

Research Strategy of the Forest Research Institute of Baden-Württemberg

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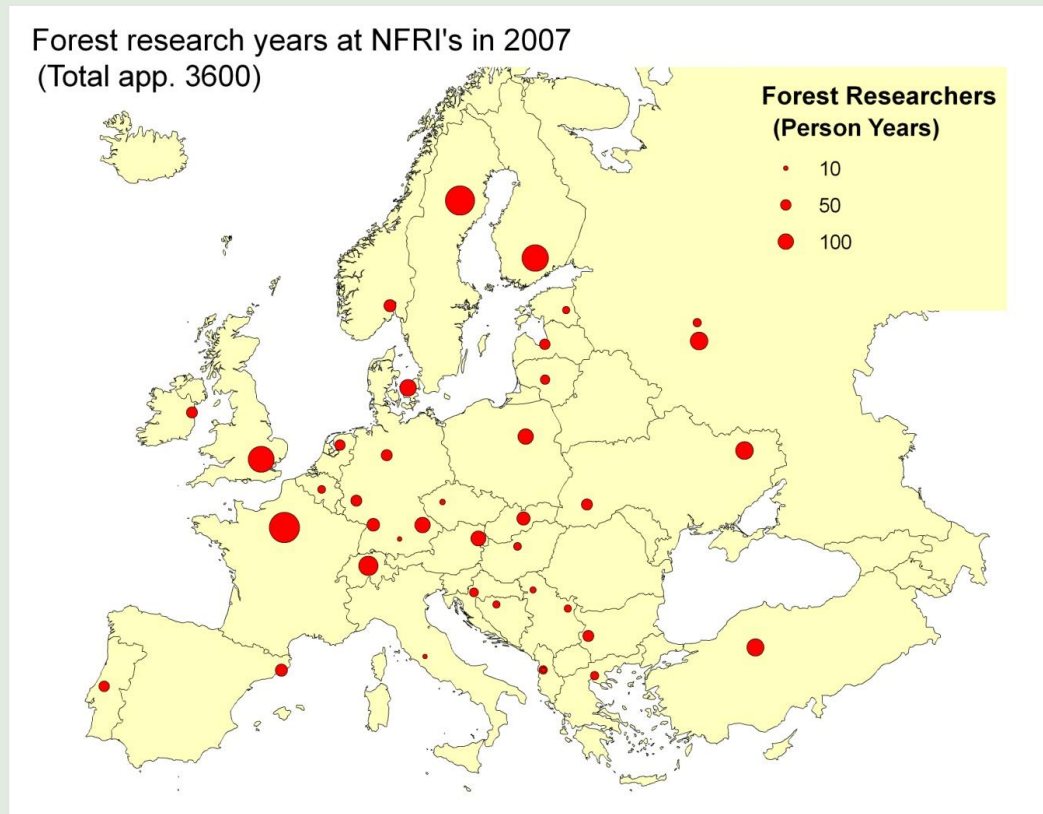
Forest Research Institute Baden-Württemberg,
Freiburg, Germany

Structure

- Forest Research Landscape
- Forest Research Institute of Baden-Württemberg (FVA)
- Frame conditions
- Emerging issues
- Setting the agenda
- Current challenges

