INTEND PROJECT

INTEND

Newsletter

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The INTEND newsletter

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Summary:

EPD: motivations for a choice

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Company Cork emerges as one of the most innovative companies in the production and elaboration of cork. The ownership (with a three-generation long production tradition) kicked off in the 1990s a process of strategic renovation, aimed at the valorisation of organisation and products "quality" concept. The first step of such process was the development and certification of the Quality System, achieved among first sector experiences in 1997 and strengthened in the early 2000s with the shift to the new version of ISO 9001 standard.

However, in the last few years, the concept of "quality" constantly pursued by Company Cork had to face a number of innovations that experienced an unusual pace for a traditional sector such as that of cork plugs. First the market went through a phase of final client's preferences maturation, in the direction of an increasingly aware consumption of high level wines, promoting the spurring of top section of the market, hence fostering an increased demand of top class cork stoppers.
Secondly, the intermediate market of winery producers

proved to know how to manage trespassing the borders of "quality" as a mere "flaws absence", as to comprehend aspects linked to production genuinity and the bound between crops and the territory. From such point of view, the increasing attention of producers towards the opportunities provided by the biologic market, the relevant diffusion of environmental certification forms (ISO 14001 standard is adopted by more than 40 Italian wineries) represent important signals for the sector of cork stoppers production. It is indeed evident how a wine producer willing to provide guarantees on the environmental compatibility of his products has to focus on the environmental impacts of stoppers, as well. Cork companies are now asked to embody the trends of a wine market evolving towards an ever increasing importance of the relationship with the environment and the territory; for instance, main Italian production areas (Chianti or Val d'Orcia in Tuscany, Langhe and Monferrato in Piedmont and wide areas in Sicily) are areas of relevant environmental interest, and are hence focusing on environmental quality as a territorial and tourist marketing tool.
An interesting example is provided by the experimental project SPINECO, of Siena Province, aimed at evaluating the environmental impact of typical local productions through the use of LCA methodology.
Not only the above mentioned demand side evolutions oc-

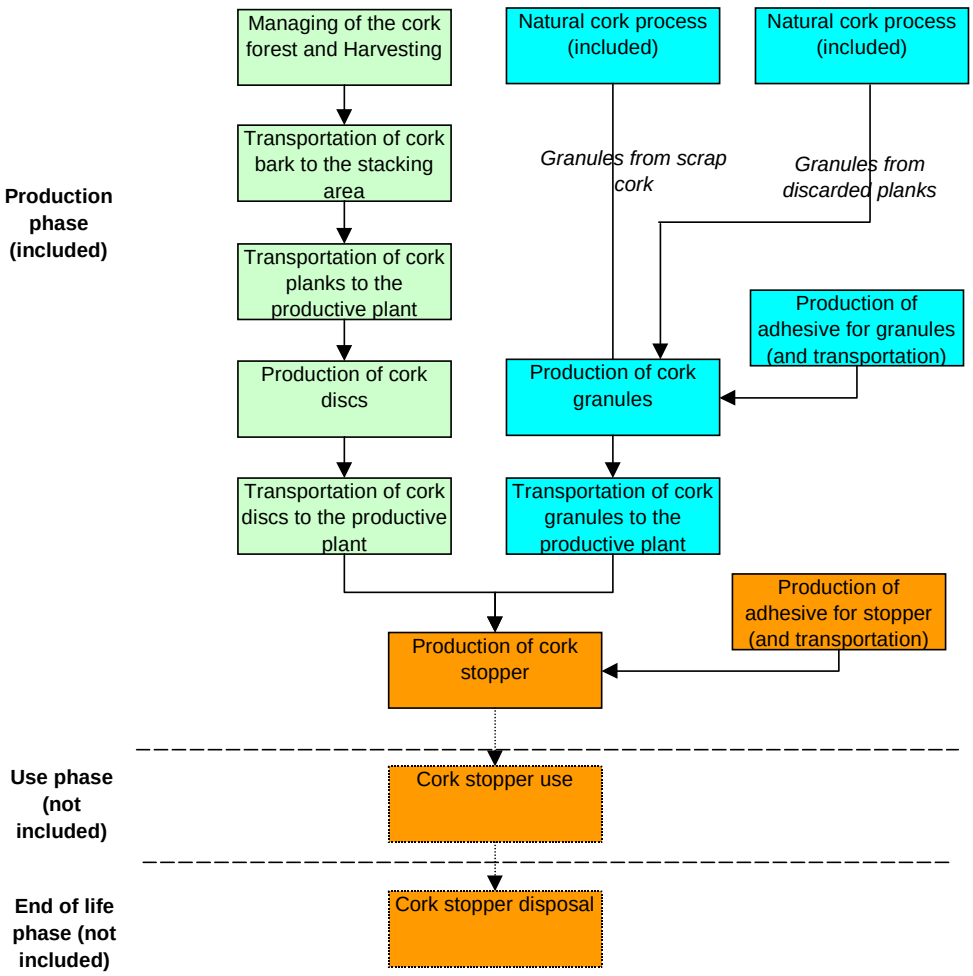
curred, but also supply side recently experienced a phase of technical and technological innovation. After many years of stillness, the sector actually went through a "radical" innovation: the introduction of plastic polymers plugs. Such innovation however, notwithstanding its relevant repercussions on the sector, doesn't seem to be in synctony with demand expectations, as far as both their use on top class wines (for which is necessary a sharpening in the bottle) and the environmental impact (much higher) are concerned.
Company Cork decision of developing the LCA actuation path as well as the EPD redaction and publishing has its roots in the above mentioned scenery, as it responds to the will of giving an answer to the strong innovative tension on both demand and supply sides. Such instruments can indeed represent an effective answer, "pre-emptive" in a way, to emerging market requirements in terms of a 360 degree quality of products, capable of mixing high performance and environmental soundness.
EPD is useful for an effective communication to the market of a product excelling on both traditional and environmental dimensions:

