https://apublicshop.com/blogs/news/eco-label-tip

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EPD
ISO 14025 and EN 15804
Institut Bauen
und Umwelt e.V.

# Environmental labelling
# Present and future

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CHEMICAL ENGINEERING

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# Three types of labels

| ISO 14024 – Type 1 | ISO 14021 – Type 2 | ISO 14025 – Type 3 |
|---|---|---|
| Ecolabel | Self declaration | Environmental declaration<br>Ecoprofile |
| Criteria fixed by a competent agency | Fast, partial<br>(mono criteria) | Complex and complete |
| Multi steps<br>Multi criteria<br>LCA not mandatory | One or two criteria<br>One step (end of life, …) | LCA = mandatory |

http://stockage.univ-valenciennes.fr/MenetACVBAT20120704/acvbat/chap05/co/ch05_010_acv_2.html

# Type I label

- Type I environnemental labelling – ISO 14024 – Briefly
  - Voluntary made
  - Goal = to reduce the environmental impact associated to a product and to obtain a certification
  - Takes into account the entire life cycle but **no mandatory LCA**
  - Issued by independent **third party** after controlling that the product complies with the **criteria** required by the classification
  - Evaluation criteria that are scientific, comprehensive and transparent
  - Validity: regional, national or international

# Type I label

«issus d'une exploitation de Haute Valeur Environ-nementale»
Ecolabel
FSC
PEFC
NF

# Type II label

- Type II environmental labelling – ISO 14021 – Briefly
  - Communication on own and full corporate responsibility
  - Monocriteria or one single life cycle step
  - 18 requirements for self declaration claims
    - Clear
    - Transparent
    - Scientifically strong
    - Documented
    - Accurate and verifiable
    - …

# Type II label

- Type II environmental labelling – ISO 14021 – Briefly
  - Advantage = rapid  implementation
  - Drawback = lack of credibility due to the absence of external validation and the free choice of methodology  difficult to compare

# Type III label: EPD

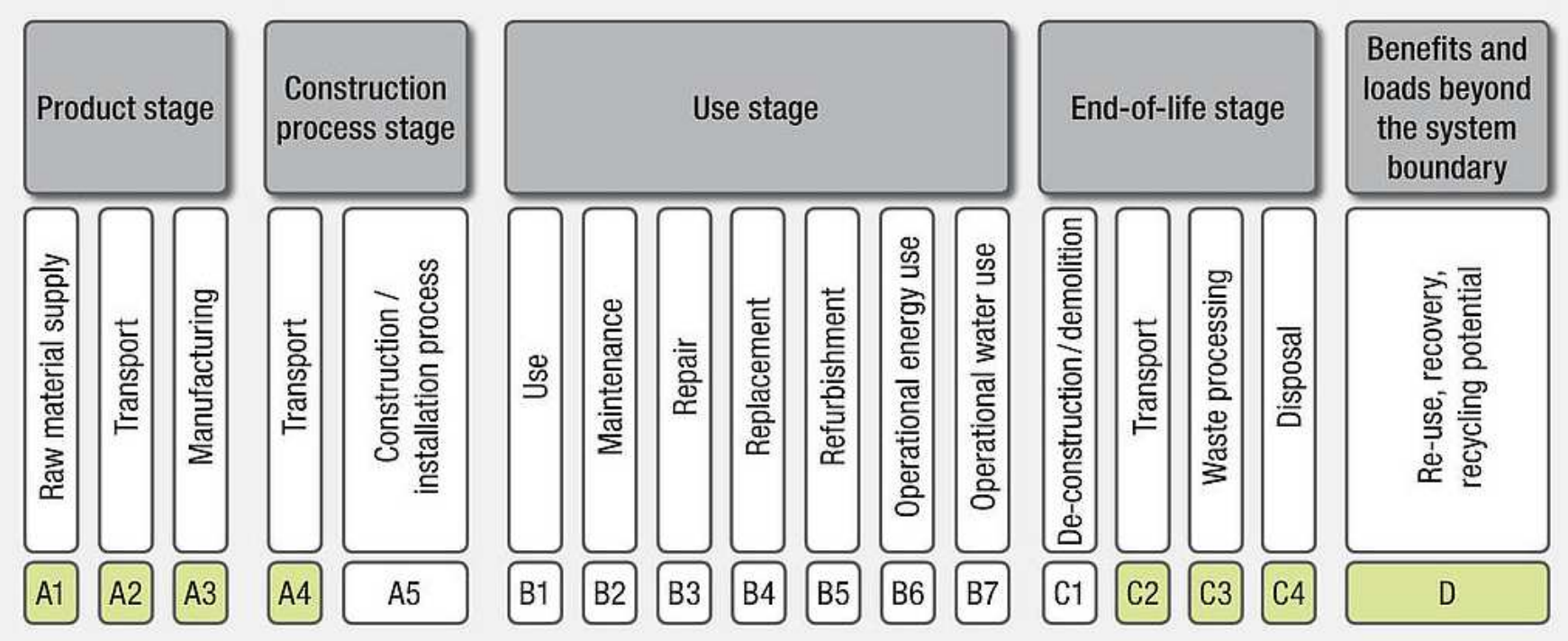
- Environmental declaration type III – ISO 14025
  - **« Ecoprofile » or « Enviromental Product Declaration (EPD) »**
  - Voluntary
  - Based on a LCA
  - Uses **PCR = product category rules**
    - « Documents that define the rules and requirements for EPDs of a certain product category. They are vital for the concept of environmental declarations according to ISO 14025 as they enable transparency and comparability between different EPDs based on the same PCR »
    - Gives details relative to methodologies choice → comparable declaration for various competing producers, …
  - Non-mandatory review
  - Useful but difficult to perform for SMEs

