : Ecomapping to improve environmental protection in old state factories

Ecoline, a Russian NGO, focuses on former state-owned companies and builds capacity to increase environmental protection.

Ecomapping is used to speed up the documentation process, to provide information quickly from audits, and enable corrective actions to occur sooner.

Canada : Ecomapping and Recognition Systems©

Improving environmental performance is as important for a micro - enterprise, to increase productivity and enhance profitability, as it is for larger companies. These smaller companies also need to be appropriately recognized for having taken the first step towards a credible environmental management system. A collaboration between Ecomapping and The Registry (www.14000registry.com) is underway to provide micro-enterprise with a means to gain market acceptance.

Iceland : Ecomapping to integrate SME's in a regional Agenda 21 process

Landmatt is an Icelandic technological R&D organization focussing on information technologies and GIS. The company will use Ecomapping on-line to assist SME's in regional environmental management programs linked to Agenda 21 processes like the "AKKUR programme".

Italy : Ecomapping is used for internal and external audit support of ISO 14001

UNICA is the Italian professional association of eco-counsellors. They use Ecomapping to deliver adequate services to SME's and facilitate contact with local authorities.

This tool has proven to be an interesting audit and information support aid for external certification auditors.

United Kingdom and Europe : Ecomapping, a training & baseline assessment tool to implement step by step ISO 14001 and EMAS in 250 companies in Europe

The EPICENTRE Life project is build on the UK Acorn model that aims to facilitate a step-by step uptake of EMAS and ISO 14001 in SME's. This by experimenting a 6 level certified approach in 250 SME's in 5 EU countries. The Acorn model involves multinationals that act as mentors to drag their own suppliers in the process and improve the relationships in the supply chain. As a baseline assessment and training tool, Ecomapping allows local trainers to aid SME's in achieving the requirements of the first Acorn level and gain recognition.

Asia : Ecomapping in Green productivity Trainings in Asia to support sustainable market evolution

Asian countries are promoting Ecomapping in the context of green productivity, a programme supported by the Asian Productivity Organization (APO) to support sustainable market evolution. Ecomapping is one of the tools used in this programme to help export oriented SME's to improve their environmental performances. Ecomapping has already been used in India, Thailand and Hong Kong.

Middle-east countries : Ecomapping is a tool for goodhousekeeping and awareness-raising of local multipliers and companies

The DELTA is Network of industries and chambers of commerce that has the objective to raise environmental awareness in the industrial tissue of 11 countries of the Magreb-Makrech region. Ecomapping is used in Jordania, Syria, Palestine and Algeria to prepare SME's to improve their environmental performance and trade equitably with the European market in the framework of the future Mediterranean zone.

United Kingdom : Ecomapping is used as an on-line training tool in a environmental awareness raising programme for the English petrol industry

The Lowestoft college in the United Kingdom has developed an on-line version of the ecomapping methodology to help SME's from the petrol industry to implement step-by-step environmental management systems.

2.2. Training for trainers manual :

A 20 module training for trainers manual has been elaborated (annexe 5) with the help of the Institute Eco-Conseil.

This training for trainers manual has been fine tuned in the framework of several training programmes :

- Követ : training for regional trainers in a EU Phare programme - Hungary
- SBA Delta Network : training for regional trainers in Jordania, Algeria and Syria
- APO Network : training for regional trainers of the INTAN programme - Malaysia
- Institut Eco-Conseil : training for eco-counsellors in Namur, Belgium
- Federal environmental coordination : training for environmental coordinators - Brussels, Belgium

2.3. Internet website

The internet website www.ecomapping.org has been elaborated to exchange information about ecomapping and link the different organisations that are part of the network together.

It is organised in the following way :

- Introduction
- What is Ecomapping ?
Quick overview of the eco-mapping methodology.
- Good practises worldwide
Abstracts and in depth papers of 16 ecomapping case studies are available.
- Future visions
Presents we the Ecomapping Network will offer in a near future : a range of support activities including training, facilitating cooperative partnerships and assistance for wide-scale adoptions in developing economies
- Framework conditions
Provides some guidance to the user as well as conditions that frame the programmes available from the Ecomapping network
- Downloads
The ecomapping methodology brochures are on the website in 5 different languages (English, French, Italian, Hungarian, Arabic). Other versions will soon be put on the website (Dutch, Turkish, Czech, etc.). Another brochure presents the ecomapping network.
Visitors that wish to download the ecomapping brochures have to sign an agreement for the non-commercial use of ecomapping. This database will enable to inform about new features and new developments of ecomapping.
- Methodology
A link has been made to the website of the in depth ecomapping methodology hosted by the Lowestoft University in United Kingdom.
<http://www.lowestoft.ac.uk/aegis/ecomapping/default.htm>
- News
To inform about new features and new developments of ecomapping
- Info-Contact

3. RESULTS

3.1. Deliverables of the project are :

- 16 International case studies
- a Training for trainers manual
- Website
- International network
- An expression of interest to participate to the VIth framework programme of the European Union.
- A Research & Development project called STIMMS submitted in the framework of the mixed actions call of the Belgian Science Policy.