- Cork is a "sustainable" raw material by definition (time needed for obtaining a good product allows the complete re-generation of the crop), and it requires little natural resources (water, etc.).
- Cork rejects becoming waste are practically non-existent, as all the material can be recycled (energy production, building industry etc)

The product, once used, has an elevated biodegradability degree (given its suitability for alimentary purposes)
Given such premises, the company has undertaken the activities of INTEND project, activating the PCR definition phase. Such phase proved to be crucial for the acknowledgement, valorisation and sharing with stakeholders of the above mentioned advantages, inserting them in the "rules of the game".
Product Category Rules (PCRs) are indeed aimed at defining a homogeneous group of products that can obtain an Environmental Product Declaration, and the rules for the carrying out of the LCA (Life Cycle Assessment) study, so that EPDs of products within a given group can be effectively compared.
Chief goal of EPD is that of spurring a constant improvement of a product environmental performance through the comparison of detailed, credible and verifiable information regarding the environmental impacts of competing products.
Given their relevance, PCR documents must go through a public consultation period, as to spur qualified international stakeholders (of the industrial, production and craftsmanship sectors as well as of research or sector associations spheres) to provide comments and suggestions.
During such "open consultation" period, Company Cork and INTEND project coordinators received a number of suggestions, opinions and proposals for the modification of product requirements, which were received and gave their contribution in improving common rules guiding market competition, to the advantage of EPD addressees communication transparency and effectiveness.
National and international subjects such as "Stazione Sperimentale del Sughero di Tempio Pausania" (SS -Italy), INETI (National Institute of Industrial Engineering and Technology, Portugal), ICSURO (Institut Català Del Suro, Spain), actively cooperated in the definition of the final draft of PCR document for single-piece cork stoppers and for sparkling wines stoppers, which are both available at the www.intendproject.net website (download area).
Among specific rules adopted in the PCR documents, an important role is played by the position assumed as regards cork planks for grinding and cork waste deriving from the elaboration of single-piece stoppers, in order to point out an environmental advantage of cork stoppers. Given the great use-potential of such material flows in relevant productions differing from the original, such materials have to be considered as secondary raw materials and not as mere waste.
The scarcity of raw materials and the high demand of cork plugs historically spurred productive efficiency and producers ingenuity allowing the identification of alternative uses of oak extracted cork. Hence planks that for dimensional matters are not suitable for transformation into single piece stoppers through punching are grinded in order to obtain granulated material for the production of agglomerated stoppers, as well as waste deriving from the punching process and ashes produced during other mechanical operations, and normally used

for the alimentation of boilers providing thermo-energy to production processes. It is hence possible to achieve outstanding efficiency standards in terms of natural and renewable raw materials use.