# Type III label: EPD

- Environmental declaration type III – ISO 14025
  - PCR written by Federations
    - Plastics Europe
    - Glass federation
    - Cement federation
    - …
  - PCR established by consultants
  - French standard for construction materials
    - NF P 01 10 → FDES : fiche de déclaration environnementale et sanitaire
    - Belgium : new Royal Decree
  - **Construction sector**: basis for all PCR
    - EN 15804

# Type III label: EPD

- Specific PCR for the building sector
  - EN 15804, aligned on PEF « product environmental footprint »



# Type III label: EPD

## Dry Semolina Pasta Selezione Oro Chef

Environmental

P

D

**CPC CODE**
2371 - Uncooked pasta, not stuffed or otherwise prepared

**APPROVAL DATE**
08/08/2014 - Validity 3 years

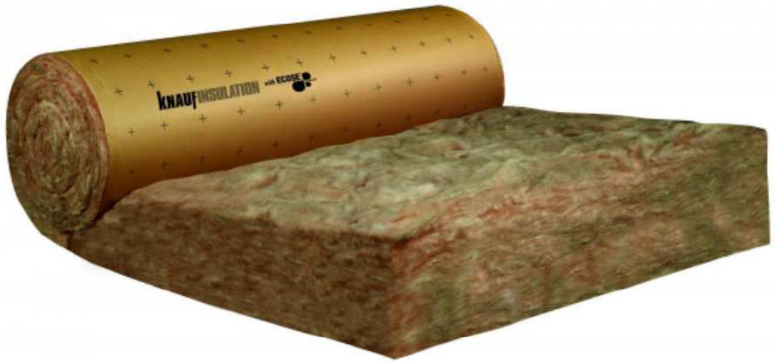
**REVISION**
1

## 12. Environmental results - Italy (for local consumption)

| NON RENEWABLE RESOURCES data per 1 kg of product | | UPSTREAM | | | CORE | DOWNSTREAM | TOTAL |
|---|---|---|---|---|---|---|---|
| | | Raw Material Production | Milling | Packaging production | Pasta Production | Distribution | |
| MATERIAL RESOURCES data in grams | Phosphorous | 3.89 | <0.01 | 0.01 | <0.01 | <0.01 | 3.90 |
| | Limestone ($CaCO_3$) | 1.49 | 0.16 | 0.37 | 0.02 | <0.01 | 2.04 |
| | Gravel | 0.40 | 0.01 | 0.76 | <0.01 | <0.01 | 1.17 |
| | Alogenate | 0.98 | <0.01 | <0.01 | <0.01 | <0.01 | 0.98 |
| | Sodium Chloride | 0.70 | 0.02 | 0.23 | <0.01 | <0.01 | 0.95 |
| | Oil | <0.01 | <0.01 | 7.86 | <0.01 | <0.01 | 7.86 |
| | Gas | <0.01 | <0.01 | 2.98 | <0.01 | <0.01 | 2.98 |
| | Others | 0.54 | 0.01 | 0.54 | <0.01 | <0.01 | 1.09 |
| ENERGY RESOURCES data in grams | Coal | 8.74 | 6.30 | 11.81 | 0.83 | 0.06 | 27.73 |
| | Oil | 54.30 | 10.67 | 4.50 | 0.76 | 2.51 | 72.73 |
| | Natural Gas | 21.28 | 6.20 | 13.01 | 62.46 | 0.13 | 103.08 |
| | Others | 0.01 | <0.01 | 11.43 | <0.01 | <0.01 | 11.44 |
| RENEWABLE RESOURCES data per 1 kg of product | | UPSTREAM | | | CORE | DOWNSTREAM | TOTAL |
| | | Raw Material Production | Milling | Packaging production | Pasta Production | Distribution | |
| MATERIAL RESOURCES data in grams | Biomass* | 0.28 | 0.70 | 25.30 | 0.04 | <0.01 | 26.33 |
| ENERGT RESOURCES data in MJ | Hydroelectric | 0.02 | 0.04 | 0.02 | 0.03 | <0.01 | 0.11 |
| | Wind | <0.01 | 0.01 | <0.01 | <0.01 | <0.01 | 0.02 |
| | Solar | <0.01 | 0.01 | <0.01 | <0.01 | <0.01 | 0.01 |

*The biomasses transformed into the product are not considered. Totals may not agree because of rounding

