The 'Johann Heinrich von Thünen Institute‘ – research in the fields of Rural Areas, Forestry, and Fisheries

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Federal Research Institute for Rural Areas, Forestry and Fisheries

Created on January 1, 2008
Research within the scope of the BMELV

Federal Ministry of Food, Agriculture and Consumer Protection (BMELV)

- **Julius Kühn Institute, Federal Research Institute for Cultivated Plants**
- **Friedrich Loeffler Institute, Federal Research Institute for Animal Health**
- **Max Rubner Institute, Federal Research Institute for Nutrition and Food**
- **Johann Heinrich von Thünen Institute, Federal Research Institute for Rural Areas, Forestry and Fisheries**
- **Federal Institute for Risk Assessment**
- **German Research Centre for Food Chemistry**
- **Leibniz Institute for Agricultural Engineering**
- **Institute of Vegetable and Ornamental Crops**
- **Research Institute for the Biology of Farm Animals**
- **Leibniz-Centre for Agricultural Landscape Research**
- **Leibniz Institute of Agricultural Development in Central and Eastern Europe**

E-URAL workshop on „Nature and Biodiversity“, Voronezh, June 28-29, 2010
Johann Heinrich von Thünen

German Agricultural Scientist, Economist and Social Reformer
(1783 – 1850)

Studied national economics in Göttingen.
1809 purchased Tellow Manor in Mecklenburg. There he developed important theories on agricultural and forest production (the so-called Thünen resource cycles).
1830 honorary doctorate from the University of Rostock.
Organization of the vTI

- Federal German research institute and top level national agency
- 15 institutes
- 577 permanent employees, of these about 190 are scientists
- Main headquarters: Braunschweig
- Contracted cooperation with the University of Hamburg in the course of study „Wood science“. Co-operations with numerous research institutes in Germany and abroad
Precursor institutions of the vTI
Institutes of the vTI

- Forest Ecology and Forest Inventory
- Wood Technology and Wood Biology
- Forest Based Sector Economics
- Rural Studies
- Forest Genetics
- Farm Economics
- World Forestry
- Market Analysis and Agricultural Trade Policy
- Sea Fisheries
- Organic Farming
- Baltic Sea Fisheries
- Biodiversity
- Agricultural Technology and Biosystems Engineering
- Fishery Ecology
- Agricultural Climate Research
General Subject laid down within the medium-term concept of vTI:

Guiding Principle:
Sustainable and competitive utilization of nature-based resources in agriculture, forestry, and fisheries

Question of Principle:
How can policy enhance preconditions for optimized utilization of natural resources with minimised damages for the environment respectively nature and for human society?
Practically vTI works continuously on current issues provided by the Federal Ministry of Food, Agriculture, and Consumer Protection along with monitoring activities pretended by national and international agreements.

- current subject-oriented policy advice
- contemporary fulfilment of national and internationally monitoring and reporting requirements

However, questions promoted within the sphere of applied sciences the vTI is largely self-reliant without direct influence of the ministry. This …

- guarantees a certain independence in scientific questions
- allows anticipatory studies, less influenced by current political interests
- secures a widely autonomous mid- and long-term planning of its research activities
Tasks of the vTI

- active in economics, e.g.
  - Impacts of increasing international competition on: agriculture, forestry, fishery and food production
  - How will the demand for organic food develop in the future?
  - How can existing supplies of wood be mobilized?
  - Consequences of demographic change on rural areas

- active in ecology, e.g.
  - Consequences of climate change on agricultural, forests and aquatic ecosystems.
  - Effects of utilisation on fish populations
  - Forest’s developing in Germany and around the world
  - Loss of biological diversity be combated on land, in forests, and in the sea?

- active in technology, e.g.
  - improvements in fisheries to optimize the selectivity of fishing gear
  - How can emissions from animal husbandry and organic fuels be documented and reduced?
  - Which production engineering innovations can improve the utilization of wood?
**Selected Research Topics within the vTI**

- Life cycle assessment
- Climate change – Avoiding greenhouse gas emissions
- Climate change – Adaptation
- Biodiversity in agriculture, forestry, and fisheries
- Competition in land use and in use of resources
- Living conditions in rural areas (socio-economics)
- Product controlling, identification tracking (timber, fisheries, husbandry, plant production) and certification systems
- Political framework for agriculture, forestry, and fisheries
- Organic farming
Mission statement

- to understand the role of biodiversity (BD) in agro-ecosystems
- to contribute to the protection of BD
- to enhance the contribution of BD to ecosystem services under current and future environments
Institute of Biodiversity

Research areas

- Soil Biology
- Agroecology
- Agri-environment schemes
- Monitoring concepts, Indicators
Mission statement

- understand structures and biotic communities in forests incl. game and ecosystem functions of forests
- provide essential information about forests by National Forest Inventory and Forest Monitoring

Research areas

- Forest Ecology
- Forest Inventories
- Forest Monitoring
- Forest Data Centre
### Institute of World Forestry

