Scientifically independent & close to politics. Communication, workflows, success factors and remaining challenges at the science-policy interface

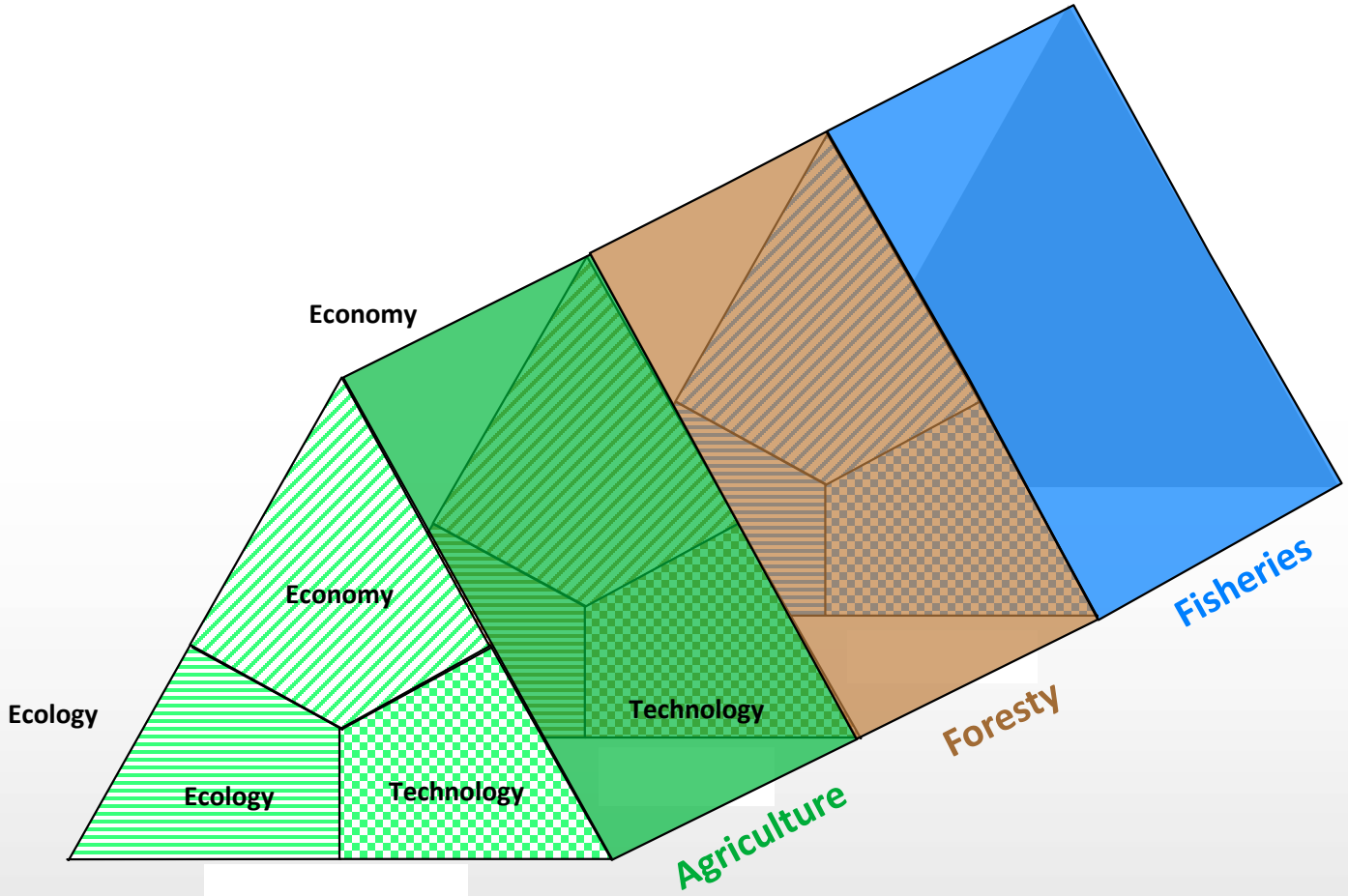
Trans-European online seminar

Science-based policy advice in agriculture, food, climate and environment

Stefan Lange, Thünen Institute

March 16th/17 th, 2021

Thünen Institute – Germany's major research institution for the rational use of natural resources