# Type III label: EPD



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TI 212 300 mm

**FICHE DE DECLARATION ENVIRONNEMENTALE ET SANITAIRE DE PRODUIT**

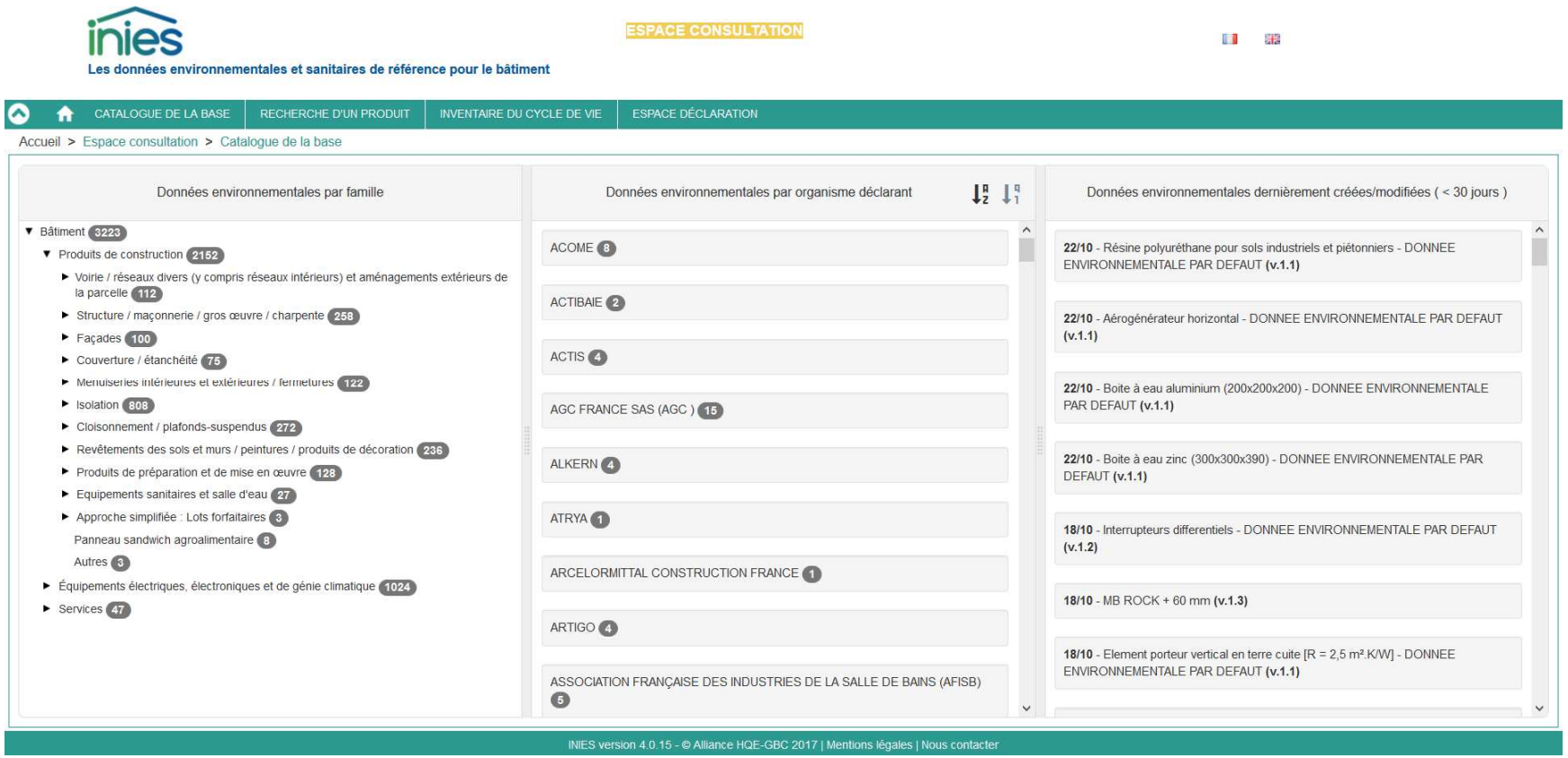
*En conformité avec la norme NF EN ISO 14025 et NF EN 15804+A1 et son complément national NF EN 15804/CN*

# Type III label: EPD

| Impacts Environnementaux | Etape de production | Etape de construction | | Etape d'utilisation | | | | | | | Etape de fin de vie | | | | D Bénéfices et charges au-delà des frontières du système |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A1 / A2 / A3 | A4 Transport | A5 Installation | B1 Utilisation | B2 Maintenance | B3 Réparation | B4 Remplacement | B5 Réhabilitation | B6 Utilisation de l'énergie | B7 Utilisation de l'eau | C1 Déconstruction / démolition | C2 Transport | C3 Traitement des déchets | C4 Elimination | |
| Réchauffement climatique *kg $CO_2$ equiv/UF* | 3.53E+00 | 1.31E-01 | 6.10E-01 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4.94E-03 | 0 | 6.48E-02 | MNA |
| Appauvrissement de la couche d'ozone *kg CFC 11 equiv/UF* | 3.51E-11 | 4.42E-14 | 2.40E-10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1.66E-15 | 0 | 6.56E-14 | MNA |
| Acidification des sols et de l'eau *kg $SO_2$ equiv/UF* | 2.04E-02 | 1.09E-04 | 4.73E-04 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4.11E-06 | 0 | 3.84E-04 | MNA |
| Eutrophisation *kg $(PO_4)^{3-}$ equiv/UF* | 4.00E-03 | 2.08E-05 | 9.24E-05 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7.88E-07 | 0 | 5.23E-05 | MNA |
| Formation d'ozone photochimique *Ethene equiv/UF* | 1.44E-03 | 1.68E-05 | 3.40E-05 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1.43E-07 | 0 | 3.02E-05 | MNA |
| Epuisement des ressources abiotiques (éléments) *kg Sb equiv/UF* | 2.34E-04 | 1.05E-08 | 4.74E-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3.96E-10 | 0 | 2.26E-08 | MNA |
| Epuisement des ressources abiotiques (fossiles) *MJ/UF* | 6.51E+01 | 1.82E+00 | 1.43E+00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6.84E-02 | 0 | 8.39E-01 | MNA |
| Pollution de l'eau - *$m^3$/UF* | 3.08E+03 | 5.34E+01 | 6.43E+01 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2.01E+00 | 0 | 1.77E+01 | MNA |
| Pollution de l'air - *$m^3$/UF* | 4.66E+02 | 3.69E+00 | 1.11E+01 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1.28E-01 | 0 | 3.14E+01 | MNA |