European Research Landscape

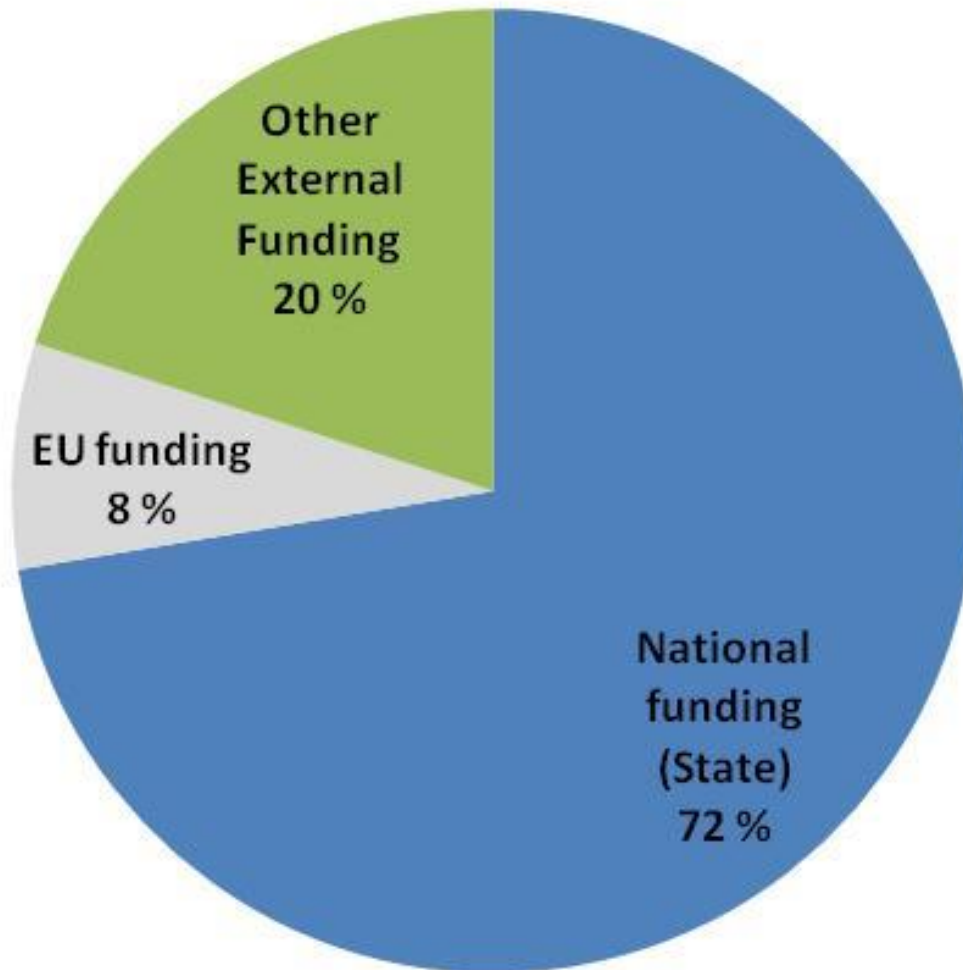
Päivinen 2007



Map of Forest Research Resources 2007
(FRI Survey in 2008, 43 organisations in 31 countries)