3.2. Indirect results of the project are :

Trainings on Ecomapping

Training on Ecomapping in Malaysia. Ecomapping training was done with APO members from 17 different countries in workshop in Kuala Lumpur in March 2002.

<http://www.apo-tokyo.org/gp.new/aframes/2tools1.htm>

A major program will be started in the Baltic States where eco mapping is a central part for EMS implementation in small SME's. The German Bundesstiftung gives the financial support from INEM.

<http://www.inem.org/>

The Hungarian association for environmental management KOEVET will start the programm Potstar in conjunction with their regional counsellors in November 2002

<http://www.kovet.hu/>

The innovation center in England in Suffolk has put Ecomapping on their website in January 2002 in an e-learning programme for the British petrol industry.

<http://www.lowestoft.ac.uk/aegis/ecomapping/default.htm>

Ecomapping is used as a training tool by the Institut Eco-Conseil in Namur to train the Eco-counsellors

<http://www.eco-conseil.be>

Presentations of Ecomapping

Presentation of EcoMapping at the UNEP "Aid&Trade" Conference in New-York City June 2002.

<http://www.aidandtrade.com/iat/>

Presentation of Ecomapping to the Belgian north south cooperation agency to outline programs during the 14 December 2001 to map out capacity building programs in developing countries pointing to APO member states

<http://www.btcctb.org/>

Presentation to the EMAS article 19 comitee on the links between Ecomapping and EMAS and how it can be recognised as an useful tool for SME's implementing EMAS and ISO 14001. Ecomapping has been recognised as a valuable tool and is now promoted on the EMAS Server helpdesk :

http://europa.eu.int/comm/environment/emas/documents/kit_en.htm

Pilot programmes with Ecomapping

The Italian Unione Italiana Consulenti Ambientali UNICA will develop a pilot program (EU financed Leonardo program) with micro companies in the region of Naples to gain recognition for the method by late 2002

<http://www.consulentiambientali.it/>

Ecomapping is adapted for use in public service office buildings since December 2001 and March 2002 in the framework of greening of government and Emas implementation by members of ABECE and the Ecocounselling Institut in Namur.

<http://www.abece/.be>

An European financed Life programme started in the middle East within the Delta network. And the Suisse NGO of Lausanne SBA. Two technical Ecomapping seminars will be organised in late 2002 with ABECE.

<http://www.sba.hello.to/>

The public financed Acorn and the EU Life EPICENTER programmes are using Ecomapping as baseline assessment

<http://www.theacorntrust.org>

<http://www.life-epicentre.com>

4. DISSEMINATION AND VALORISATION

4.1. Dissemination

Dissemination of the ecomapping methodology has been done during presentations, trainings and the development of pilot programmes (see point 3.2). The website helped to disseminate the ecomapping methodology and the case studies at a low cost through the world.

Ecomapping Network Website : <http://www.ecomapping.org>

More than 180 downloads of the ecomapping methodology brochure have been since February 2002.

Actual number of visitors to the Ecomapping website : 1500.

TABLE I : Top 25 : the countries of origin of the visitors

1.	Belgium	650	43.1 %
2.	Italy	83	5.5 %
3.	United Kingdom	76	5.0 %
4.	Spain	76	5.0 %
5.	USA	67	4.4 %
6.	Germany	56	3.7 %
7.	Portugal	52	3.4 %
8.	France	50	3.3 %
9.	Canada	40	2.7 %
10.	Australia	20	1.3 %
11.	Suisse	20	1.3 %
12.	Autriche	19	1.3 %
13.	Pays-Bas	19	1.3 %
14.	Hongrie	14	0.9 %
15.	République Tchèque	14	0.9 %
16.	Danemark	13	0.9 %
17.	Islande	13	0.9 %
18.	Grèce	12	0.8 %
19.	Philippines	10	0.7 %
20.	Slovénie	10	0.7 %
21.	Israël	9	0.6 %
22.	Inde	9	0.6 %
23.	Norvège	8	0.5 %
24.	Colombie	7	0.5 %
25.	Brésil	7	0.5 %
	Rest of the world	290	7.0 %
	Unknown	48	3.2 %
	Total	1508	100.0 %

Links on the following websites :

Related links to the ecomapping website are available on the websites of ABECE, INEM and the EMAS server.

TABLE II : Origin of the ecomapping website visitors

1.	europa.eu.int/comm/environment/emas	70%
2.	www.inem.org	15%
3.	www.google.be	10%
4.	www.abece.be	5%

70% of the visitors coming via the EMAS server, 15% via INEM and 10 % via internet search engines.

