

# The Northwest German Forest Research Station

## NW-FVA

### Data from Natural Forests

**Who we are**

Founded in 2006 as a joint State Department for Hesse, Lower Saxony, Saxony-Anhalt, and Schleswig-Holstein




**What we do**

practical forest research within 20 different types of forest on 40 participating estates

Northwest German Forest Research Station			
Department	Researcher	Location	Research Focus
Forest Management	Dr. G. G. G.	Forest A	Forest Management
Forest Management	Dr. H. H. H.	Forest B	Forest Management
Forest Management	Dr. I. I. I.	Forest C	Forest Management
Forest Management	Dr. J. J. J.	Forest D	Forest Management
Forest Management	Dr. K. K. K.	Forest E	Forest Management
Forest Management	Dr. L. L. L.	Forest F	Forest Management
Forest Management	Dr. M. M. M.	Forest G	Forest Management
Forest Management	Dr. N. N. N.	Forest H	Forest Management
Forest Management	Dr. O. O. O.	Forest I	Forest Management
Forest Management	Dr. P. P. P.	Forest J	Forest Management
Forest Management	Dr. Q. Q. Q.	Forest K	Forest Management
Forest Management	Dr. R. R. R.	Forest L	Forest Management
Forest Management	Dr. S. S. S.	Forest M	Forest Management
Forest Management	Dr. T. T. T.	Forest N	Forest Management
Forest Management	Dr. U. U. U.	Forest O	Forest Management
Forest Management	Dr. V. V. V.	Forest P	Forest Management
Forest Management	Dr. W. W. W.	Forest Q	Forest Management
Forest Management	Dr. X. X. X.	Forest R	Forest Management
Forest Management	Dr. Y. Y. Y.	Forest S	Forest Management
Forest Management	Dr. Z. Z. Z.	Forest T	Forest Management

**Data from the forest**



**Fields of research**



**Output**

- numerous scientific articles
- education and training (State forest enterprises, universities)
- management tools (directives)
- counselling for Government, forest owners; protected/conservation area managers



Michelle Sundermann, Christoph Tewes and Claudius Fricke, NW-FVA  
 FieldMap International User Conference, October 1-3, 2014, Lednice - Czech Republic



# Who we are

Founded in 2006 as a joint State Department for Hesse, Lower Saxony, Saxony-Anhalt and Schleswig-Holstein



**NW-FVA**

Nordwestdeutsche Forstliche Versuchsanstalt

133 permanent employees  
(add. 70 project staff) in two locations



Göttingen



Hann. Münden

# What we do

- practical forest research
- advise the different types of forest owners (participating states)

## Northwest German Forest Research Station

Department A FOREST GROWTH	Department B FOREST PROTECTION	Department C FOREST GENETIC RESOURCES	Department D ENVIRONMENTAL CONTROL
Sections	Sections	Sections	Sections
Yield Science	Beetles & Chemical Testing	Conservation of Forest Genetic Resources	Intensive Environmental Monitoring
Forest Regeneration	Butterflies & Mammals	Investigation of Genetic Diversity	Forest Condition & Forest soil
Forest Conservation & Natural Forest Research	Mycology & Complex Diseases	Testing and Utilisation of Forest Reproductive Material	Modelling Nutrient Cycles & Data Management
Computer Science & Forest Growth Modelling	Aerial Photography & GIS	Provision of Forest Reproductive Material	Environmental Analysis
<i>Services for all Depts.</i>	<i>Services for all Depts.</i>	<i>Services for all Depts.</i>	<i>Services for all Depts.</i>
<i>hardware, software</i>	<i>aerial photography, GIS</i>	<i>biometric advice</i>	<i>chemical analyses</i>