Life Cycle boundaries for cork stopper



Learning from Asian Type III labeling perspective

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The National Institute of Advanced Industrial Science and Technology (AIST) and the Japan Environmental Management Association for Industry (JEMAI) organized a Type III Environmental Declaration International Seminar in Tokyo. It was the first cross-regional (EU and Asia) seminar dealing with Type III labeling.
The seminar entitled "Lessons Learned in Company Experiences" took place on 15th March 2005 and provided to participants an overview of the experiences carried out in Japan and in Europe.

More than 200 persons from institution, industry and association participated to this seminar organized in three sessions:
Session 1: Increasing Demand for Environmental Product Information
Session 2: Applications and Implications of Type III Environmental Declarations
Session 3:Panel Discussions

Prof. Inaba, Director of the Research Center for LCA of the National Institute of Advanced Industrial Science and Technology introduced the session 1. He focused on the well structured JEMAI program for type III labeling, called EcoLeaf. He outlined the main aspects of the EcoLeaf and posed the first questions to the participants.

Dr. Konrad Saur of Five Winds and member of GEDNet followed on the topic of the harmonization with special focus on the building sector. Prof. Paolo Frankl of Ecobilancio and Head of the Task Force on Life Cycle Communication of the UNEP Life Cycle Initiative provided the EU perspective of the Environmental Communication approach with some relevant outcome from the EU-Life DEEP Project. Mr. Ishizuka from Canon opened the second session offering the company's experiences. He introduced the matter of BtoC communication suggesting a new CO2 factor calculation for ready understanding of the final consumer. Mr. Suh from Samsumg electronics brought to the participants his experience within the Korean Type III labeling program and introduced the matter of complementation with type II labeling and informative for compliance with regulations (e.g. WEEE, RoHS or EuP). Ms. Birgit Bodlund from Vattenfall brought to the participant the experience of the company which reached the first EPD registration in Europe and enforced the advantages of a type III labeling. The session closed with ABB's perspective in building an effective use of type III labeling for marketing purposes, focusing on major issues to be solved. The panel session chaired by Prof. Inaba collected further discussed of: aspects of supply chain, how to establish the program in developing countries and how to communicate LCA data/information to customers. He collected further comments from participants and provided final elements for the expert discussion that took place the day after.
The experts meeting focused on existing program, operational issues and other related topics. After a more detailed presentation of the EcoLeaf program and an introduction to the INTEND program the Asian countries viewpoint was brought to the meeting and how to raise awareness of Type III labeling in Thailand, Malaysia, Philippines, and China was investigated. These potential new type III labeling programs owner countries gave also an overview of their planned activities in this field.
The main tasks for future work were outlined and

among these: research activity on consumer behavior, management regarding to retailer and consumer organization, capacity building as function of GEDnet and harmonization with ISO standards for Clean Developing Mechanisms.
During the expert meeting a discussion focusing on differences between the JEMAI and INTEND program finalized to future harmonization tasks was held. The main outcome of this fruitful discussion can be summarized as follow.
The main target choice for these Type III communication tools and therefore their formats are driven by the program owner. In case of direct participation of an Institution the format will be mainly BtoC oriented, while in case of Private enterprises driving this will mainly BtoB oriented.
Ecoleaf format is structured in three sheets (PDS – Product Data Sheet, PEIDS – Product Environmental Information Data Sheet and PEAD – Product Environmental Aspects Declaration), a way that allows its use at the same time both for BtoB and BtoC. The PEIDS sheet is quite similar to the "Environmental Performance Declaration" section of the EPD and it sound very promising for BtoB use. The Ecoleaf format includes also a PEAD sheet designed for BtoC.