**Research areas**

- International forest development and policy
- Sustainable forestry
- Hosts the European co-ordinating centre of ICP Forests (PCC)

### Institute of Forest Genetics

**Research areas**

- Securing the origin and quality of seeds and plants
- Maintenance and evaluation of forest genetic resources
- Biodiversity in forests
- Evaluating the risks of biotechnology
Institute of Baltic Sea Fisheries

**Research areas**

- Modelling/statistics, population estimates, monitoring in the Baltic Sea

Institute of Sea Fisheries

**Research areas**

- Development of commercially valuable stocks of fish and invertebrates and monitoring of fish assemblages in the European Seas, North Atlantic, and Antarctic Ocean
vTI is open for calls and programmes for the enhancement of sciences at the national and international level

- building of consortia

- engagement within the European Technology Platforms (ETPs); influencing funding schemes both at national and European level

- leading responsibilities within EU projects

- participating in ERA-NET activities

- supporting of all these activities by an own vTI co-ordinator (Mr. Lange)
The primary aim of funding the 'Food, Agriculture and Fisheries, and Biotechnology' research theme under the Seventh Framework Programme (FP7) is to build a European Knowledge Based Bio-Economy (KBBE).
Objective

The main objective of research for the environment under FP7 is to promote the sustainable management of both the man-made and the natural environment and its resources. To this end, increased knowledge on the interaction between the climate, the biosphere, ecosystems and human activities is sought and new environmentally-friendly technologies, tools and services are developed.
European Technology Platforms

- Bottom-Up Approach with Industry in Lead
- Wide Stakeholder Involvement
- Flexibility: No ‘One Size Fits All’
- EU Role: Facilitating and Guiding but not Leading or Owning
- Majority of Strategic Research Agendas, where Appropriate, Taken into Account in Thematic Priorities of FP7
- Minority of Strategic Research Agendas Identified through Dialogue with Industry as Potential ‘Joint Technology Initiatives’
Programmes and Initiatives: FTB

Forest-Based Sector Technology Platform

Internationally supported by:

‘European Forestry Institute‘ (EFI), ‘European Fibre and Paper Research Organisation‘ (EFPRO) and ‘InnovaWood Management LTD‘ (InnovaWood)

http://www.forestplatform.org/
Vision 2030

The European forest-based sector plays a key role in a sustainable society.

It comprises a competitive, knowledge-based industry that fosters the extended use of renewable resources.

It strives to ensure its societal contribution in the context of a bio-based, customer-driven and globally competitive European economy.
Knowledge-based bio economy (KBBE)

List of preliminary topics for the Work Programme 2011 Cooperation Programme

**Theme 2 KBBE**

KBBE.2011.1.1-01: Promoting conifer genomic resources

KBBE.2011.1.1-04: Sustaining and managing forest tree genetic resources

**KBBE.2011.1.2-05:** Root signalling, growth and development under abiotic stress conditions
Theme 6 Environment incl. Climate Change:

ENV.2011.1.2.3-2 Positive effects of natural environment for human health and well-being

ENV.2011.1.3.2-2 Vulnerability and increased drought risk in Europe

ENV.2011.1.3.4-2 Capacity building in natural hazards risks reduction

ENV.2011.2.1.4-2 Behaviour of ecosystems, thresholds and tipping points

ENV.2011.2.1.4-3 Improved comprehension of the utility of the concepts of value of biodiversity

ENV.2011.2.1.6-1 Land-use and European forest ecosystems
A Strategic Research Agenda
for Innovation, Competitiveness and Quality of Life

The European Strategic Research Agenda
Strategic Research Agenda (2)

- Five Strategic Objectives (SOs) are covered:
  1. Development of innovative products for changing markets and customer needs
  2. Development of intelligent and efficient manufacturing processes, including reduced energy consumption
  3. Enhancing availability and use of forest biomass for products and energy
  4. Meeting the multifunctional demands on forest resources and their sustainable management
  5. Regarding the sector in a societal perspective (socio-economic aspects)
Welcome to the website of the WoodWisdom-Net 2 ERA-NET Project!

ERANET WoodWisdom-Net 2 (2009-12)
12 countries 19 partners,
5 joint call funding organisations
7 associate organisations
Joining new forces in East and South Europe

ERANET WoodWisdom-Net (2004-08)
first 5 countries 12 partners,
growth to 8 countries 18 partners
Joining forces in North & Central Europe

Networks joining forces from outside Europe

Wood Material Science and Engineering Research Programme (FIN-SWE 2003-06) Tekes, AKA
MMM, Vinnova, Formas
Joining forces in Finland and Sweden

Joining forces of Finnish funding and research
Resume

vTI

- covers most aspects of primary production in its economical meaning
- has economically, ecologically and technologically oriented tasks
- has 15 specialised institutes, which are active as partners in its subject areas
- is a potential partner in collaborations and platforms concerning the above-mentioned spheres