Coordination,  
Projects, Public  
Relations

Administration,  
Services

staff  
administration office  
staff





**Department A**  
**FOREST GROWTH**

Sections

Yield Science

Forest Regeneration

Forest Conservation & Natural Forest Research

Computer Science & Forest Growth Modelling

*Services for all Depts.*

*hardware, software*

**Department B**  
**FOREST PROTECTION**

Sections

Beetles & Chemical Testing

Butterflies & Mammals

Mycology & Complex Diseases

Aerial Photography & GIS

*Services for all Depts.*

*aerial photography, GIS*

**FO**

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# Section A3

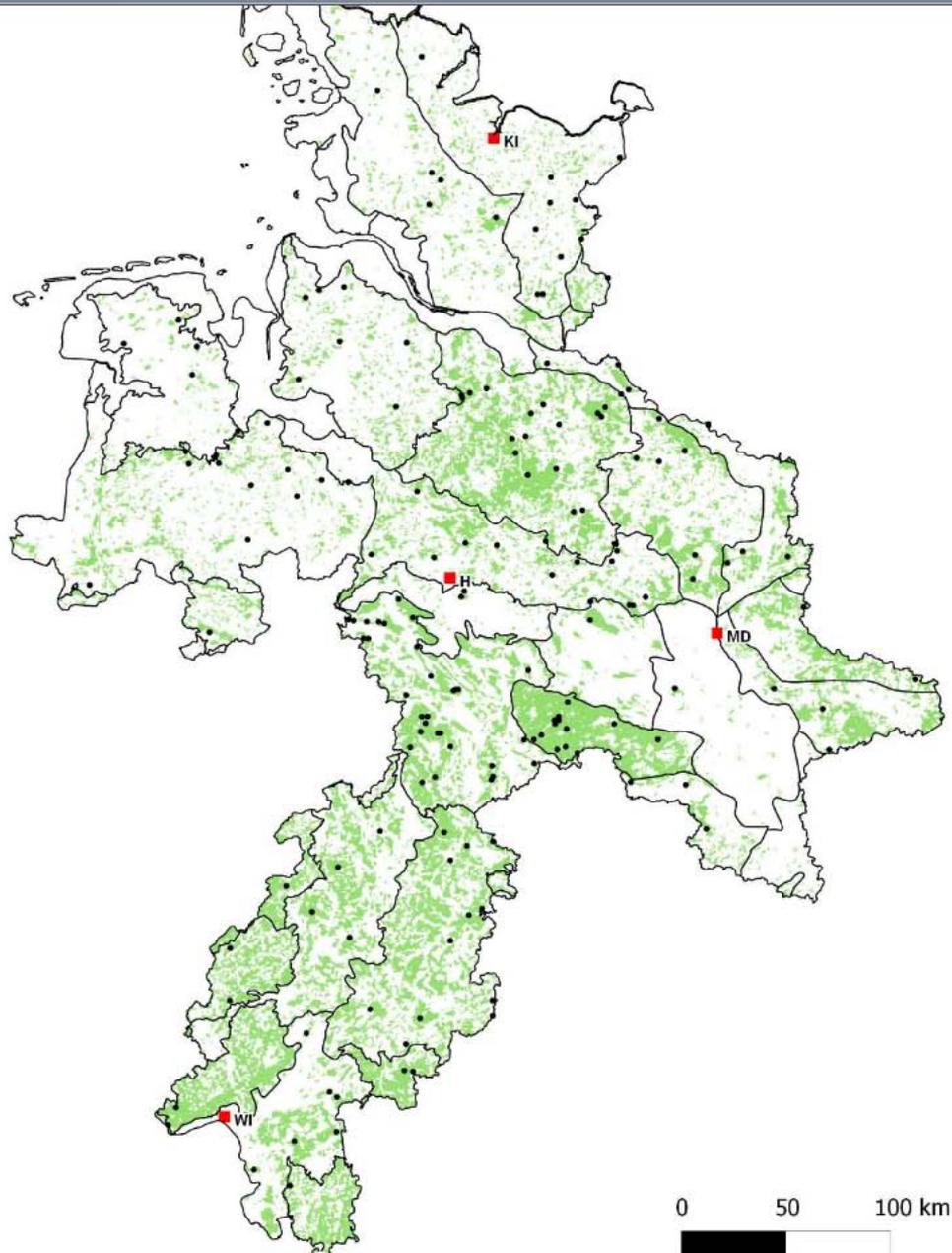


3 scientific staff  
5 field staff  
1 administration officer  
5 project staff

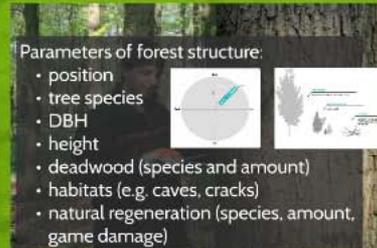


- 173 natural forests
- approx. 7000 ha
- between 8 and 150 ha
- no impact for up to 40 years