Forest Research Funding in Europe

Total app. 290 M€ in 2007

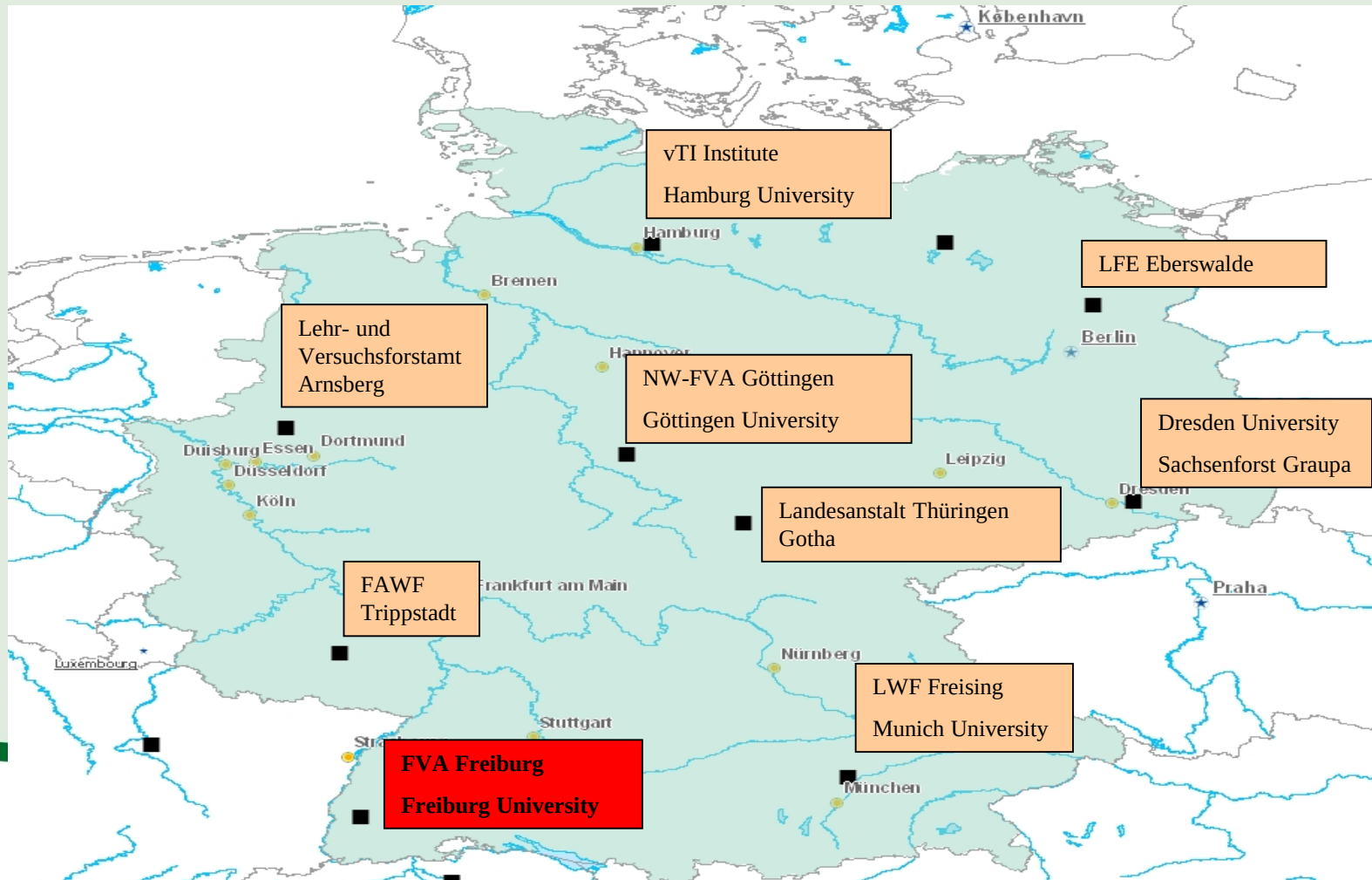


(N=43 FRIs in 31 countries)

Päivinen 2007

German Research Landscape

- 10 Forest Research Institutes
- 4 Faculties for Forest Science



Forest Research Institutes

Core activities:

- State of the art knowledge for **policy advice**
- **Quick** reaction to emerging topics
- **Unbiased** information
- Long term **monitoring data**
- Solutions for **relevant and applied** problems

