

Weihenstephan-Triesdorf **'green' and innovative**

Applied Research and Development at the
green University of Applied Sciences

Teaching and Research Structure

Departments

- » Biotechnology and Bioinformatics
- » Horticulture and Food Technology
- » Landscape Architecture
- » Agriculture and Food Economy
- » Agriculture
- » Environmental Engineering
- » Forestry

Students

- » 6,300 students
- » 1,700 new students (2014/15)

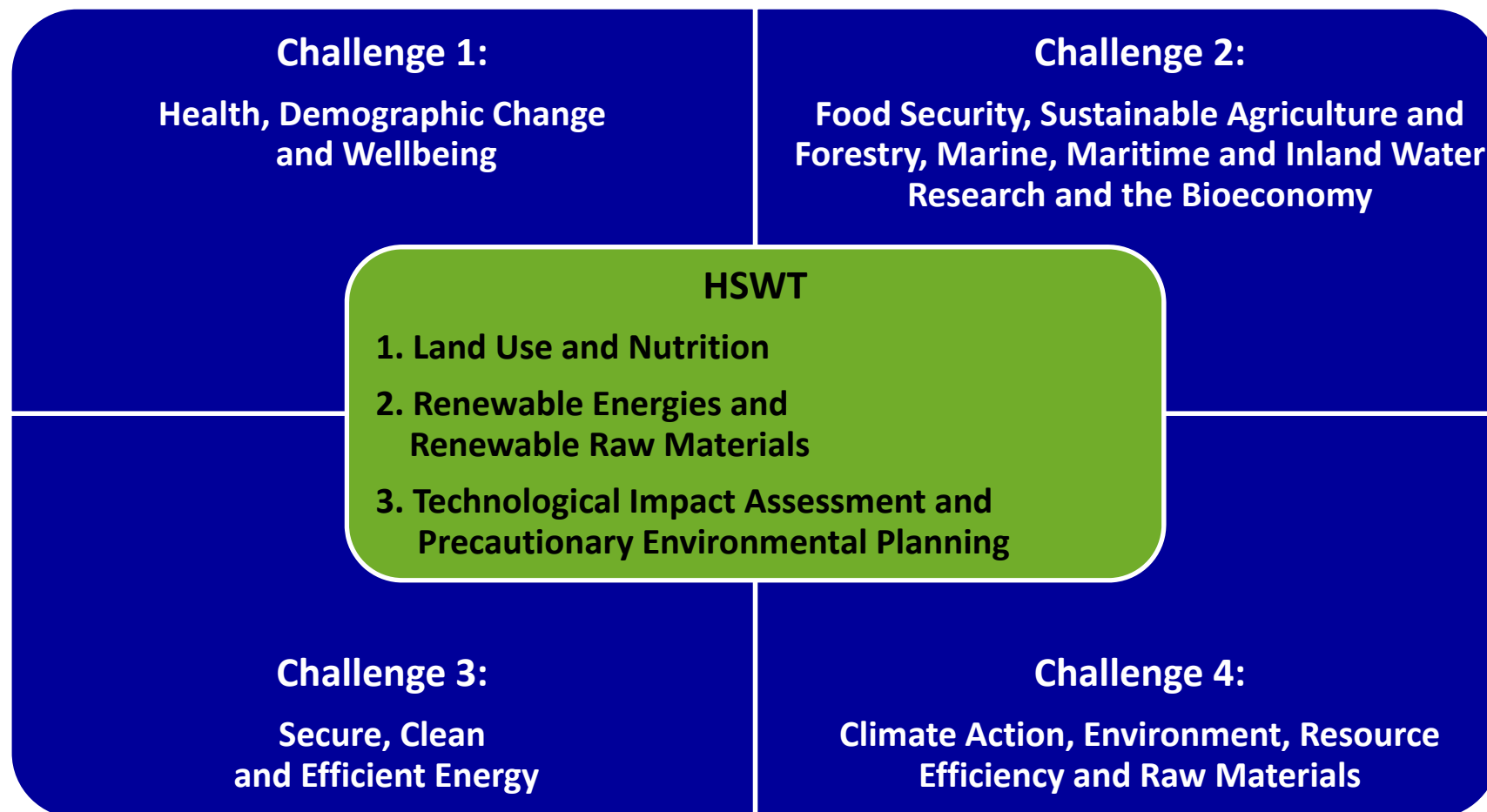
Research Facilities

- » Centre for Research and Continuing Education
 - › Institute for Horticulture
 - › Institute for Landscape Architecture
 - › Institute for Food Technology
- » Straubing Centre of Science

