

# Sustainable development

The spatial clustering of different agro-production chains and the spatial combination of agro-processing and non-agro functions enable many prosperous scenarios. It includes not only the production of food, feed, vegetables and fruits, but also of fuels, fibers, fermented products, flowers, fragrances, flavours, functional molecules and pharmaceuticals.

The concept of Agroparks is based on the principles of sustainable development.

- Environmental benefits through lowering emissions and waste
- Application of principles of industrial ecology, i.e. mutual use of waste and by-products
- Advantages of scale through industrial production and processing

- Reduction of fossil fuel use and veterinary risks because of reduced transport
- Improved animal comfort, increasing production levels
- Independence of season and land by whole year products
- Enables chain transparency resulting in better quality management
- Improvement of farmers position as a preferred supplier
- Significant reduction of economic costs

## What does Wageningen University & Research Centre offer?

- Integrated approach of chain development and regional development in a creative research by design process
- Detailed expertise in production chains, logistics, processing, environmental aspects and spatial planning

Wageningen UR Agroparks currently is active in several emerging countries, including China, India, Thailand and Vietnam.



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## Agroparks - an innovative design approach for metropolitan areas



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For quality of life

# Urbanization and agriculture

The world is urbanizing. In the next few years more than half the world population will be living in cities. Many of these cities are typical Delta metropolises usurping the space most suited for agricultural production. The distinction between urban and rural areas within the metropolises is vanishing. In this situation reliable food-chains that provide fresh products are becoming of strategic importance.

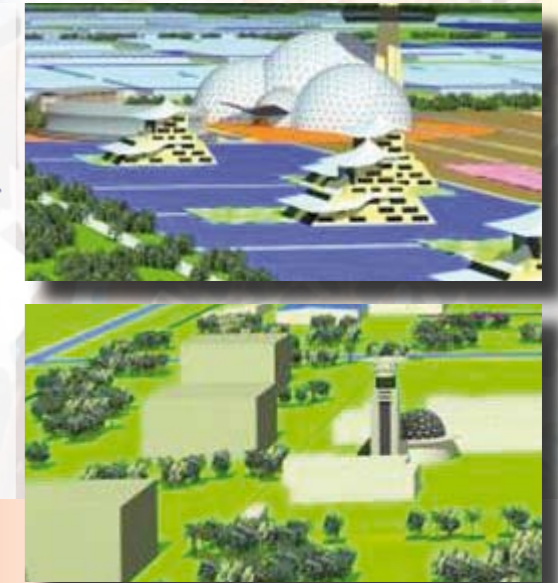
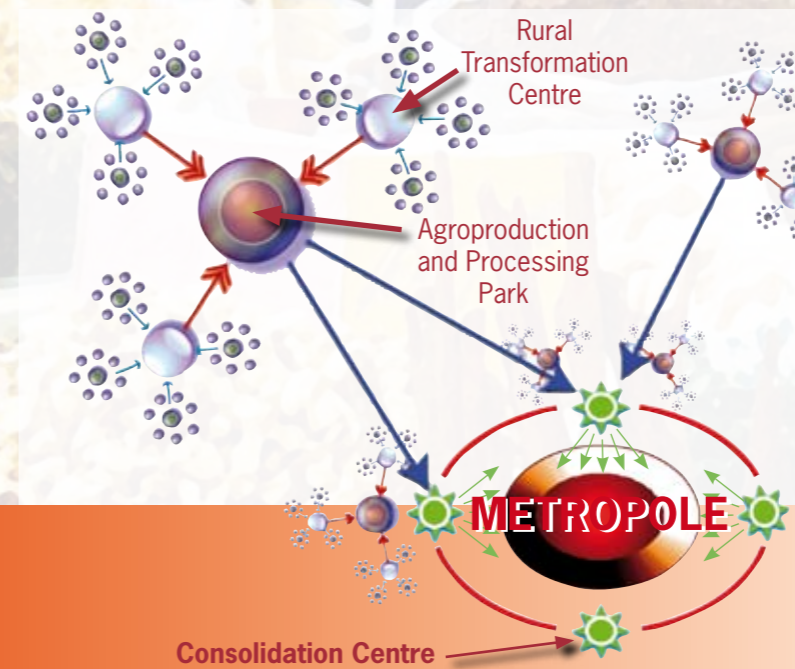
# Population growth needs rise in agricultural productivity

In the last decade landscape architects, urban developers and agrofood technicians have developed new concepts that must enable agrofood-production to take its place in the network metropolises of the 21st century. Metropolitan agriculture is the knowledge driven, complex network of agro production, processing, trade and logistics that has been developing in and around the nodes of the global network since 1970. The expertise and lessons learned by the Northwestern European agro sector can be used in other metropolitan areas in the world to create regional specific forms of innovating metropolitan agriculture.