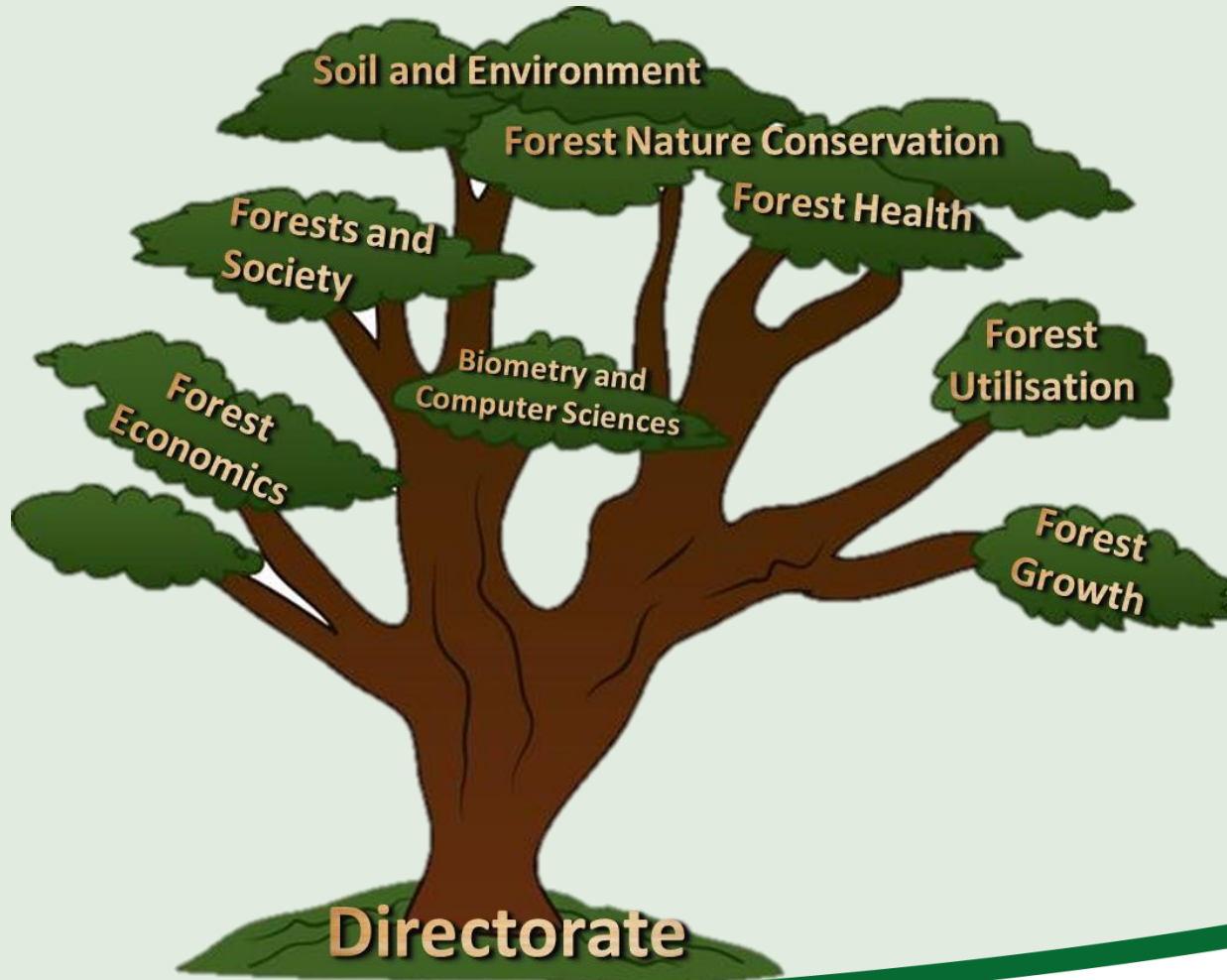
FVA - Mandate

- The Research Institute of Baden-Württemberg is responsible for forest research and advising private and community forest owners
- Baden-Württemberg Forest Act § 76 (LWaldG):
„... The role of the Forest Research Institute is to provide the forest and timber industry with rational options for fulfilling the multiple forest functions and to investigate the ecological relationships between the forest and the environment.“

FVA – Core Competences

- Long term scientific monitoring
 - Research plots and data
 - socio-economic surveys
- Applied research
 - “practical results in mid term perspective”
- Knowledge transfer
 - Policy advice
 - Foresters/ forest owners

