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HOW ENVIRONMENT PRODUCT DECLARATIONS (EPD) PRACTICALLY CONTRIBUTE TO AN EFFICIENT POLICY SETTING IN THE BUILDING SECTOR IN EUROPE

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The Integrated Product Policy (IPP) in Europe

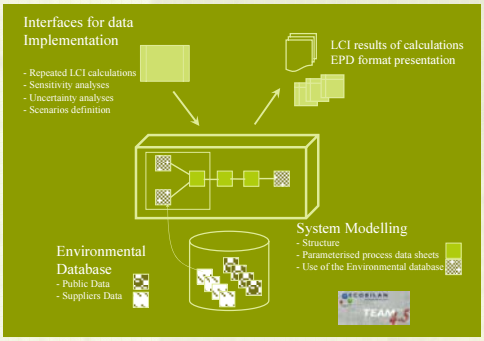
The European environment policy gathers many potential drivers to decrease the impacts on the environment of products and services, as shown on the IPP Web pages of the DG Environment. One of the drivers is the shared producer responsibility: the responsibility of producers regarding the impact on the environment of their products no longer stops at the gate of their plants.

The European Commission stresses the fact that the producers share also a responsibility of the impact of their products up to their end of life, including their use by customers. In the same time, the European Commission promotes a responsible attitude from the customers, including the Administration. They should adopt an **eco-responsible attitude**, through the development of green purchasing policies (using environmental criteria).

The lever of action of the Administration is important. Through their purchase, they can motivate the producers to improve their whole production processes, even when the Administration represents from 10 to 30% of the market.
As a result of the European policy, the producers are motivated **to take into account the full Life Cycle of their products at the design and production phases**. Face to the eco-responsible attitude, they want to keep their market shares, and therefore launch eco-design actions which will help them to convince their customers that they have improved their products in the correct way.
In order to convince their customers, **they have to communicate environmental information to them**. This communication has to be credible to be accepted by the customers (industry or public). Therefore, international standards have been developed to provide credibility to the communications: ISO 14020, ISO 14025.

	Type I	Type III
Reference documents	**14024 European eco-label regulation dated 2000, July the 17th**	**14025**
Integration of LCA in the EPD	Optional. A Life Cycle approach is recommended. LCA has been used in some Eco-label making	LCA is mandatory
Integration of non-LCA information	Optional	Optional. The French EPD includes some specific non-LCA information in a mandatory manner
Use for communication	Selected products (e.g. 25% of a given family) are awarded with the Eco-label	All products can be accompanied by an EPD, even if the product is not the best in class
Comparison of products	The label is comparative: all products from a given family are compared to the others	The label is declarative. No comparison is needed at first stage
Nature of products that can be dealt with the eco-label	The label is adapted for products which are produced in similar ways since the environmental criteria need to be adapted for the whole family	All products can prepare an EPD, even if there is no reference for comparison (no family)
Target audience	The eco-label Type I is adapted for consumers: no LCA experience is needed to select a product which cares the environment	The eco-label type III is adapted for business customers. An LCA experience is needed to use the EPD in the best way, i.e. in a fair manner Consumers can envision the use of type III EPD, as long as the documents listed in the standard are available

Type I Eco-labels have been developed to cover products that are sold to final consumers. This **elitist system** allows the producers of the best products (e.g. 30% of the family of products) to communicate to their customers in an easy way, by telling them that they have the label, while the other 70% are not able to communicate anything. **Type III** Environmental Product Declarations (EPD) have been developed to **enable all producers to credibly communicate** about the environmental performance of their products.



The internalization of the EPD practice

in the industry sector is ongoing. Through trainings to transfer the know-how and implementation of parameters in software (such as TEAM™ and other LCA software), many companies (including SMEs) have now the possibility to **provide specific EPD for all the products of their commercial catalogue**. They have the ability to use **parameterized tools**: the parameters allow to model different products, different sites, different production lines and different uses inside constructive systems.

Some companies or Federations (e.g. Saint-Gobain – Isover, see http://www.isover.fr, CTTB, see http://www.fftb.org/hqe) are able to provide an EPD for any of their product within half a day, thanks to an in-house engineer trained to LCA and EPD practice. This EPD work has demonstrated its ability to provide more than just a declaration. The know-how transfer needed to edit fair EPD in one company enables it to carry on more Life Cycle Assessment (LCA) work.

The use of the tool enables them to define alternatives, scenarios, and sensitivity analyses at all stages of the Life Cycle of their product. The iterative use of such tool enables 1) **benchmark of sites** producing the same product 2) **benchmark of the environmental impacts** associated to a product year after year to analyze variations (improvements…) and 3) **test new products design**, integrating environment concerns in the design process. This is a wide internal benefit when considering the first goal of the EPD, helping to set the environmental policy of the company.