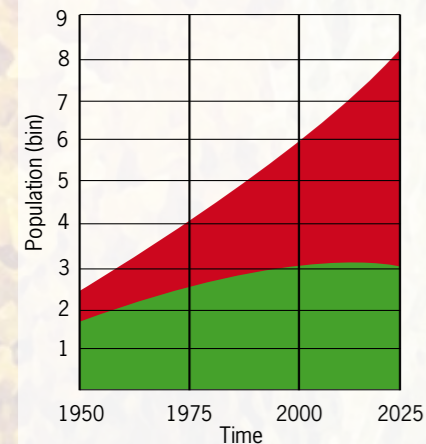
# The Agropark concept

An Agropark is a systems innovation of metropolitan agro production, processing and logistics. As part of an Intelligent Agrologistic Network, it enables a demand driven combination and integration of various agricultural activities.

Intelligent Agrologistic Networks combining Consolidation Centres, Agroparks and Rural Transformation Centres.

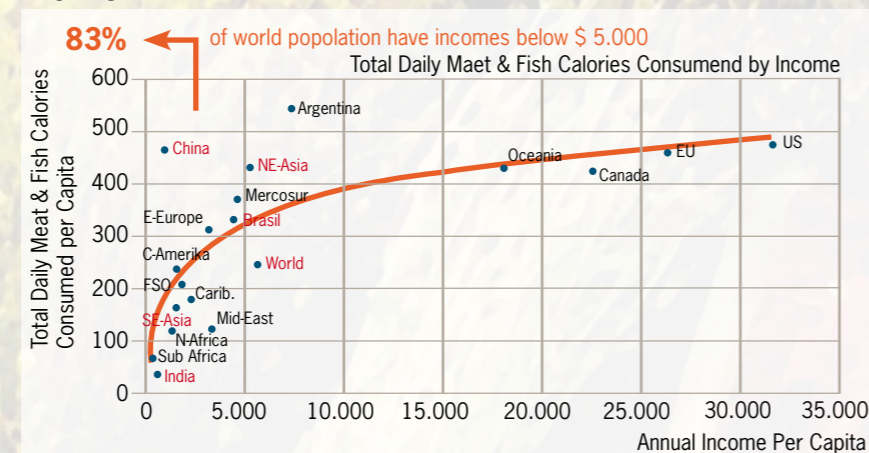


Growth and projected growth urban (red) and rural (green) population

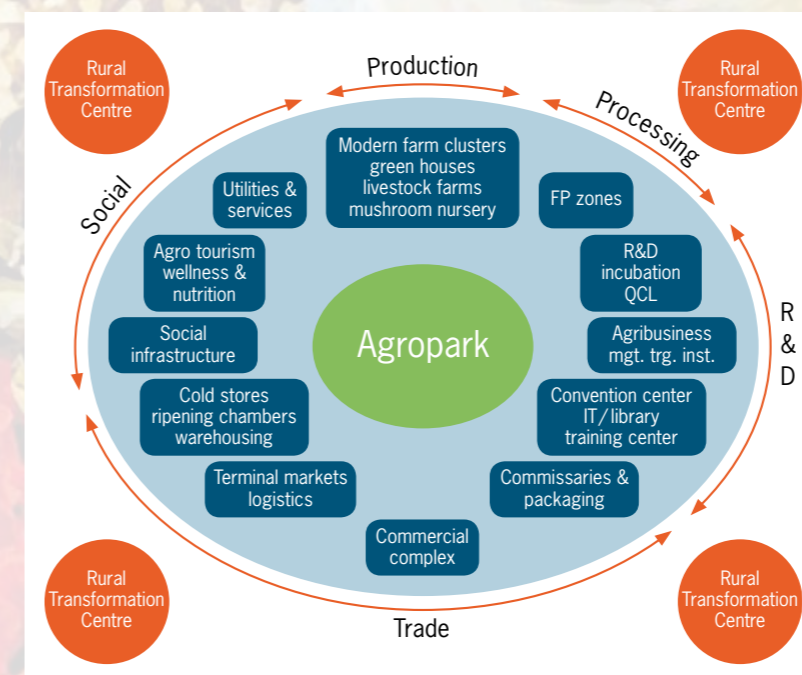


Meat consumption increases with welfare

Meat consumption grows fastest where income is less than \$ 5,000 per year and growing: Asia, Africa and South America



An Agropark with components of production, processing, trade, demonstration, R&D, capacity building and social functions, delivers its products throughout the whole year as efficient as possible, independent of season and land.



The Agropark fits in a network containing three vital appearances:

- Rural Transformation Centre: combining collection and storage of farmers products with rural development services
  - Agro Production and Processing Park: combining production, processing, collection, R&D, trade and social functions. An Agropark delivers its products throughout the year as independent as possible from season and land
  - Consolidation Centre: serves a metropolitan market in a consumer responsive way throughout the year. Seasonal products not available from local producers are being supplied from storage or by trade
- This network is an Intelligent Agrologistic Network. It is not only a new perspective of metropolitan agriculture but it also offers access to markets for existing farmers.