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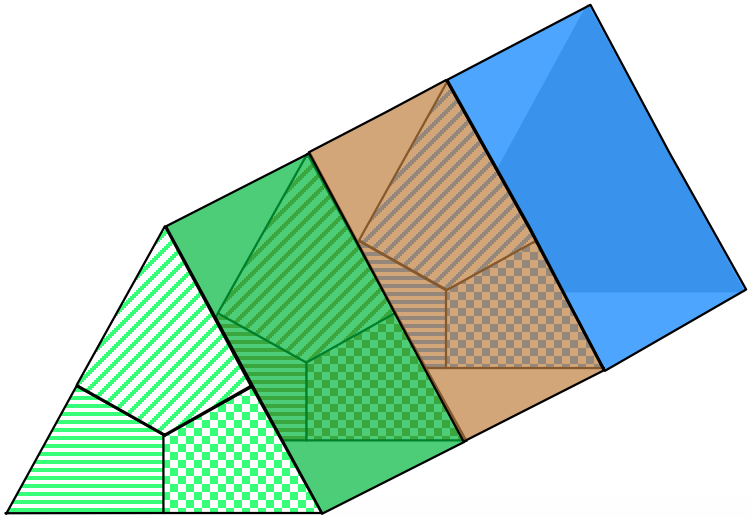
14 specialized institutes of Thünen Institute



			Sea Fisheries
		Baltic Sea Fisheries	Fisheries Ecology
		Forest Genetics	Forest Ecosystems
		International Forestry and Forest Economics	Wood Research
	Rural Studies	Farm Economics	Market Analysis
Agricultural Technology	Biodiversity	Climate-Smart Agriculture	Organic Farming

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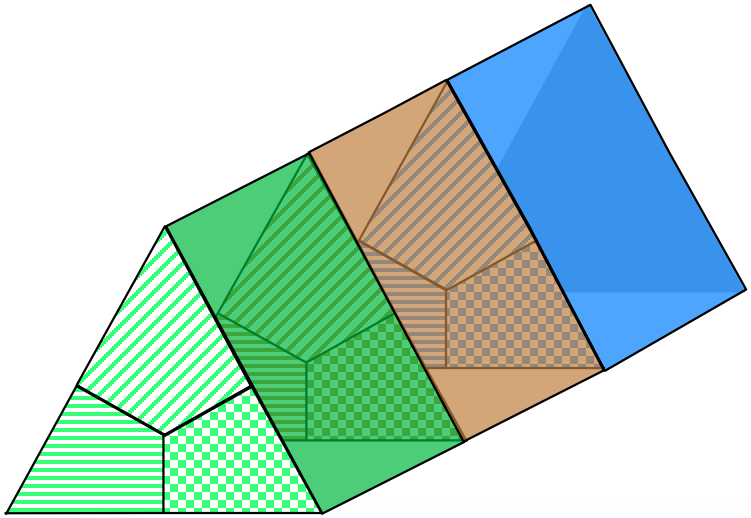

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Our research & policy advice covers all farmed zones and landscape components.

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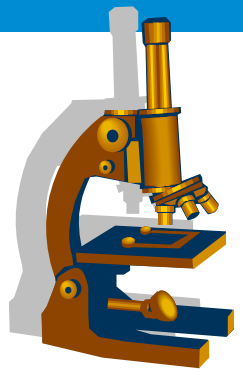
Three main tasks of Thünen Institute



1. Research and participation in free scientific competition

- Research of high societal relevance based on institutional budgets
- Applying for third-party funds on national and international level
- Collaborating in national and international research consortia

2. Conducting national longterm monitorings

- National Forest Inventory, National Soil Surveys, Greenhouse Gas Inventories, Fish stock assessments etc.