Other organisations are already distributing the ecomapping methodology brochure. Links to the ecomapping website will soon be available on :

- APO <http://www.apo-tokyo.org/gp.new/aframes/2tools1.htm>
- Lowestoft University <http://www.lowestoft.ac.uk/aegis/ecomapping/default.htm>
- Ecoforma <http://www.eco-conseil.be/ecoforma>
- SBA <http://www.sba.hello.to>
- Fil de l'Eco-Gestion <http://www.eco-gestion.be>
- Espace-Environnement <http://www.espace-environnement.be>
- ISO 14001Registry <http://www.14000registry.com/>

4.2. Valorisation

The Ecomapping methodology is now being:

- Recognised as a way of introducing EMAS into micro companies by the EMAS article 19 comitee – January 2002
http://europa.eu.int/comm/environment/emas/documents/kit_en.htm
- Used in the APO Green Productivity Programme. Green Productivity (GP) is a strategy for enhancing productivity and environmental performance for overall socio-economic development. It is the application of GP methodology comprising the appropriate techniques, technologies and management system to produce environmentally compatible goods and services. Green productivity can be applied in manufacturing, service, agriculture and community and its training is provided by APO.
<http://www.apo-tokyo.org/gp.new/aframes/2tools1.htm>
- Used in the application of article 157 of the Belgian Federal Plan for Sustainable Development. Following this article, the different federal administrations and ministries have to implement a environmental management system by signing a federal environmental charter. Ecomapping is used for the initial assessment of the environmental aspects and to elaborate action plans, objectives & targets.
- Included in Research and Development programme proposals at European and at Belgian level proposals :
 1. Expression of interest to the VIth European Framework Programme submitted in response to Call EOI.FP6.2002 :
“Sustainable trans-cultural management and information systems for micro and SME’s in the global market place”.
The aim of the program is to utilize Information Society Technologies to increase the efficiency of existing solutions to address the major environmental and sustainability issues of today. These objectives will be obtained by:
 - Developing a user-friendly interactive Internet-based software that micro and SME’s can use for their continuous environmental improvement

- Constructing a database for the analysis and visualization of environmental information relevant to the general public, enterprises and public institutions
- Convert known and proven methodologies in environmental management into new management tools and thereby facilitate sustainable development and green productivity of micro and SME's in regional planning, international development programs, and Local Agenda 21 implementation.

The aim is also to provide new ways to produce comparable perspectives world wide and to make new openings for sustainable trade and business and sustainability tracking.

The cornerstones of the work are; the EMS requirements of EMAS and ISO 14001, the Ecomapping tool, benchmarking, eco-design, cleaner production, green procurement, green accounting and green legislation. The program will facilitate for better stakeholder interaction through participatory processes and information flow.

2. The **STIMMS** proposal submitted on the 22nd of July 2002 in response to the Belgian Science Policy call for proposals for the SECOND MULTIANNUAL SCIENTIFIC SUPPORT PLAN FOR A SUSTAINABLE DEVELOPMENT POLICY – SPSD II “MIXED ACTIONS”

The Sustainable Tracking Information Micro Management System project (STIMMS) proposes to explore the possibilities and framework conditions of using the specifically adapted EcoMapping tool within different specific applications. The project objectives are 4 fold angled to :

- elaborate and experiment a new business model within a sustainable production consumption cluster in a multi stakeholder approach.
- develop from paper based proven method and concepts the basic architecture for micro information and management tools for micro companies by the integration of Information Technology.
- reinforce the capacity of Belgian and third world countries export oriented small SME's and micro companies to be part of sustainable supply chain management.
- define common shared Technical Specifications for Information Technology based shareware solutions (regarding software structure, data banking and data mining, recognition in the market) which may be used in :
 - Local Agenda 21 context and GIS,
 - Fair Trade and Ethical Investments,
 - Supply chain management and greening of public administrations,
 - Integrated management of industrial estates

5. CONCLUSIONS AND PERSPECTIVES

Elaboration of the electronic smart Ecomaps concept in Iceland with Ictec, Landmat and Environice to create a virtual assistant within Local Agenda 21 programmes and develop other forward looking applications for internet based EMS tools is under way

<http://www.landmat.is/>

<http://www.icetec.is/>

The Canadian web based initiative Iso14001registry launched in March 2002 will be a central part in the concept of recognition in supply chain management and concepts like green productivity. The Registry makes the link between the ISO world and the Ecomappers

<http://www.14000registry.com/>

The German NGO and management consulting Baum has developed an interactive CD software tool to introduce EMS in SME's called Baumis.

Projects are to build a web based tool and integrate Eco-mapping as entry level. Cooperation strategies will be mapped with Iceland and ABECE

<http://www.baum-ag.de/index2.asp>

A Presentation of Eco-mapping in the European EMAS governmental and competent body meeting during the 31 January 2002 proposed eco mapping as to be adequate as documentation and internal audit support in the EMAS regulation or ISO 14001 implementation. Eco mapping is now on the EMAS Helpdesk server.

http://europa.eu.int/comm/environment/emas/documents/kit_en.htm

Ecomapping is integrated in the EMAS toolkit which is available on the INEM. A new version is under way.

<http://www.inem.org/>

The French NGO Ecolindus of Jean Francois Vallés puts TV interviews on line with news and smart sustainable business ideas. The site of ecolindus has an intro to Ecomapping

<http://ecolindus.free.fr/>

Ecomapping Guidebook for industrial estates in collaboration with **OREE** is developed and experimented in August 2002 Feasibility of an electronic component will be studied

<http://www.oree.org/>

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