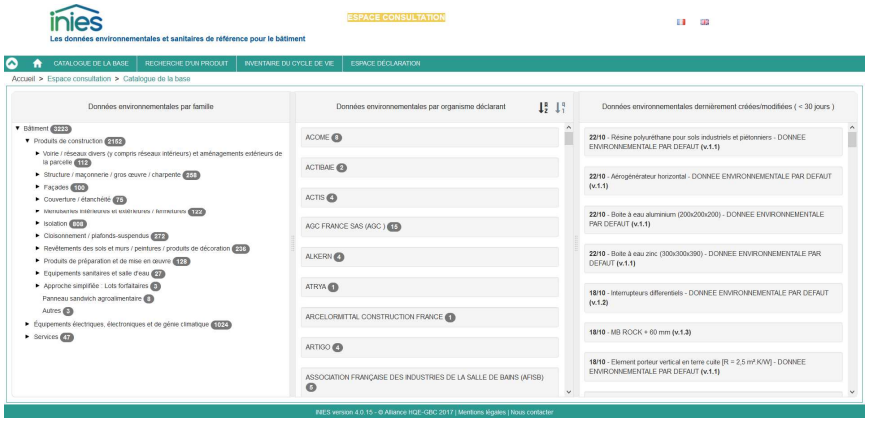
# Type III label: EPD

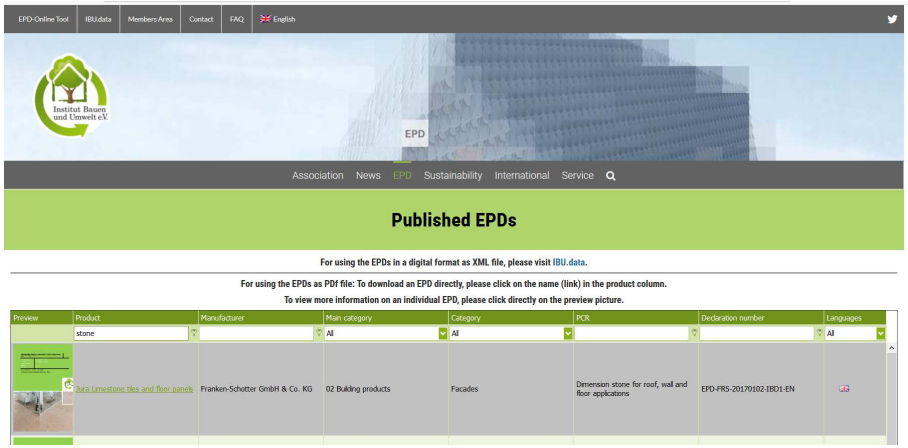
- Environmental declaration type III – ISO 14025
  - Where to find ecoprofiles?
    - Sectorial databases
      - INIES : [http://www.base-inies.fr/](http://www.base-inies.fr/)



# Type III label: EPD

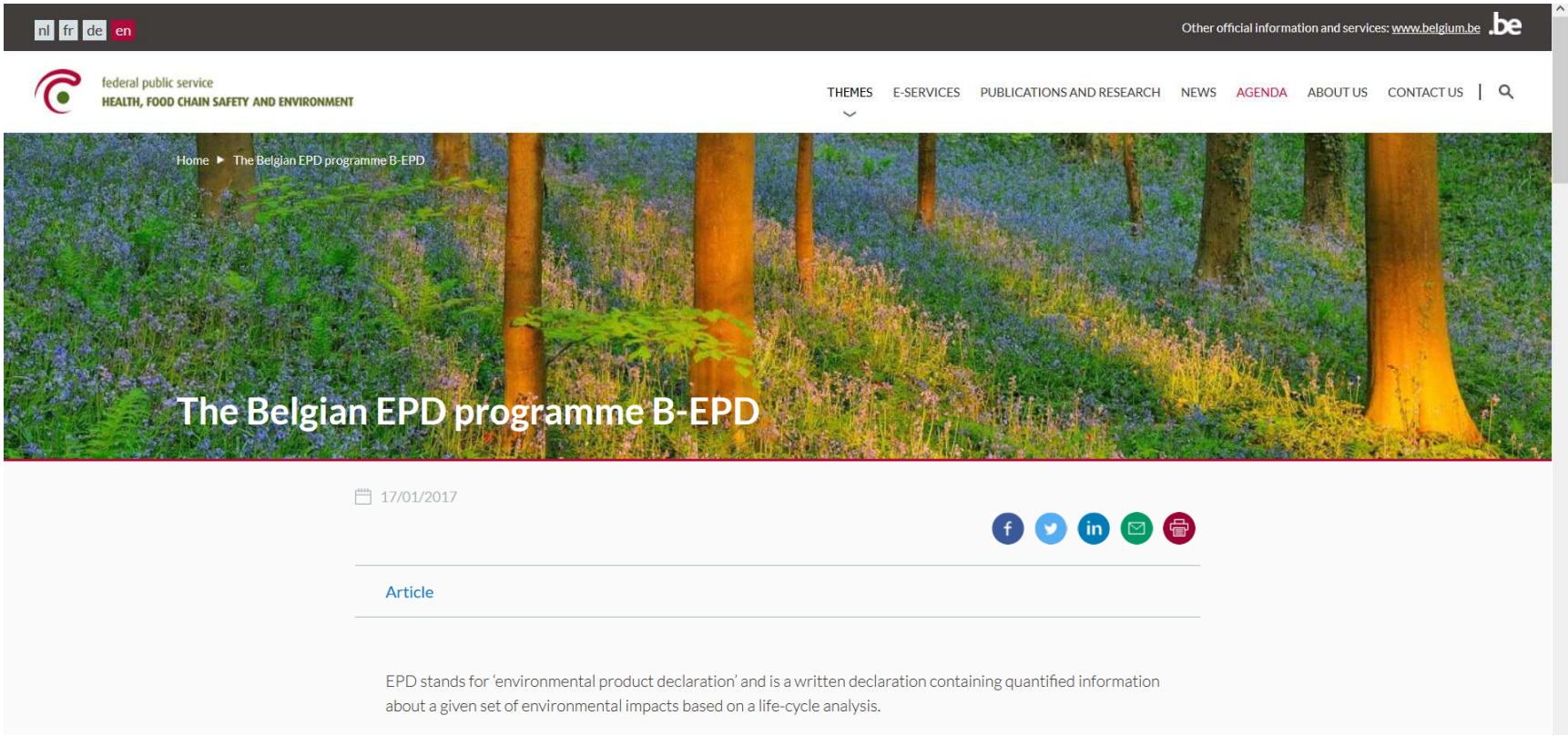
- Existence of several national programmes
  → Attempt for mutual recognition