3. Political advice for German Government, EU etc.

- Preparing science-based reports, expert‘s opinions, options for action
- Answering rapidly and highly skilled to urgent requests from politics
- Representing Germany in international science & advisory boards

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14 specialized institutes collaborate in 20 Thünen Topics

Natural Resources and Protected Assets

- **Soil** — AK WO BD AT OL BW LR
- **Water** — AK BD WO LR
- **Climate and Air** — LR BW MA AT BD AK OL HF WF WO FG SF FI OF
- **Biological Diversity** — BD WO OL AK FG LR SF FI OF
- **Forests** — WO WF FG HF
- **Seas** — SF OF FI

Production and Utilization

- **Plant Production** — AT OL AK BD MA BW LR
- **Renewable Resources** — AT HF BW MA FG BD LR WF
- **Forest Management and Wood Use** — HF WF FG WO
- **Organic Farming** — OL BW MA AK BD AT FI
- **Livestock Farming and Aquaculture** — AK AT BW MA FI LR OL SF
- **Fisheries** — SF OF FI
- **Land Use and Wild Animal Management** — LR BD WO WF

Economy, Society and Policy

- **Competitiveness and Structural Change** — BW MA LR WF FI SF
- **Income and Employment** — BW MA LR SF FI WF
- **Rural Living Conditions** — LR BW
- **Markets, Trade, Certification** — MA BW LR HF WF FG AT FI OF
- **Global Food Security** — MA BW SF FI
- **Consumer and Society** — MA BW FG HF WF OL OF SF FI
- **Long-term Policy Concepts** — LR BW MA AT BD AK OL HF WF WO FG SF FI OF

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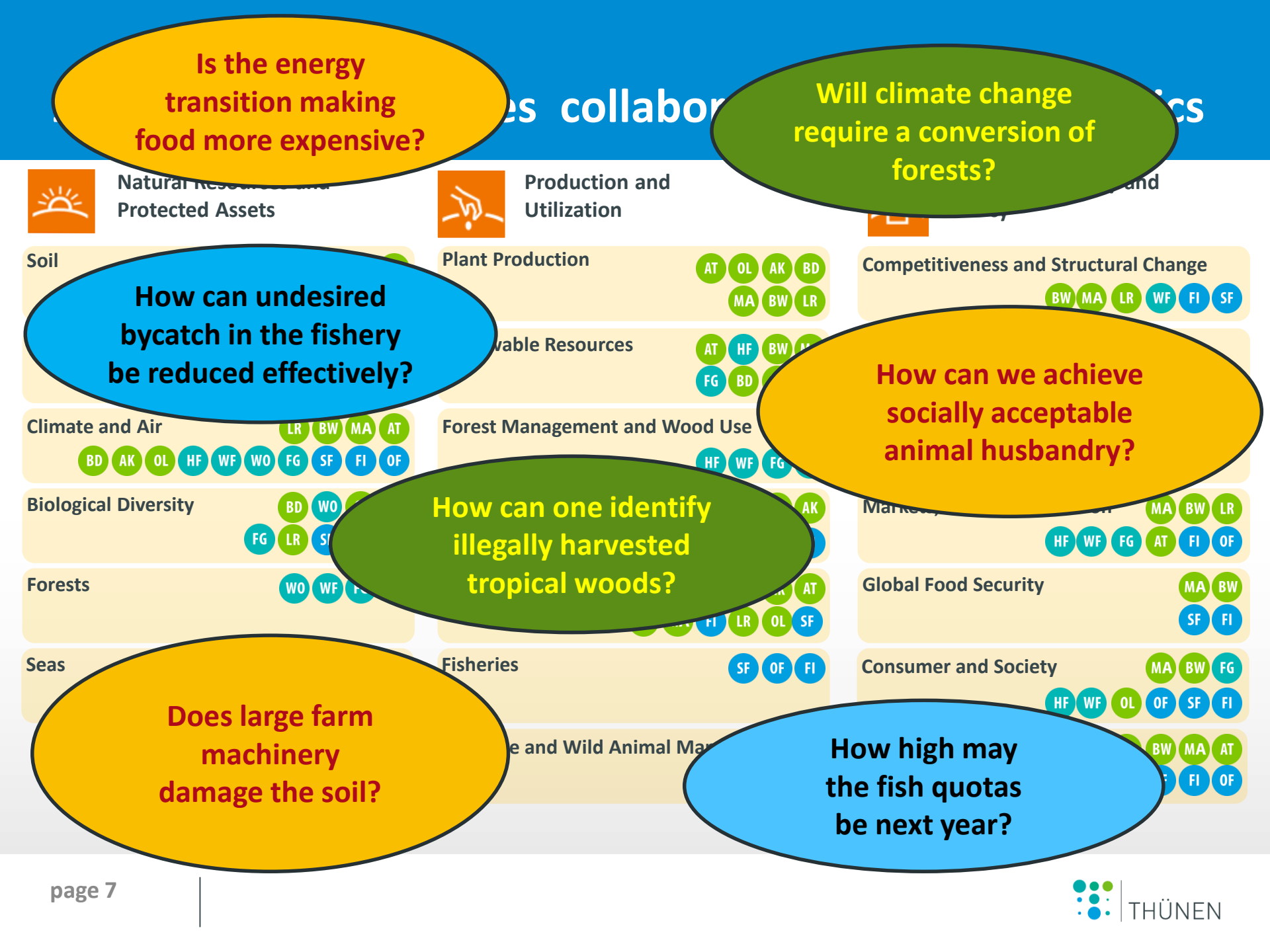
Is the energy transition making food more expensive?
Will climate change require a conversion of forests?
How can undesired bycatch in the fishery be reduced effectively?
How can we achieve socially acceptable animal husbandry?
How can one identify illegally harvested tropical woods?
Does large farm machinery damage the soil?
How high may the fish quotas be next year?
Natural Resources and Protected Assets
Production and Utilization
Soil
Plant Production
AT OL AK BD MA BW LR
Competitiveness and Structural Change
BW MA LR WF FI SF
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Consumer and Society
MA BW FG HF WF OL OF SF FI