Research Projects

- » 12 projects supported by the EU
- » 57 projects supported by the federal government and the State of Bavaria
- » 88 projects supported by external sponsors
- » 62 cooperative dissertations

Four Societal Challenges of „Horizon 2020“ meet HSWT Research Topics



Research Topics HSWT

Improvement of
Animal Husbandry
Systems

Precision Farming

Environmental
Protection

Climate Change and
Climate Impact
Research

Cultural Landscape
Development

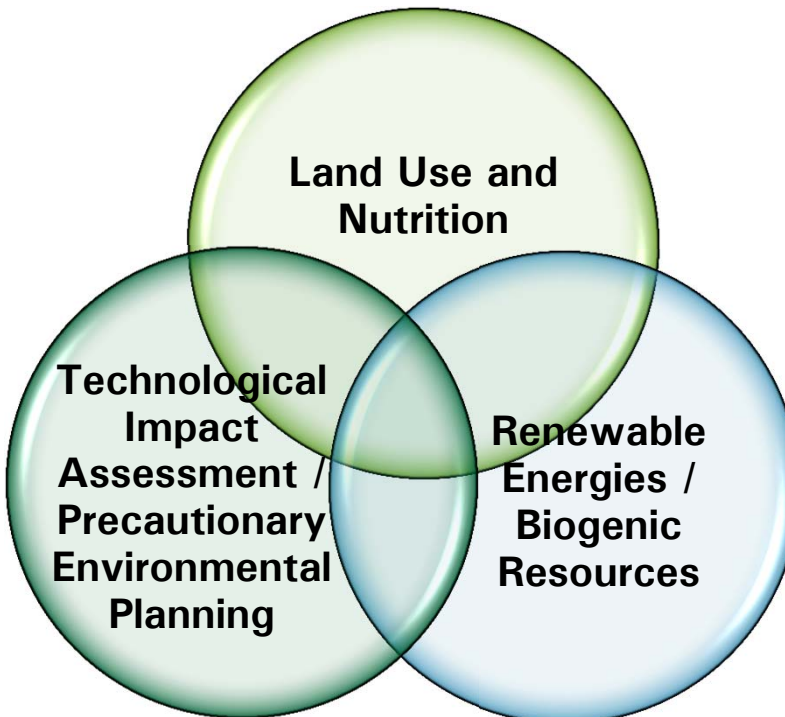
Vegetation Ecology

Energy Efficiency

Restoration Ecology

Plant Nutrition
Plant Protection

Use of forest
resources



Inventory and
Control of Forest
Resources

Agricultural
Economics and
Sociology

Soil Sciences

Marketing and
Management of
Biogenic
Resources

Land Use and Water
Resources

Food and Beverage
Technology

Irrigation Technology

Investigations for the
Optimisation of
Processes in Biogas
Facilities

Location Potential of
Renewable Energies

Optimising Biomass
Energy Utilisation

Organical and Analytical
Chemistry of Biogenic
Resources

Use of Renewable
Energies

Economics of Renewable
Resources



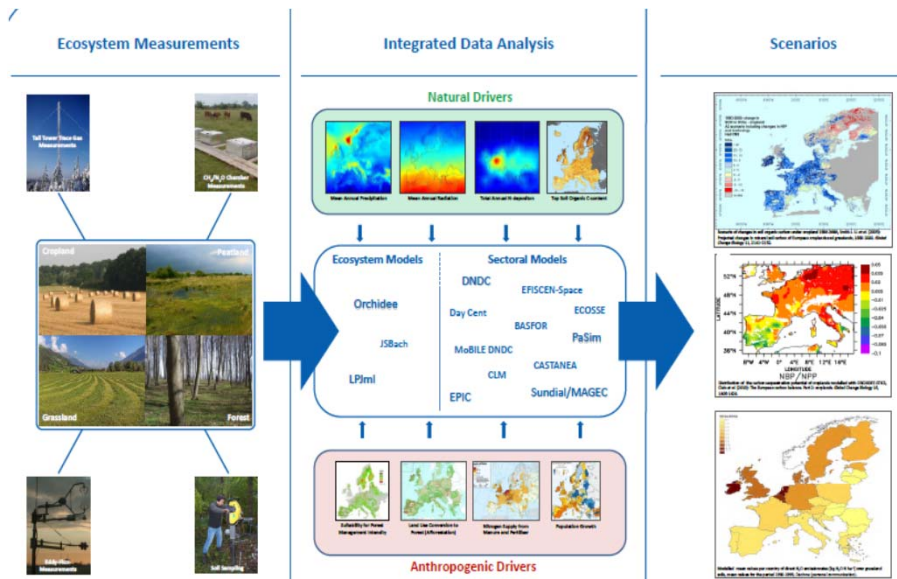
GHG Europe

Greenhouse gas (GHG) management in European land use systems

Research Focus

Greenhouse gas emissions are not evenly distributed across land use systems and regions of Europe. Spatial concentrations (*hotspots*) and temporal discontinuities (*hotmoments*) predominantly account for the existing uncertainties in the quantification of the European greenhouse gas budget.