# Type III label: EPD

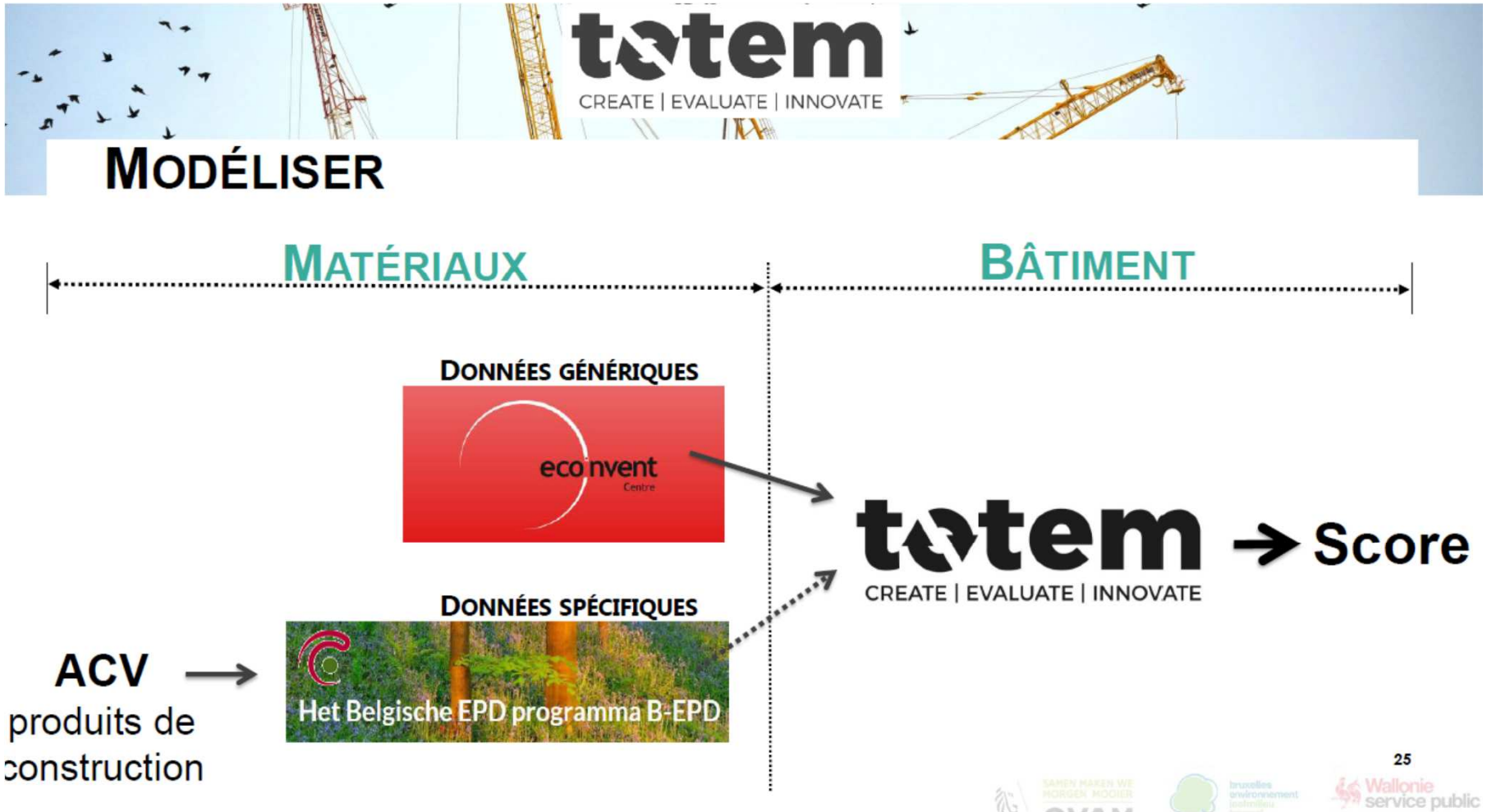
- Belgium: royal decree (2014)
  → B-EPD