# Data from the forest

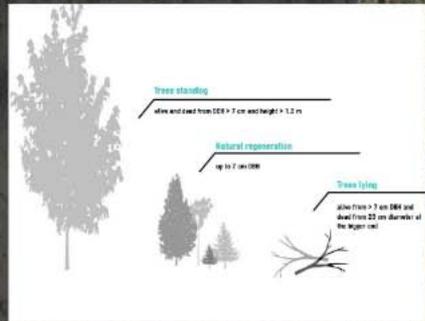
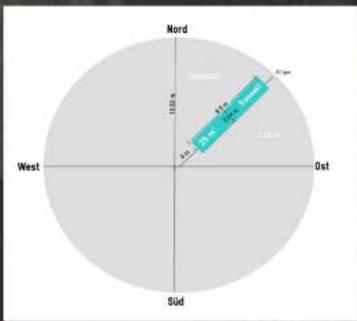


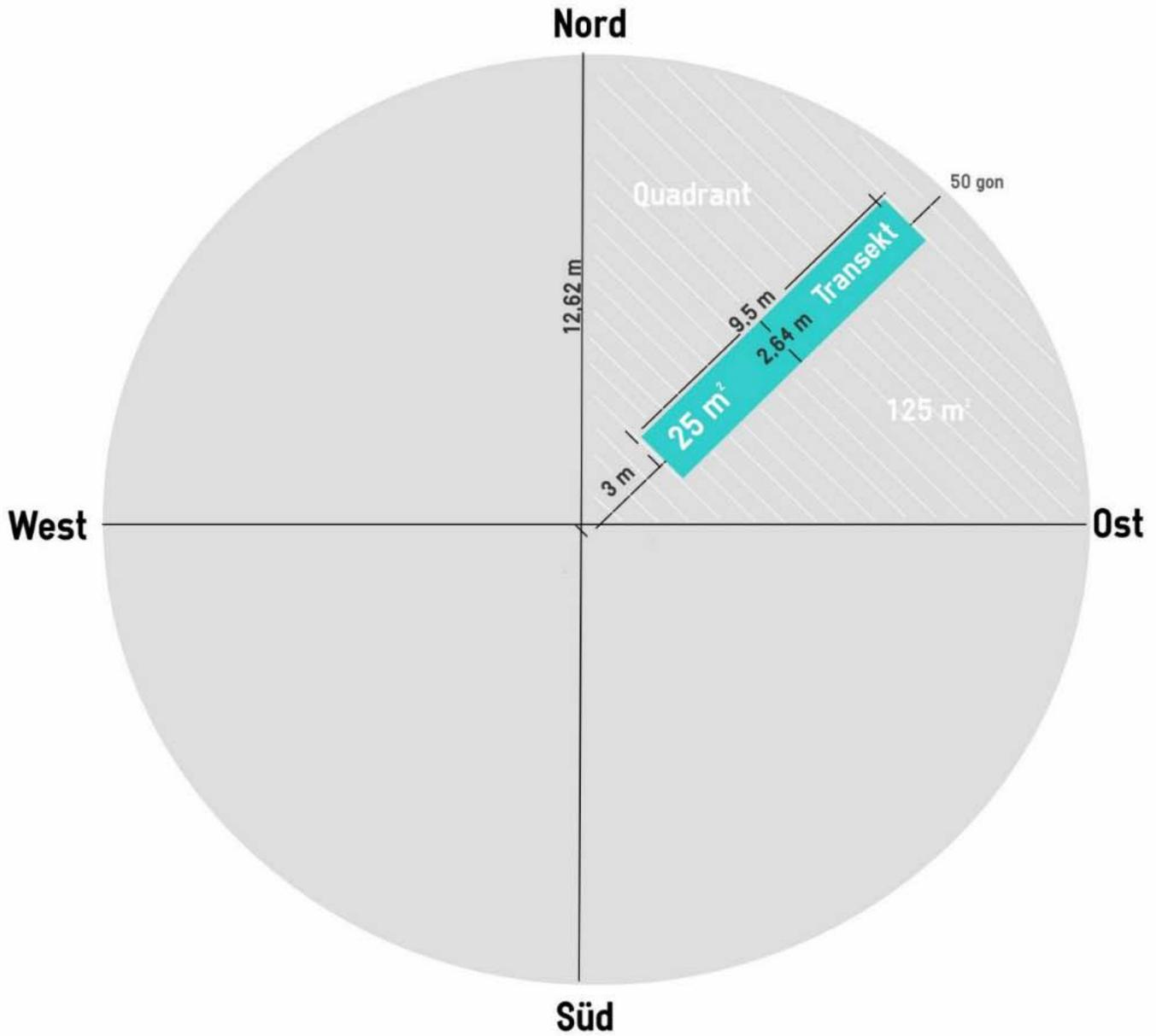


- Data collection every 10 - 15 years
- permanent sample inventory
- 100 x 100 m rasta
- own staff and contractors