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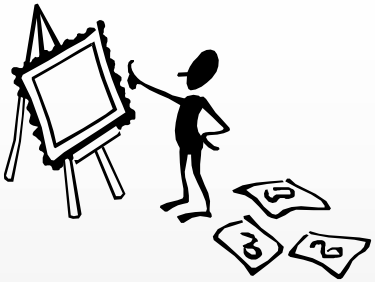
Input and Output of Thünen Institute

INPUT: 101 Mio. € fixed budget + approx. 28 Mio. € third-party funds

approx. 1.100 staff members, thereof 550 scientists

OUTPUT: approx. 850 scientific publications



approx. 1.000 scientific lectures and posters

1529 scientific expert‘s opinions (mainly for BMEL)

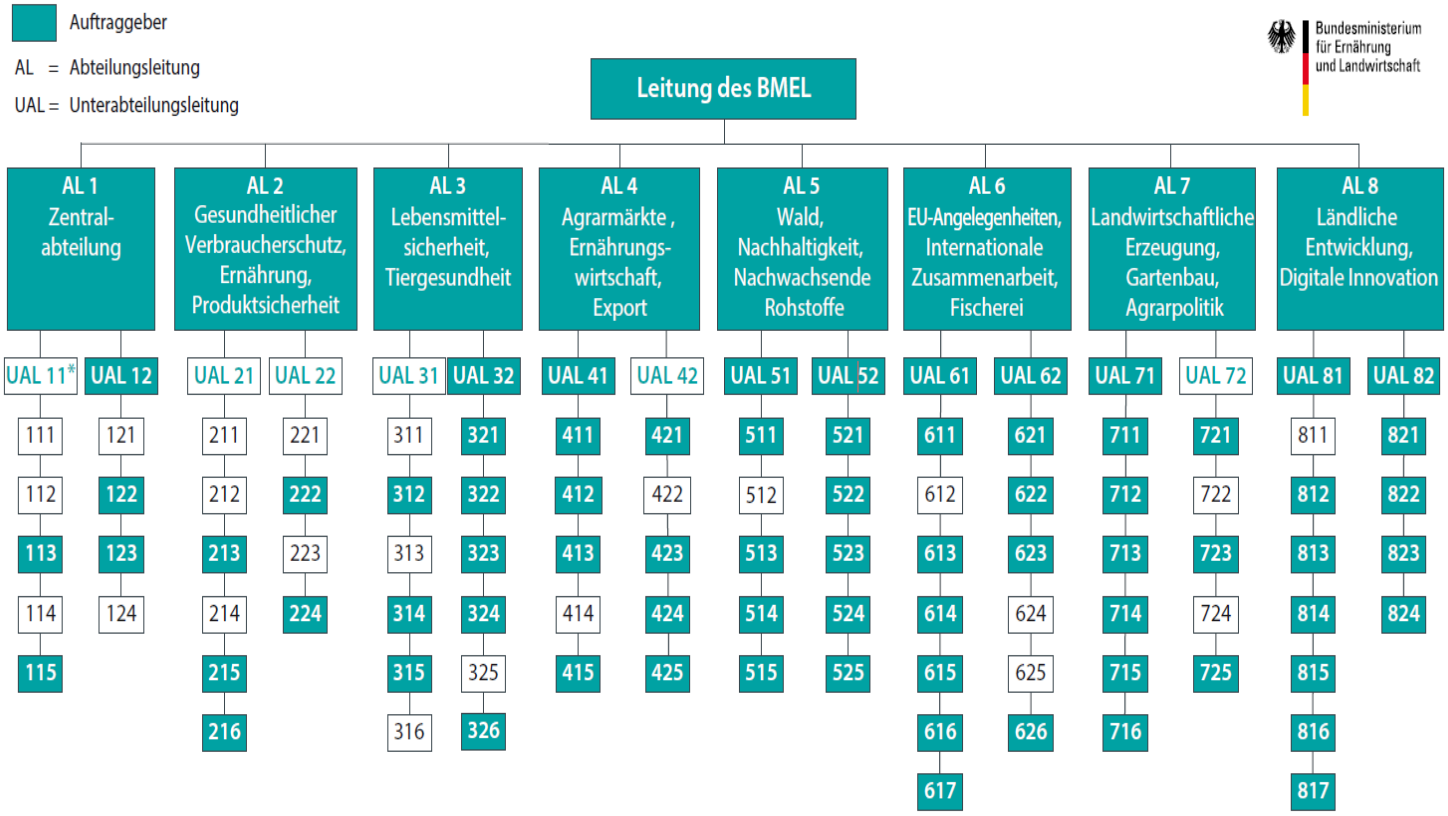
approx. 200 other statements, reports etc.

approx. 120 scientific conferences and workshops

>120 postgraduates and postdocs, moreover master and bachelor students

72 Thünen scientists additionally teach at universities