Communication format; document structure comparison

	BtoB	**BtoB**	**BtoC**
Ecoleaf	PDS	PEIDS	PEAD
EPD®	Not disclosed	EPD	Not available

The decision to merge in one document a communication oriented to different targets seems to be hard to manage in an effective way. The problem is that the BtoC communication have to be tailored to final consumers whit different priorities in different countries, while BtoB communication being less emotional and more technical can be worldwide applicable. For this reason the harmonization should focus on a mutually recognized format for BtoB and leave the choice for the BtoC communication format to the different National Competent Bodies.
The disclosure of a PDS like sheets within the INTEND scheme seems to be not feasible due to data confidentiality problems. Moreover it is not seen as information particularly significant for the customers.
The well structured and formatted process for LCA study development within the Ecoleaf guidelines in conjunction with the System certification seems to be very effective for cost reduction and should be considered within the INTEND scheme.
The use of JEMAI's LCI data set is simpler than the INTEND scheme approach but needs a strong centralized efforts for its development and maintenance. The approach adopted within the INTEND scheme seems to be more flexible and ready for an extension of the LCI information needs. A combination of the approach should be investigated.
In this framework where an International coordination is more and more needed the structure of the INTEND project could have a relevant role as a basis. For this reason, a special attention should be brought to the definition of the aspects related to the management of the whole system within the new "Requirements".

Product Category Rules : the case of light aggregates of expanded clay

Authors
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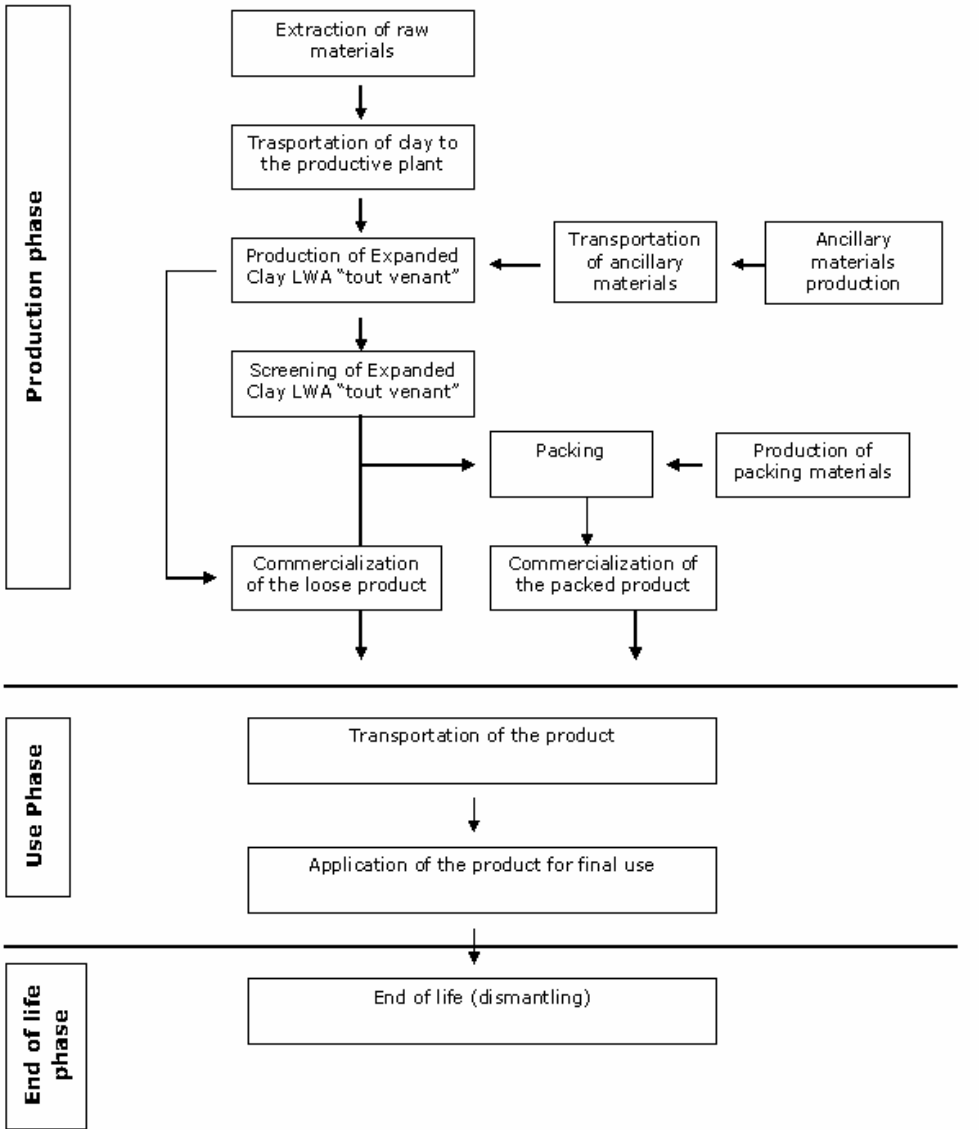
.Within the LIFE INTEND Project, Laterlite S.p.A. had to accomplish the task of carrying out a LCA study on its products, aimed at redacting an EPD conform to new requirements set in the "Requirements for an international EPD scheme". At the same time, the company had to make a draft of specific product requirements (Product Category Rules, PCRs), for the homogeneous products category object of the study, to be regarded as the common rules for the implementation of the Life Cycle Assessment so that EPD of products within a given functional category can be compared.
Laterlite S.p.A., leader in Italy, has chosen as group of products for the INTEND Project experimentation light aggregates of expanded clay, marketed both by measure and in bags with the commercial brand Leca®.
The production process of such products exploits a feature of clay which, under elevated temperatures, expands becoming as much as six times the original volume. The volumetric expansion is caused by the internal action of gas produced by organic material combustion, by the reactions of metallic oxides reduction and by crystallisation water evaporation. The outcome is a product assuming the form of round granules, with a hard vitrified external core and a close cells internal structure. Expanded clay isn't an artificial product, it doesn't release toxic substances, doesn't scatter fibres, particles or ashes, doesn't need any stabilisation treatment, maintains its features with no alterations across time, has outstanding performances in terms of mechanical, thermo and fire resistance, and it finally has phono- absorbent and phono-isolating power. Expanded clay is therefore used for specific applications granting better environmental protection and safety conditions: for instance, for draining road surfaces, for interventions of ground and escarpment restoring and consolidation, for constructions with specific needs of protection against fire rather than noise (with phono-absorbent barriers), for the treatment of dismissed tanks, and finally as filtering systems in water depuration processes, etc.
The product –by measure or in bags- is marketed by granulometric classes with diverse densities linked to thermo performances required and mechanical resistance features.