https://www.health.belgium.be/en/belgian-epd-programme-b-epd

# Totem = Belgian tool

- Tool to Optimize the Total Environmental impact of Materials



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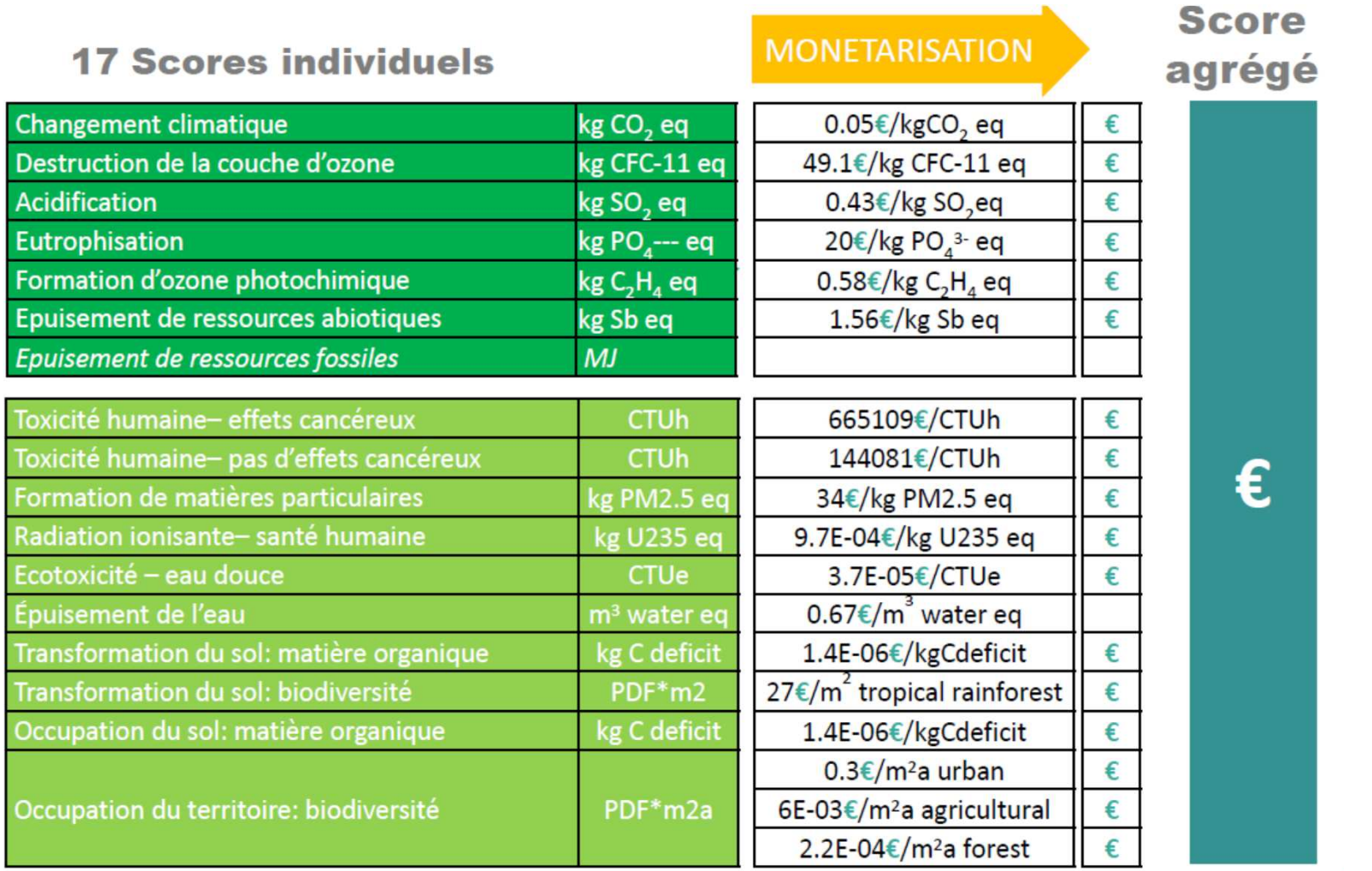
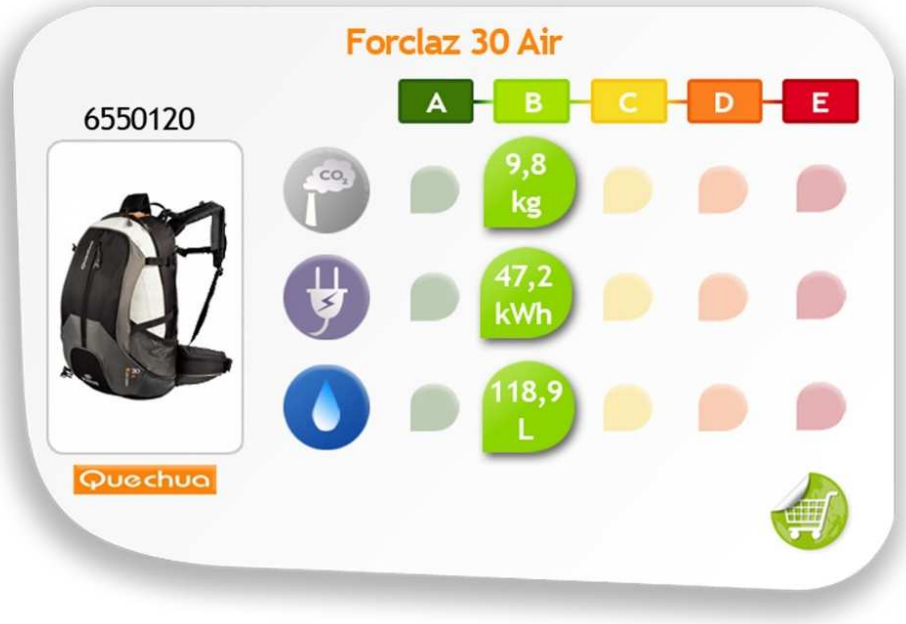