GHG-Europe will focus on **hotspots** (peatlands, mediterranean shrublands, Eastern European forests) **hotmoments** (land use change, intensification/extensification of land use, bioenergy production) and **driving factors** (climate/climate variability, management, disturbances, N-deposition).



Subproject HSWT

Task 2.1 Peatland Synthesis
Prof. Dr. Matthias Drösler
Department Landscape Architecture
Chair of Vegetation Ecology

GHG-Europe at a Glance

Funding source: European Commission (FP7)
EC-contribution: € 6.6 Million
Duration: 01.01.2010 –30.06.2013
Consortium: 41 partners from 15 EU countries
Coordinator: Thuenen Institute (TI)

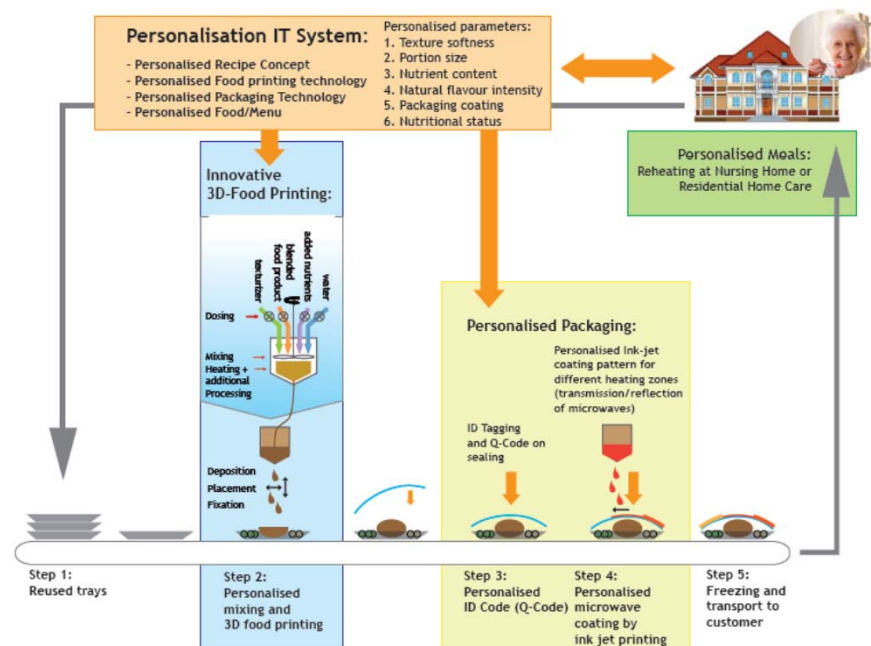
PERFORMANCE

PERsonalised **FO**od using **RA**pid **MA**nufacturing for the **NU**trition of elderly **CON**sum**ER**s

PERFORMANCE is a 3-year (EU-funded) research project addressing patients with mastication and swallowing problems.

Research Focus

Development of a personalised food supply chain for elderly people based on 3-D Food Printing. Personalisation will be based on preferences, portion size and nutrient composition as well as food texture. The innovative products developed (based on food purees) will have the appearance and taste of natural traditional meals.