Thünen policy advice for Federal Ministry of Food and Agriculture



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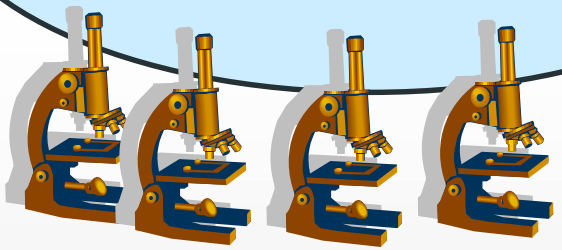
High complexity of agriculture, food, climate and environment issues

means to

High complexity of agriculture, food, climate and environment issues

means to

SCIENTISTS
= impulse to reduce uncertainties and knowledge gaps through more research



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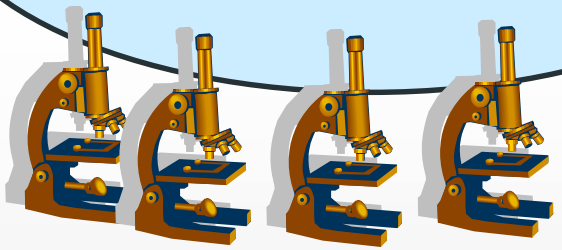

POLITICIANS
= pressure to decide and to set up political instruments under uncertain, ambiguous conditions