# Product Environmental Footprint

- PEF = the future ?
  - Experimentation during 3 years to develop european sectoral repository (PCR, Product Category Rules)
  - Projects calls with enterprises



# Take home message

- Contusumers are not aware about differences in logos
  - Self declaration >< criteria certified by third party
- Needs for education/information
- Needs for uniformization → role of EU
- 1 = EPD but complex
- 2 = Type I
- 3 = Type II

# Take home message

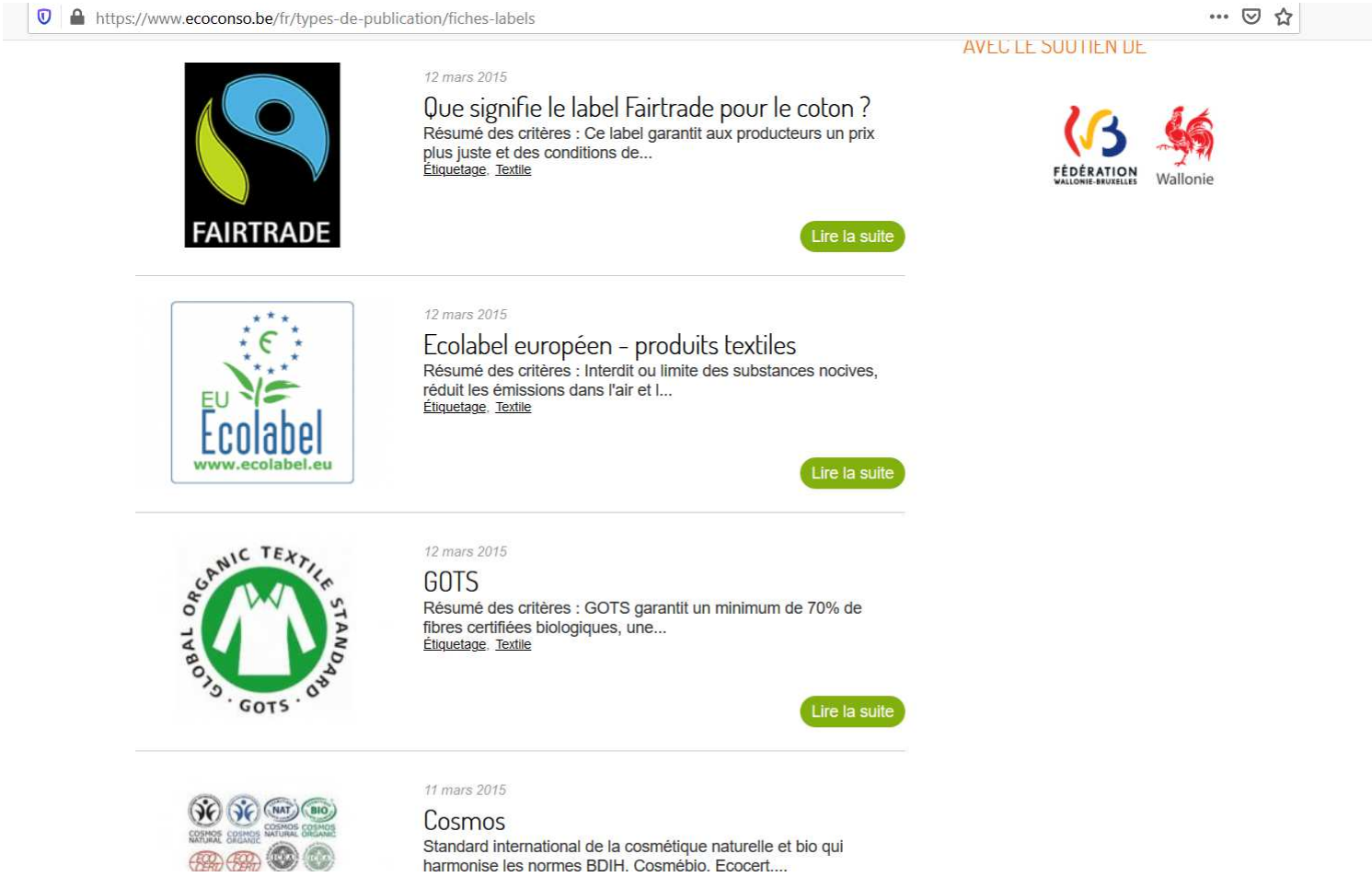
- https://www.ademe.fr/labels-environnementaux