FVA – Organisation



FVA – Human Resources

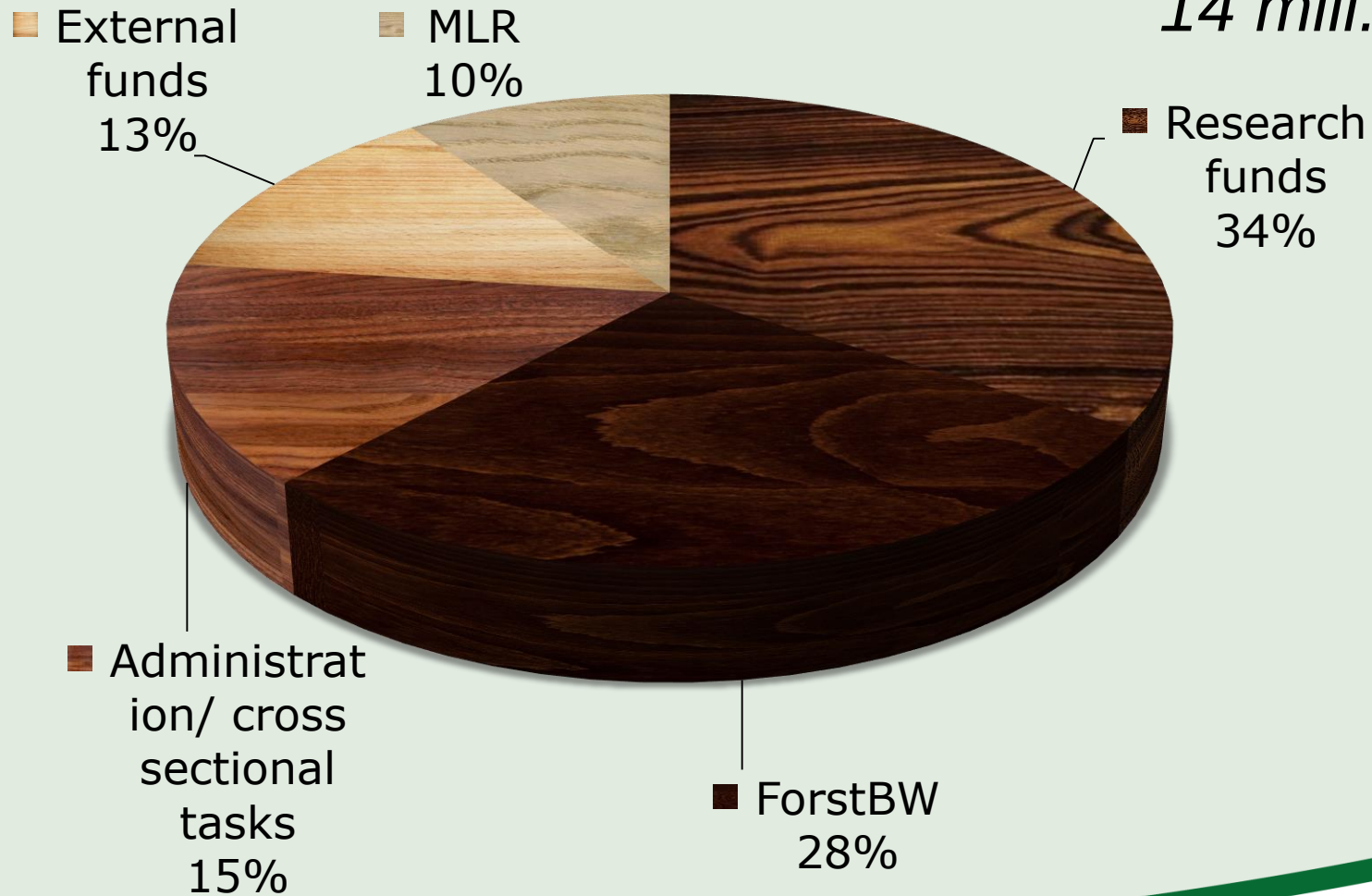
➤ Employees in total **245**
(as of 31.12.2014)