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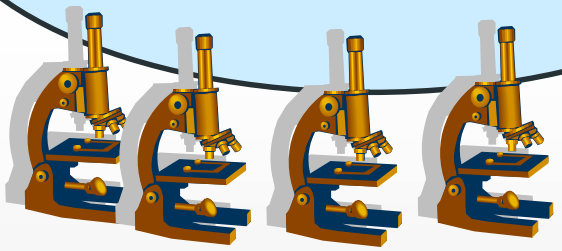
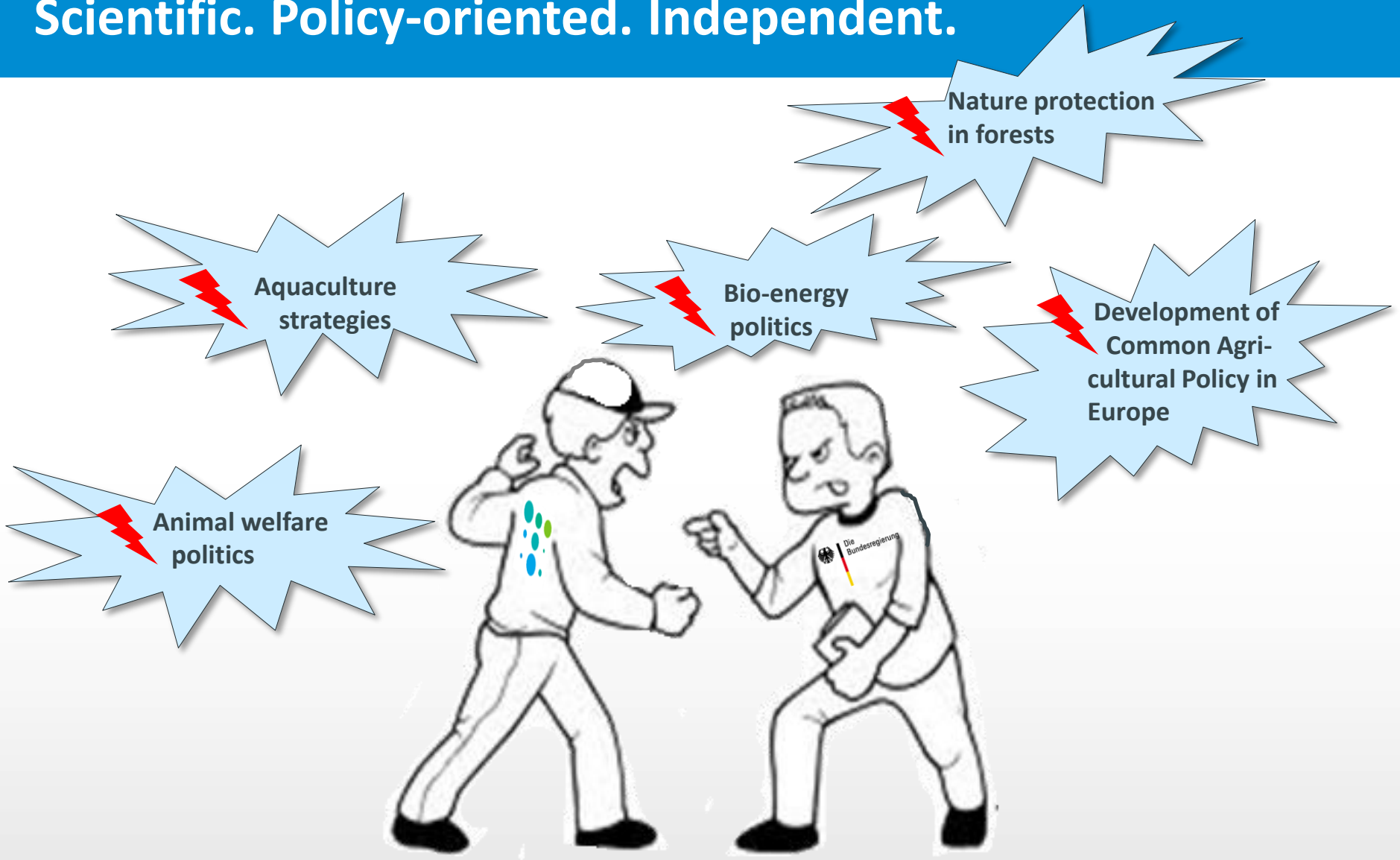


POLITICIANS
= pressure to decide and to set up political instruments under uncertain, ambiguous conditions

These initially opposed positions = framework for modern science-policy interfaces!