The "HQE Practice"

(Démarche HQE®) aims at mobilizing all stakeholders to build safe and comfortable buildings for which the impacts on the environment, evaluated along the Life Cycle, are reduced as much as possible. This practice involves the setting up of an **Environment Management System** (EMS), which is a specificity of the French approach, and the global evaluation of the actual and/or expected performances of the building.

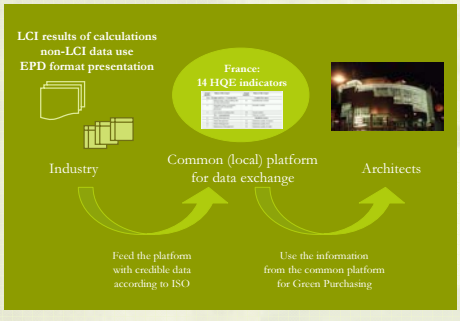
The "HQE Practice" is THE way architects should take into account the environment in France when building new constructions. All stakeholders, who have been involved for more than 15 years in its definition, have developed this practice. An Association, "**Association HQE**" (http://www.assohqe.org) has been created to exchange information, and develop the practice. The "HQE Practice" defines criteria that encompass the environment from a global point of view: HQE targets and means to reach them have then been defined. The following table provides the 14 environmental issues of concern / HQE targets.

Target Number	Name of the target	Target Number	Name of the target
Eco – Design and Eco – Construction		**Comfort for users**	
1	Relationships of the building with its close environment	8	Hydrothermal comfort
2	Integrated choice of products, systems and construction processes	9	Acoustic comfort
3	Low nuisance building sites	10	Visual comfort
Eco – management		11	Odorous comfort
4	Energy Management	**Health for users**	
5	Water Management	12	Sanitarian quality of spaces
6	Waste Management	13	Sanitarian quality of air
7	Maintenance Management	14	Sanitarian quality of water

As an example of the growing green requirement requirements in public call for tenders, the French HQE regular fairs, presenting surveys of HQE experiences, have shown that a growing number of public tenders in France include the application of the "HQE Practice" to the building construction.

French EPD, called "Fiches de Déclaration Environnementale et Sanitaire (FDES)", are done according to NF P 01 010, which is consistent with ISO 14025 requirements, and the on-going work at ISO TC59. AIMCC, the Association of construction products manufacturers, communicates the list of EPD that have already been done for various construction families of products (http://www.aimcc.org). A **public database, called INIES**, is available with the public information relative to FDES (http://www.inies.fr).

Certification projects of the application of the "HQE Practice" exist aiming at bringing more credibility and demonstrating the environmental quality approach that has been followed. These certification projects cover all kinds of operations, from individual houses to Tertiary buildings. The five first certified operations belong to the Tertiary sector (offices…).



HQE targets is a platform

which enables architects and materials producers **to communicate** on a basis of a reliable information that they both understand, sustained by the products EPD prepared according to ISO 14025. The material producers prepare first the EPD, and then fill in the HQE documentation using information from the EPD. The architects are able to understand the information from the HQE documentation, and thrust its reliability thanks to the conformity of the EPD to a recognised standard… These common platforms are needed to enable environment information communication.

Towards Green Purchasing

The integration of environment criteria in public call for tenders required modifying the code of public procurement to make it legal. This work has been done at European level, and applied by some European countries, such as France. **It is** now **legal to set environmental criteria** that Companies which will answer the tender will have to fulfill to have the right to answer.
Following this modification, governments and local authorities in Europe are now starting to integrate fair environmental criteria in call for tenders (**green procurements**).
The definition of these criteria is up to the government or local body. The use of EPD is an element to help the criteria setting: the fair use of the EPD allows to set green purchasing criteria which take into account the flows and potential impacts that are specifically representative of the product to which the criteria apply

In the scope of the building sector, the availability of tools that are able to integrate all the information from different EPD is key to avoid a direct comparison between products: **a global comparison of building solutions is adapted to take into account all the stakes associated to products** (cf. HQE targets and their interactions).
As a promising conclusion, finance organisms now use HQE and EPD in France. "Banque Populaire du Haut-Rhin (BPHR)", with the support of ADEME – the French EPA – has set a **special low-interest rate** for specific loans to promote the operations that care the environment applying the "HQE Practice". Other banks are working on it. This action falls in the scope of the IPP, as the setting up of financial incentives to promote the integration of environment in the concerns of stakeholders.