- Full-time 52 %
- Scientific 47 %



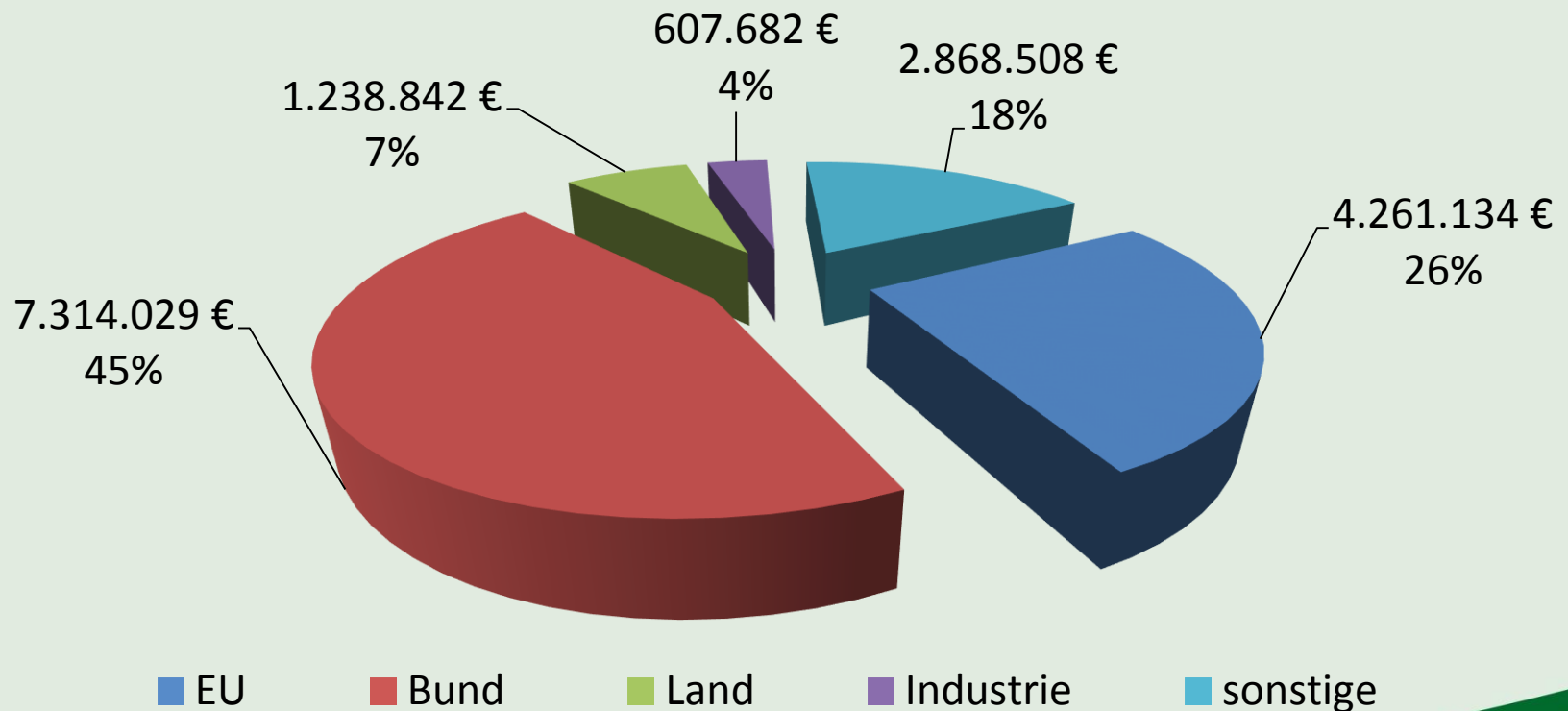
FVA – Budget

Budget 2014
approx.
14 mill. €



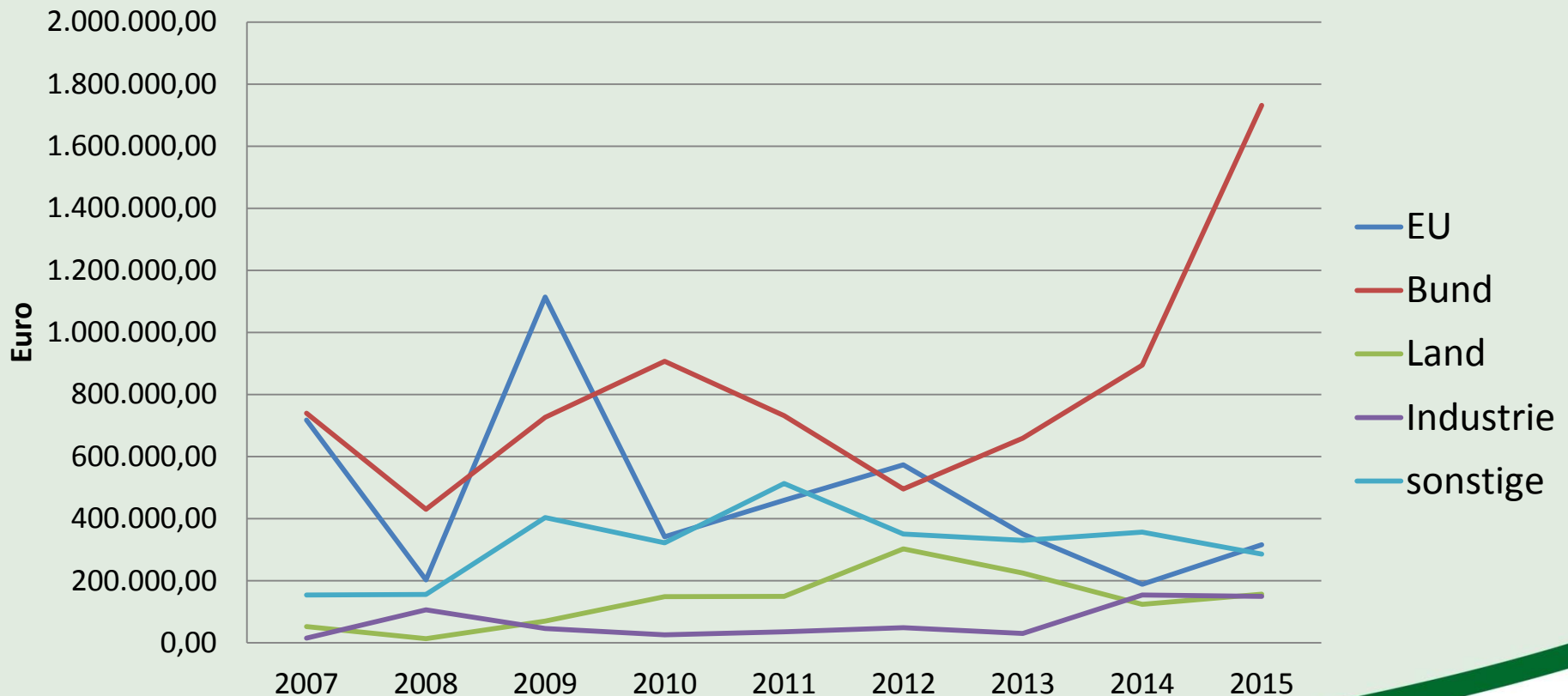
FVA – Third Party Funds

2007 bis 2015: in total 16.290.195 Mio.



FVA – Third Party Funds

Trend by origin



Research Funding Programmes

- International
 - EU Framework Programmes, ERA-Nets, COST, Interreg...
- National
 - Forest Climate Fund, Renewable Resources (FNR)....
- Regional
 - Klimopass...



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FVA - Co-operation

- University of Freiburg
 - “Freiburger Modell”
- European Forest Institute
 - Central European Regional Office
- waldwissen.net
 - Information for Forest Management
- nfz.forestnet
 - Regional Forest Research Network



Frame conditions

- Globalisation & internationalisation
 - increasingly cross cutting issues
 - worldwide trade conditions
 - innovation in science
 - invasive pests and diseases
- Marginalisation of forestry in Europe
 - cuts in personnel and finances

Frame conditions

- Nature protection and demand for wood
 - Biodiversity and protection of natural resources as prevailing topics in the 80s and 90s
 - Increasing demand for wood as natural resource

Frame conditions

- More competition inside and outside sector
 - more **problem-oriented**, integrated programs, less single research projects
 - => more integration
 - => loss of disciplinary focus
 - more **cross sector & cross disciplinary** programs
 - challenge: how to find excellent partners?
 - more **participatory** research!

Frame conditions

- Fragmentation of the sector (in Germany)
 - > 200 associations/interest groups
 - controversial interests

Emerging issues

➤ Sources of information

- IUFRO Directors' Forum
- IUFRO Division 9 proposals
- European Forest Institute (EFI) strategy
- Forest Technology Platform (FTP)
 - Strategic Research and Innovation Agenda
 - German Research Agenda
- National Forest Research Institutions

Emerging issues

➤ In general:

- 80s and 90s → decades of natural sciences, biodiversity, ecosystem research
- recent development → more demand for economics, forest utilisation, forest management, ecosystem services and social sciences

➤ Climate change, biodiversity and energy supply as dominating problems

Emerging issues

➤ Topics:

- Climate change
- Sustainability of forests & forest management
- Wilderness
- Biodiversity, nature protection
- Economic viability of forests,
- Valuation of non commercial forest products
- Bioenergy
- Forests and water

Emerging issues

➤ Topics:

- Genetics and breeding
- Forest ecosystem services
- Urbanisation
- Invasive species
- Forest fires
- etc.

Emerging issues

IUFRO Survey 2014

Rank	Current Priorities			Future Priorities		
	Q3 Priority #1	Q3 Priority #2	Q3 Priority #3	Q4 Priority #1	Q4 Priority #2	Q4 Priority #3
1	Forest/Forestry	Forest/Forestry	Forest/Forestry	Forest/Forestry	Forest/Forestry	Forest/Forestry
2	Management	Management	Management	Climate Change	Climate Change	Social Issues
3	Climate Change	Trees	Sustainable	Management	Management	WATER
4	Protection	Fire	Wood	Sustainable	Biodiversity	Biodiversity
5	Biodiversity	Plantations	Products	Ecosystems	Global	Services
6	Use	Adaptation	Biodiversity	Service	Products/Productions	Ecosystems
7	Global	Climate Change	Conservation	Global	Services	Management
8	Sustainable	Conservation	Climate Change	Conservation	Social Issues	Climate Change
9	Resources	Genetics/Genomics	Plantations	Social Issues	Species	Products
10	Conservation	Social Issues	Forest Health	Economics	Environment	Species
11	Species				Inventory	Conservation
12	Multifunctional				Conservation	Restoration
13	Environment					Economics
14	Ecosystems					Forest Health
15	Forest Health					

Forest-focused priorities or catchwords (somewhat decreasing in importance)

External trends and drivers for new forest-related research priorities (gaining importance)

Broad holistic and/or interdisciplinary research priorities (gaining importance)

Setting the agenda

➤ Two major aspects: **Who and How**

➤ Who?