Our guiding principles:
Scientific. Policy-oriented. Independent.



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Our guiding principles:
Scientific. Policy-oriented. Independent.

Nature protection in forests

Aquaculture strategies

Bio-energy politics

Development of Common Agri-cultural Policy in Europe

Animal welfare politics

Sometimes hard but needful debates between Thünen Institute and Ministry

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Challenges for policy advice resulting from different roles

Policy has to

- react to topical issues, often driven by public opinion and social expectations, by media etc.;
- resolve problems preferably within one election period
- decide and to set up political instruments under uncertain conditions
- adapt or to revise instruments, regulations, laws etc. according to real development

➡ policy business - mainly a reacting towards reality

➡ policy addresses questions to science often regarding acute issues

Aim of science is to

- reduce uncertainties and knowledge gaps through more research
- work on/resolve long-term questions that still are not asked by policy or society

➡ scientific activities – often a forecast to upcoming reality

Challenges for policy advice resulting from different roles

- fixed budget of 101 Mio. € p.a. –> expectation of Ministry that Thünen Institute should work primarily for the Ministry and its acute policy advice requests
- sometimes lack of understanding that Thünen Institute works in addition and intensively also on long-term questions by participating in free scientific competition, raises third party funds etc.
- sometimes suspicion „researchers follow their own interests and disregard demands from policy“

BUT:

- Precondition for reputable policy advice is definite and approved scientific expertise
- this expertise is achievable only by research in scientific discussions and competition

➡ Needed: communication between politics and science to build confidence that
(a) Thünen Institute uses provided resources in a responsible way
(b) Ministry can trust in receiving well approved policy advice in time

Quality assurance of Thünen policy advice

Quality assurance of policy advice is carried out by:

1. **Development of Thünen strategies in close agreement with BMEL top management**

2. **annual strategic expert discussions between BMEL specialty departments and Thünen management (President, directors of 14 specialized institutes, research director)**

3. **individual expert discussions between several Thünen institutes and BMEL units**

4. **demand-driven pre-agreement about content, scope and targets of concrete consulting requests on working level**

5. **New instrument:**

- **systematic feedback from BMEL about understandibility, practicability and accuracy of Thünen services for political purposes**
- **systematic feedback from Thünen institutes about understandibility of inqired demands in terms of policy advice / feedback about usability of Thünen services etc.**

More transnational cooperation regarding research & policy advice needed – an insight from MACS-G20

- MACS-G20 = Meeting of Agricultural Chief Scientists of G20 States
- established in 2011 by G20 Agricultural Ministers as a science-policy interface
- **annual MACS-G20 meetings hosted by particular G20 presidency**
- Tasks: - creating transparency **of national agricultural research systems and funding structures in G20 states**
  - **bringing together national resources and cabalities**
  - **launch joint initiatives and formats to work on problems of global relevance**

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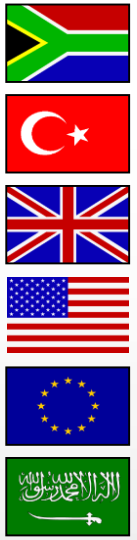
Who is MACS-G20, how does it work?

(a) MACS Members = Agricultural Chief Scientists of the G20 States
with voting power

(b) MACS Guests = multinational institutions and associations
in consultative capacity