Within the process for PCR drafts definition, methodological choices have been adopted, as well as definitions subject of an open consultation period with stakeholders. Among these, we can mention INTEND Project partners, Maxit Group Heidelberger (European leader in expanded clay production, with factories all over the continent), ANPAE-(National association of expanded clay producers), Leca DK and Argex, important European producers. The open consultation period took place between October 2004 and January 2005 and brought to some modifications to the initial draft, and to the text that is currently waiting for the Swedish Environmental Management Council approval.
We can highlight some of the choices adopted within the document, such as the product category and functional unit definition.
Among expanded clay products, PCR comprises only those directly derived from the furnace trough screening and packing, in other words with the exception of those pre-mixed or for gardening purposes. The numerous applications of light aggregates of expanded clay, in building industry as in geo technic, suggested a limitation of LCA study to the "gate" of the factory, making the qualitative description of use functions and commercial names of EPD products introduced in the market compulsory.
As far as the functional unit is concerned, system performances are to be assessed in terms of quantity of product exiting the furnace, the so-

called "tout venant), before screening and confectioning phases. The selected unit is the cube meter, being it usually adopted both by firms for production management and at a commercial and use level.

Fig.1 – Life cycle diagram – Expanded clay Light Weight Aggregates - System boundaries



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Macroscopio
Strategie e Strumenti per la Sostenibilità

The INTEND project

INTEND Project has been submitted by Macroscopio and other 32 partners to Life Environment Program 2003.
The project has started in January 2003 and will end in September 2005.
INTEND's objectives are:

- To define an Environmental Product Declaration (EPD) system, according to ISO TR 14025. The EPD international scheme framework will be defined by identification of coordination and harmonisation rules among national schemes.
- To test the defined system in two pilot countries (Sweden and Italy) and to diffuse the main system characteristics e at European and international level, also to candidate countries.
- To give the opportunity and the tools to Member States and candidate countries to cooperate in the implementation of an international system composed by national sub-systems.
- To diffuse the knowledge of type III Environmental Claims and to educate technicians on them.
- To increase people's knowledge and sensitiveness on products (goods and services) environmental aspects.

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