- do not let **scientists** set the agenda alone!
- but prevent **politicians** from doing alone also!
- involve **stakeholders** (beyond disciplines and sectors => challenge!)

Setting the agenda

➤ Who?

- interaction between politicians and scientists
(push AND pull!!)
- scientists: anticipate future topics
- politicians: give some freedom (foresight!)

Setting the agenda

➤ How?

- **structured processes** inevitable (vs. freestyle)
 - increasingly scarce resources =>
 - **strategy processes** (e.g. IUFRO, EFI, FTP, CIFOR, national institutions) useful
 - area of conflict for public research institutes: assigned tasks vs. research
 - universities increasingly challenged
 - do not lose innovation!!

applied research vs. breaking new ground

Setting the agenda

German Research Agenda of the Forest-based Sector

7 Strategic Fields of Action

01 Sustainable Production of Natural Resources

02 Developing More Bio-based Products

03 Networked Thinking, Efficient Production and Sustainable Business Practices

04 Supporting the Energy Turnaround

05 Reducing Climate Change and Controlling Its Effects

06 Protecting Nature and the Environment

07 Maintaining and Improving the Quality of Life and Work



Setting the agenda

FVA - Research Focus

from "Strategy 2014-2018"

How?

- Analysing the frame conditions and main challenges
- Obligation to cover the broad range of forestry
- Selection of 3 main research areas
- Upcoming demands may change the focus within the five years period

Setting the agenda

FVA - Research Focus

from "Strategy 2014-2018"

3 Main Research Areas

- Climate Impact Research
- Nature Conservation and Biodiversity in Forests
- Measurement and Evaluation of Sustainability



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Setting the agenda

FVA – Main Research Area 1

➤ **Climate Impact Research**

- Changes in productivity
- Vulnerability
- Suitability of main tree species
- Future range of wildlife species (e.g. capercaillie)
- Economic evaluation

Setting the agenda

FVA - Main Research Area 2

➤ **Nature Conservation and Biodiversity in Forests**

- Forests with opened-up canopy
- Animal and plant species with special demands
- Large-scale inventory of forest structures
- Biodiversity indicators
- Indicators for habitat networks

Setting the agenda

FVA - Main Research Area 3

➤ **Measurement and Evaluation of Sustainability**

- Strategic sustainability management
- Measuring and evaluation of the natural forest cover
- Nutrition of forest soils
- Sustainability of biodiversity
- Recreation and health

Current challenges

➤ Cooperation

- No “closed shop”
- Incentives needed (research programs, etc.)
- Transparent reviews
- No top down process

➤ Personnel

- less permanent
- more specialised ==> professional and transparent recruitment procedures

Current challenges

➤ Funding and financing

- Stable core funding inevitable (50% plus!)
- Competitive third party funds, i.e. “soft money” (important also for quality assurance)
- Recent trends:
 - general cuts in core funding (forestry no “hot issue”)
 - more competitive funding, “restricted to projects”
 - problem: shift from expertise to money?

Current challenges

➤ Organisation

- Make excellent scientists visible
- Identify emerging fields (e.g. genetics ...)
- Maintain proven (traditional?) expertise
- sharpen scientific profile and give policy service (recent IPCC-Problem)

Current challenges

➤ Quality Management (QM)

- Internal and external
- **External:** classical instruments
 - ✓ reviewed **publications** (citation indices ...)
be aware of limitations! ("citation circles")
 - ✓ share of **soft money**
 - ✓ etc.

don't be too mechanistic

- ✓ international performance indicators for benchmarking
useful (NFRI-Survey)

Current challenges

➤ Quality Management (QM)

▪ Internal:

- ✓ written **ethical standards** (consequences for your institution: organisation, structures, documentation!)
- ✓ effective **science controlling** systems (by when, with how many resources, which objective)
- ✓ clear allocation personnel and money

don't strangle your scientists



Thank
You!