# Parameters of forest structure:

- position
- tree species
- DBH
- height
- deadwood (species and amount)
- habitats (e.g. caves, cracks)
- natural regeneration (species, amount, game damage)







### Trees standing

alive and dead from DBH > 7 cm and height > 1,3 m

### Natural regeneration

up to 7 cm DBH



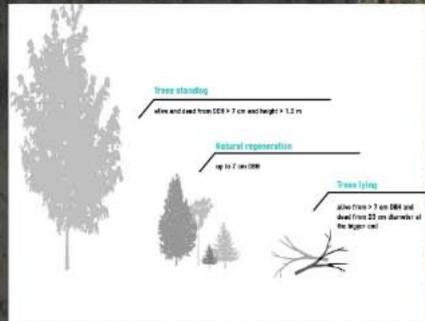
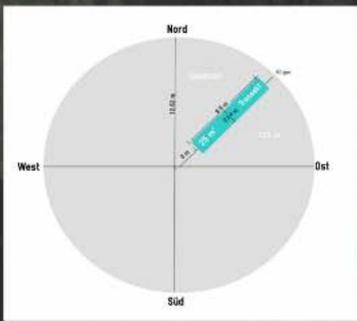
### Trees lying

alive from > 7 cm DBH and  
dead from 20 cm diameter at  
the bigger end



# Parameters of forest structure:

- position
- tree species
- DBH
- height
- deadwood (species and amount)
- habitats (e.g. caves, cracks)
- natural regeneration (species, amount, game damage)





## Parameters for Vegetation:

- species
- coverage

## Parameters for fauna (in Hesse only)

- species (earthworms, spiders, true bugs, beetles, gnats, butterflies and birds)
- abundance



Data processing and interpretation:

- Access and import tools
- SAS and R



# Fields of research

- Dynamics of species competition
- Disturbance regime and gap dynamics
- Dynamics of regeneration
- Deadwood <http://www.rw-fva.de/WebToothholzkalkulator/index.jsp>
- Biodiversity (in comparison to the managed forests)



# Output

- numerous scientific articles <http://www.nw-fva.de/index.php?id=220>
- education and training (State forest enterprises, universities)
- management tools (directives)
- counselling for Government, forest owners, protected/conservation area managers



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**What we do**

- practical forest research
- advance the efficiency of use of forest resources
- use to guiding practice

Northwest German Forest Research Station			
Department	Research	Applied research	Transfer of knowledge
Forest Management	Forest Management	Forest Management	Forest Management
Forest Ecology	Forest Ecology	Forest Ecology	Forest Ecology
Forest Silviculture	Forest Silviculture	Forest Silviculture	Forest Silviculture
Forest Conservation	Forest Conservation	Forest Conservation	Forest Conservation
Forest Economics	Forest Economics	Forest Economics	Forest Economics
Forest Education	Forest Education	Forest Education	Forest Education
Forest Extension	Forest Extension	Forest Extension	Forest Extension
Forest Research	Forest Research	Forest Research	Forest Research
Forest Management	Forest Management	Forest Management	Forest Management
Forest Ecology	Forest Ecology	Forest Ecology	Forest Ecology
Forest Silviculture	Forest Silviculture	Forest Silviculture	Forest Silviculture
Forest Conservation	Forest Conservation	Forest Conservation	Forest Conservation
Forest Economics	Forest Economics	Forest Economics	Forest Economics
Forest Education	Forest Education	Forest Education	Forest Education
Forest Extension	Forest Extension	Forest Extension	Forest Extension
Forest Research	Forest Research	Forest Research	Forest Research

**Data from the forest**



FieldMap

**Fields of research**



**Output**

- numerous scientific articles
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