**Introduction**

In Western Europe, landscapes are shaped and modified primarily by agriculture resulting in a close relationship between landscape pattern and agriculture. In recent decades, however, some major changes have substantially transformed agricultural landscapes. These farmland changes are driven by developments such as urbanization, globalization, economic technologies, demographic growth, the changing societal expectations towards the countryside and the European agricultural policy. As a consequence, the typical agricultural landscape features undergone many evolutions resulting in a multifunctional landscape with different land uses and environmental services where production of food or nature conservation are no longer the only objectives.

**Main goal**

To assess structural changes of farmland in a transforming landscape.

“What are the patterns and processes of a transforming agricultural landscape in an urbanizing region?”

**Hypothesis**

Dynamics in agricultural landscapes causes a fragmentation process affecting both its structure and functions.

**Case of Flanders**

Northern region of Belgium

6 case study areas

**Objectives and RQ’s**

Mapping the structural changes of farmland

*What is the fragmentation degree of the farmland?*

- Farmland loss
- Parcel configuration
- Farm configuration

Strategies for farmland planning and preservation

*What is the optimal farmland structure?*

- Economic
- Ecological
- Spatial
- Socio-cultural

**Methodology**

Mapping + GIS analysis + Participatory

Spatial scales

- General
- Regional
- Farm

Time scale


**LANDSCAPES**

**STRUCTURE**

- Composition
- Configuration

**FUNCTIONS**

- Economic
- Ecological
- Socio-cultural

**FRAGMENTATION**

- Non-spatial characteristics of the landscape
  - Proportion farmland vs non-farmed
- Spatial characteristics of the farmland
  - Parcel geometry (area and shape)
  - Spatial relationships

**Introduction**

These dynamics causes next to a decrease in total area also the division of landscape elements into smaller pieces. This fragmentation trend presents a challenge to conservation management of our most fertile and productive area. To get insight into the consequences of fragmentation on the landscape, a framework is proposed based on three fundamental aspects in landscape research: structure, function and change.

In this study we focus on the agricultural land and make the distinction between land in agricultural use and non-agricultural area (e.g. settlement, nature, etc.). The term ‘fragmentation’ refers in our study to the processes of farmland loss, the changing farmland configuration and the increasing isolation of patches.