3. Découvrez les labels

| | | |
|---|---|---|
| **AGRICULTURE BIOLOGIQUE**<br>TRÈS BON choix<br>Ces deux labels garantissent que les fruits et légumes sont cultivés sans produit « de synthèse » (pesticides et herbicides, engrais) et sans OGM. | **BIO COHÉRENCE**<br>TRÈS BON choix<br>Ce label intègre les critères des labels Agriculture Biologique. Il garantit en plus que les fruits et légumes sont d'origine française et produits dans le respect des agriculteurs. | **NATURE & PROGRÈS**<br>TRÈS BON choix<br>Ce label intègre les critères des labels Agriculture Biologique. Il garantit en plus que les fruits et légumes sont produits dans le respect des agriculteurs (valorisation du savoir-faire...). |
| **EN SAVOIR PLUS** | **EN SAVOIR PLUS** | **EN SAVOIR PLUS** |
| **DEMETER**<br>TRÈS BON choix<br>Ce label intègre les critères des labels Agriculture Biologique. Il intègre en plus les principes empiriques de la biodynamie. | **HAUTE VALEUR ENVIRONNEMENTALE**<br>TRÈS BON choix<br>Ce label garantit que les fruits et légumes sont cultivés en limitant l'utilisation des engrais et des pesticides et favorise la biodiversité. | **FAIRTRADE MAX HAVELAAR**<br>TRÈS BON choix<br>C'est un label de commerce équitable, qui garantit une contribution au progrès économique et social des producteurs (prix équitable, revenus décents, possibilité de faire valoir leurs... |

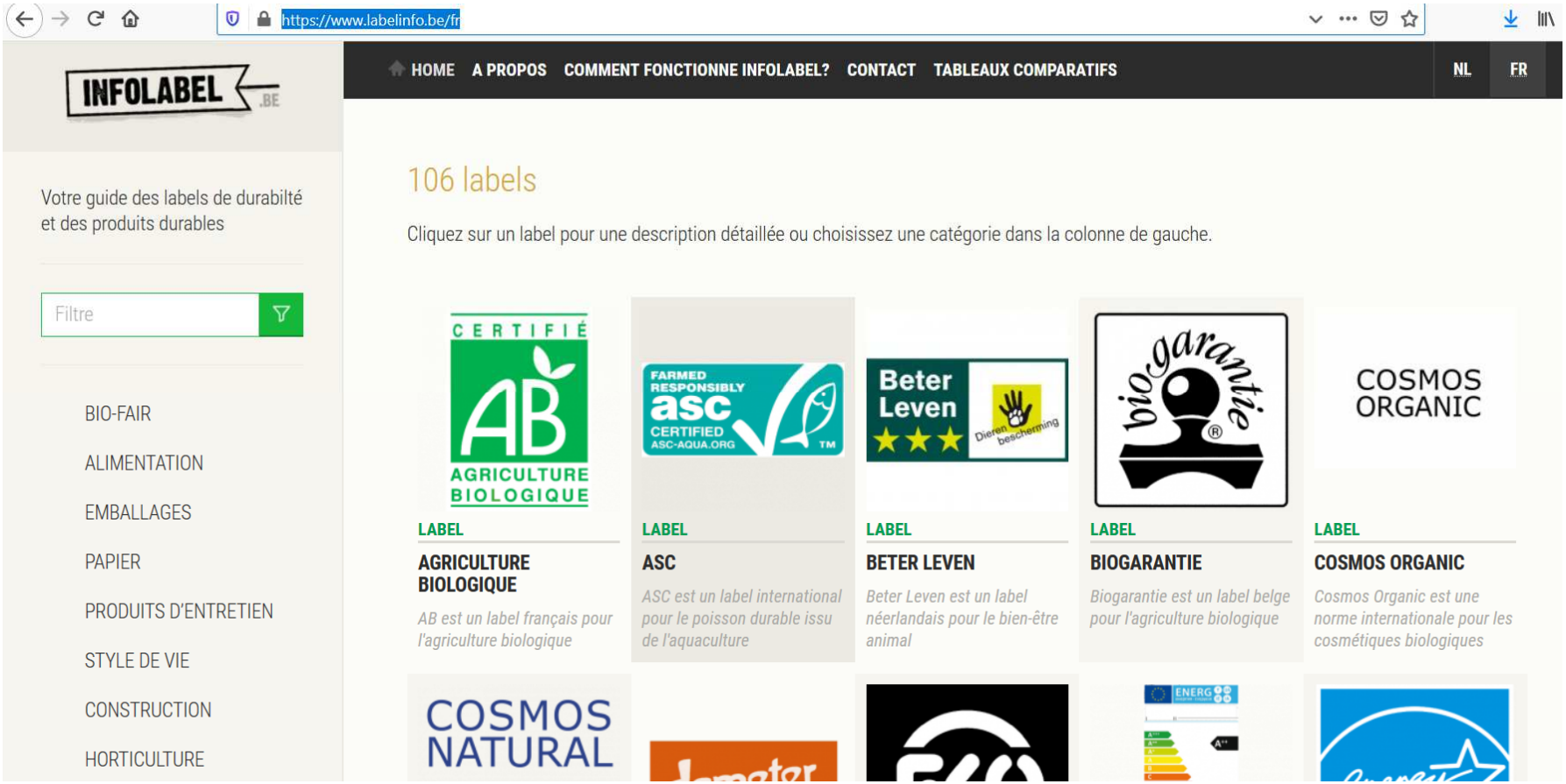
# Take home message

- https://www.ecoconso.be/fr/types-de-publication/fiches-labels



# Take home message

- https://www.labelinfo.be/fr



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