



## Environmental, societal and territorial management (GESTe)

Chair: Prof. Marie-Françoise Godart

Administrative support: Mrs. Sandrine Spaeter

Research Staff : Prof. Wouter Achten, Mrs. Luce Bellefontaine, Dr. Valérie Cawoy, Ir. Alain Coppens, Mr. Etienne Castiau, Mr. Xavier Courtois, Mr. Simon De Muynck, Mrs. Michèle Haine, Mrs. Thaïs Pons, Dr. Stéphanie Quériat

This **multidisciplinary** team specializes in **environmental assessment** in the broad sense.

The group masters assessment techniques for products and services (e.g. Life Cycle Assessment), projects (e.g. Environmental Impact Assessment), as well as for plans (e.g. Strategic Environmental Assessment) and programs and policies. Next to their evaluation function, these competences are also used to nourish smart **land management** (including rural areas, landscapes, forests, ...) for which the team employs an **ecosystem approach**.

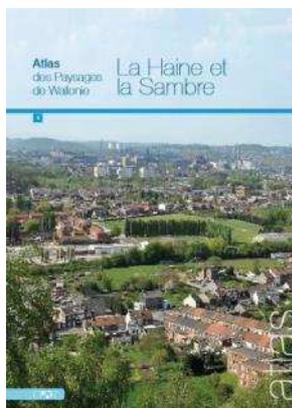


Our research is organized along **two main topics**

- Landscapes
- Environmental impact assessment and management

### *Topic 1 - Landscapes*

Specialized in **Landscape and Spatial Planning**, the research unit GESTe has developed recognized expertise in landscape through publications (e.g. "The Landscape Atlas of Wallonia"), interuniversity research and the organization of several seminars and trainings. The specificities of our approach include four elements:

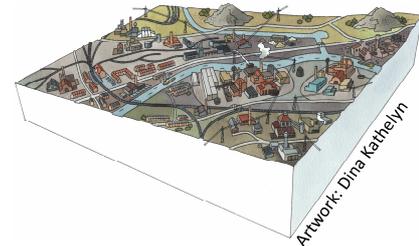


- **Rural development:** decoding the rural issues related to landscape structure.
- **The spatial scale:** analysis of landscape issues at both regional and local level including cross-boundary issues.
- **The temporal scale:** historical analysis of the production and representation of landscapes.
- **The sociological dimension:** analysis of the perception of landscapes, their symbolic and identity identification.

The **crossing of geomorphological** (climate, soil, topography), **natural** (vegetation) and **human data** allows in-depth studies on the description of landscapes, their symbolic meaning and identity. Issues arising are put in broader perspective and in particular allow the definition of recommendations combining landscape protection, management, and conservation.

### Competences, methods, techniques available:

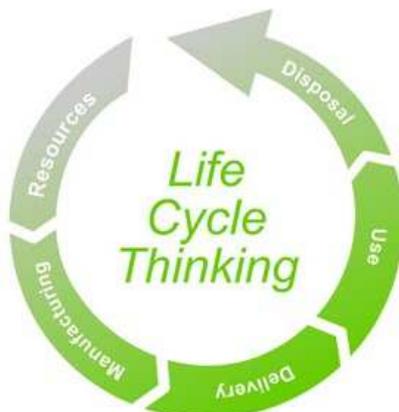
- Field surveys and analysis
- Interpretation of landscapes based on i) individual interviews or focus group discussion; ii) analysis of imagery; iii) analysis of tourist guides
- Processing geospatial landscape analysis
- Mastering various graphical techniques (e.g. block diagram , topographic , etc. . ) as tools for reading, analysis and dissemination
- Analysis of the direct and indirect provisioning services of landscapes – agriculture, forestry, nature conservation, tourism
- Historical analysis of landscape evolution
- Evaluation of landscape integration in urban projects
- Operationalizing of the European Landscape Convention and its objectives for the protection, management and development of landscape quality
- Strong multidisciplinary and interdisciplinary reflex, including cross-boundary regional themes
- Multi-criteria analysis , statistical analysis



### *Line 2 - Environmental impact assessment and management*

Since several years the necessity to assess and manage the impacts of human activities on the environment becomes more and more important. Therefore a variety of methods has been developed, which allows to tackle this requirement in various ways.

**Environmental impact assessment (EIA)** assesses (infra)structural project proposals. These assessments can be executed on a voluntary base, mainly aimed at impact management, or in a legal context, mainly aimed at ex-ante evaluation for decision support. **Strategic Environmental Assessment (SEA)** involves evaluation of strategic planning documents (policies, plans and programs) and prospective projects aimed at identifying and formulation recommendations. Finally, **Life cycle thinking tools** (e.g. life cycle assessment, life cycle costing and life cycle management ) together with footprinting tools (e.g. carbon and water footprints) allow impact assessment and management of products, services and production systems, in both private and public sectors as well as in both industrial and bio-based sectors. These tools can be used in both a retrospective and prospective way.



### Competences, methods, techniques available:

- Environmental impact assessment (experience: roads, quarries, airports, stores and office buildings)
- Carbon and water footprinting
- Life cycle assessment (experience: agricultural products, biofuels, biomaterials, wooden products, proteins, ...)
  - Scenario analysis
  - Uncertainty analysis
  - Substitution effects
  - Methodological development

## Project experiences and collaborations

The research group has collaborated and is still active in various European (framework programs, ESPON), national (BELSPO) and regional (CPDT, Wallonia and Brussels) **research projects**, and has successfully executed numerous **research contracts** also occasionally in Africa. Through this research work GESTe has established **collaborations** with other Belgian universities (ULg, UCL, UMONS, UNamur, KU Leuven, UGent) and organizations (e.g. Bruxelles environnement, Public Service of Wallonia, Natural parks, Local Action Group (GAL), Urban Ecology Centre), but also with international research groups and institutions (e.g. Missouri Botanical Garden (Africa and Madagascar Department), RWTH Aachen University (Germany), Wageningen Universiteit (Netherlands), Landscape Research Group (UK)).



## Public and scientific impact

In the last 5 years the members of the group realized in total **more than 60 publications**, and promoted **7 PhDs** (9 others are currently ongoing). Work was presented at numerous national and **international conferences** (through posters and speeches).

Recently the group participated at the organization of several scientific events:



19<sup>e</sup> Colloque International en évaluation environnementale  
 Bruxelles (Belgique), du 8 au 10 septembre 2014

Renouvellement de l'approche et des pratiques  
 en évaluation environnementale : pourquoi et comment?

Organisé par



En partenariat avec



- SIFÉE – Conference 8-10/09/2014, ULB – Brussels: Renewal in approach and practical environmental assessment: why and how?
- Landscape Conference 28-29/04/2014, ULB – Brussels: Combining scientific expertise with participation: the challenge of the European Landscape Convention
- CPDT – Conference 26/11/2013, Palais des congrès – Liège: Densification and quality of life: what project for the Walloon territory?
- Research action platform in phytoremediation for Brussels - Capital Region (“Opération tournesol”)- Workshops 19/02/2013 and 29/03/2014, Brussels