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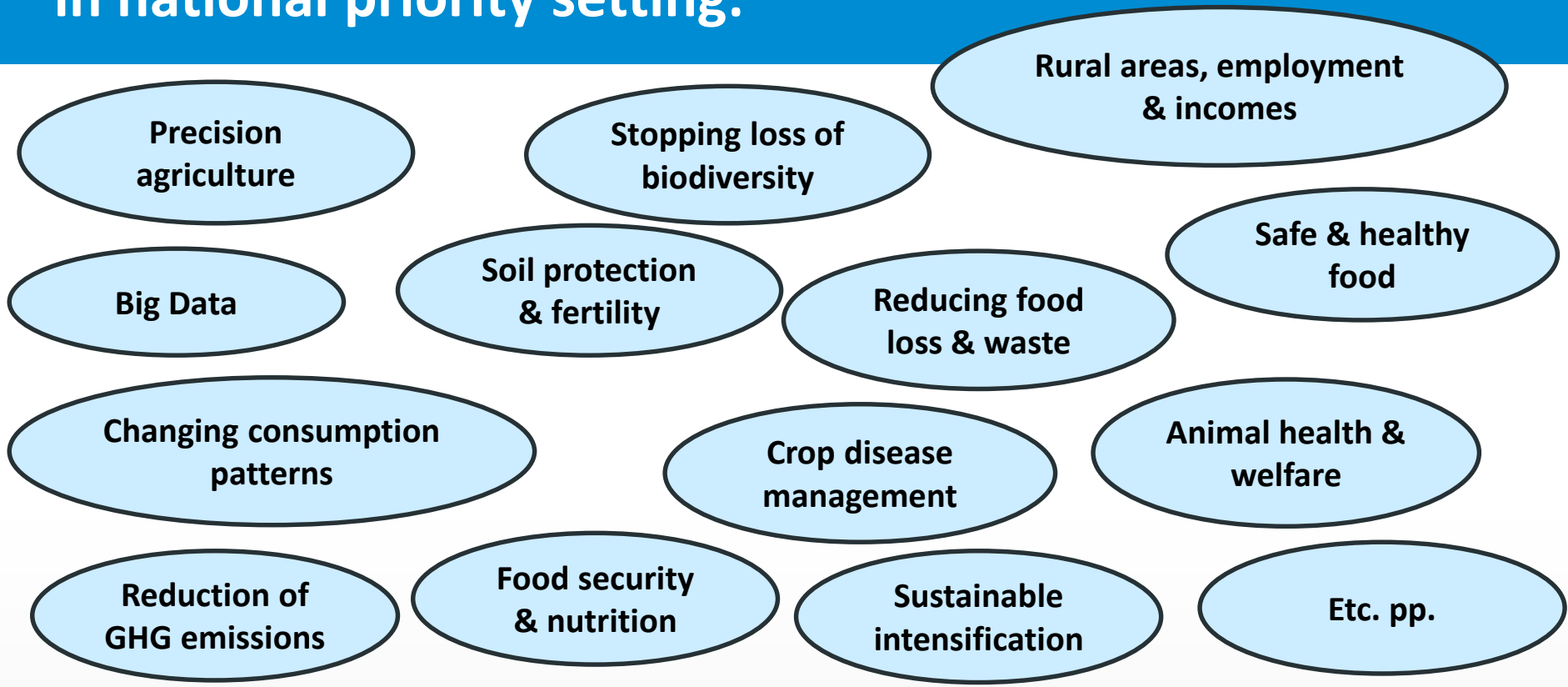
Not a single G20 state ignores globally relevant challenges in national priority setting:



High congruency of national research priorities in the G20 states!

(verified by MACS priority mapping exercise coordinated by UK)

Federal Ministry of Food and Agriculture

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Correct priorities, sufficient investments – what is missing for real breakthrough?

Research investment efforts in G20 states:

- Thousands of agricultural scientists at universities and other reserach institutions
- basically sufficient amount of funding budgets

Output:

- certainly progress in several parts of agricultural, food, climate and environment sector
- huge number of Ph.D.s, publications, and projects too often focussing on specific subquestions and fractional economic, technological and physiological optimisation

At the same time important questions are furthermore unsolved:

- Loss of biodiversity, soil degradation, rural depopulation, expanding monocropping, harvest stagnation in organic farming, decreasing societal acceptance of intensive animal husbandry, decline of cultivated plant species and varieties, etc.

Lesson to be learnt – more systematic cooperation

1. In several European countries (and beyond) there are scientific institutions specialized in research & policy advice
2. Infrastructure, financing and personal staff – more stable than e.g. at universities
3. So far they mainly advice national governments based on advice demands coming from these national governments
4. At the same time a huge number of remaining and unsolved questions and challenges are similar and more than only of national interest
5. We need joint systematic science-policy interfaces developing science-based, policy-driven joint strategies and implementation plans

This strongly argues for more, closer and structured cooperation between our institutions, not only based on a „now and then“ within consortia funded by third parties ☺

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