Subproject HSWT

Prof. Dr. Thomas Lötzbeyer
Institute for Food Technology
Fields of Work: Food Ingredients and
Biotechnology / Quality Assurance

PERFORMANCE at a Glance

Fundingsource: European Commission (FP7)

EC-contribution: € 3 Million

Duration: 01.11.2012 –31.10.2015

Consortium: 14 partners from 5 EU Countries
(2 Universities, 2 Research and Technology
Organisations, 10 Small- and Medium-sized
Enterprises)

Coordinator: biozoon food innovations gmbh

HSWT has Joint Research Projects with over 120 Business Enterprises

- » For education and research, HSWT cooperates closely with a large number of companies from different sectors that are involved in the energy transition
- » The cooperation with self-help business institutions and non-governmental organizations which are supporting the energy transition critically is of particular importance.
- » For the regional planning management and implementation, the close cooperation with communities, official agencies and ministries is of crucial importance.

Verband Bayer. Landw. Brennereien e.G.
CompacTec – Gesellschaft zur Kompaktierung nachwachsender Rohstoffe mbH & CO.KG

Fraunhofer-Holzkirchen
Stadtwerke München Kaminkehrerinnung Niederbayern

BioEnergie GmbH & Co. KG

BayWa AG EnBW

Viessmann Werke GmbH und Co. KG

C.A.R.M.E.N.
Bayerischer Bauernverband

erdgas schwaben GmbH
Fachverband Sanitär-, Heizungs- und Klimatechnik Bayern

Bayerische Staatsforsten A.ö.R.
Clariant AG

MW Biomasse GmbH

Fachverband Biogas e. V.
Wald 21 GmbH Schmack Biogas

Selection of partnerships

HSWT Cooperates with National and International Universities and Research and Technology Institutions

- » Over 100 projects in joint research and development with national universities, research and technology institutions
- » National cooperation with 55 universities
- » International cooperation with over 100 universities
- » 62 cooperative dissertations

With its campus Weihenstephan, the HSWT forms part of the largest “green“ campus in Germany with numerous renown institutions like f. ex. the Technical University Munich and some State Institutes of Bavaria.

Fraunhofer-Institut für Verfahrenstechnik
Humboldt-Universität Berlin
Ludwigs-Maximilians-Universität München Universität Konstanz
Hochschule für Wirtschaft und Technik Dresden
Max-Planck-Institut für Biogeochemie
Wissenschaftszentrum Weihenstephan für Ernährung, Landnutzung und Ernährung
Forschungsinstitut für biologischen Landbau Hochschule München
Karlsruher Institut für Technologie
Leibniz-Institut für Ostseeforschung Warnemünde
Leibniz-Universität Hannover
TU München TU Berlin
Universität Regensburg
TU Dresden
Leibniz-Zentrum für Agrarforschung
Agroscope Changins-Wädenswil
Thünen Institut
Helmholtz-Zentrum für Umweltforschung

Selection of partnerships

We are looking for ...

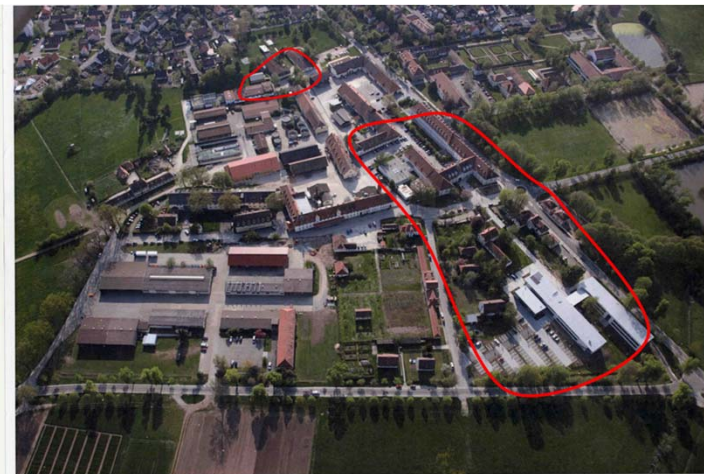
... projects and project partnerships in the following fields of Societal Challenges defined in Horizon 2020

- » **Health, Demographic Change and Wellbeing**
- » **Food Security, Sustainable Agriculture and Forestry, Marine, Maritime and Inland Water Research and the Bioeconomy**
- » **Secure, Clean and Efficient Energy**
- » **Climate Action, Environment, Resource Efficiency and Raw Materials**

Thank you for your attention!



Campus Freising-Weihenstephan



Campus Triesdorf



Experimental Station of Fruit-Growing at Lake Constance



Campus Straubing