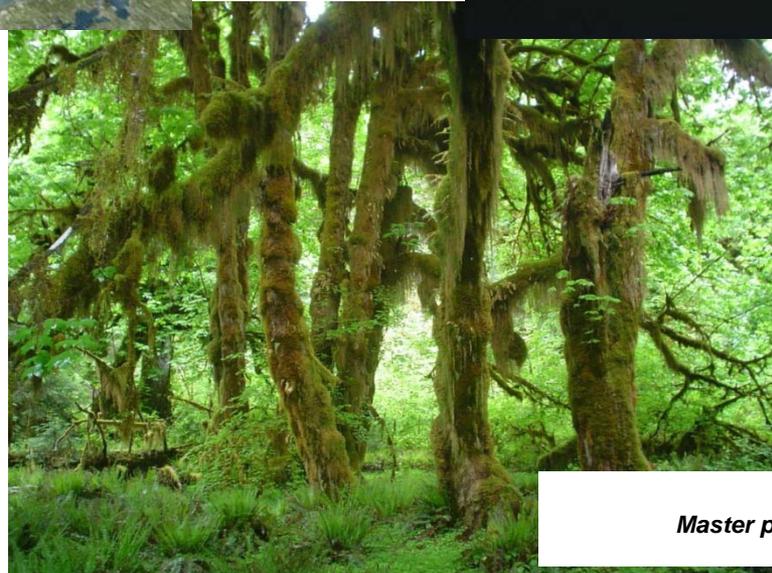


# Master Environmental Biology, track Ecology and Natural Resources Management



**Universiteit Utrecht**

*Faculty of Science  
Master programma Environmental Biology*

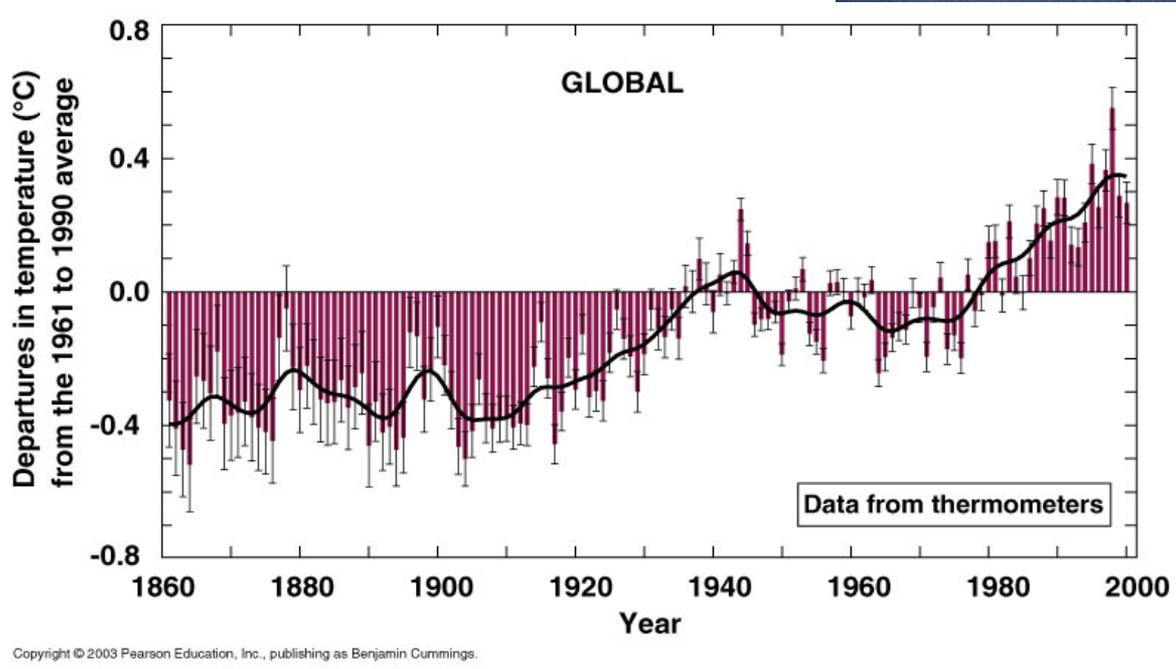
# Natural resources and ecosystem services

**Natural ecosystems provide services without which we could not survive**

- Food
- Fiber
- Genetic resources
- Biochemicals
- Freshwater
- Biodiversity

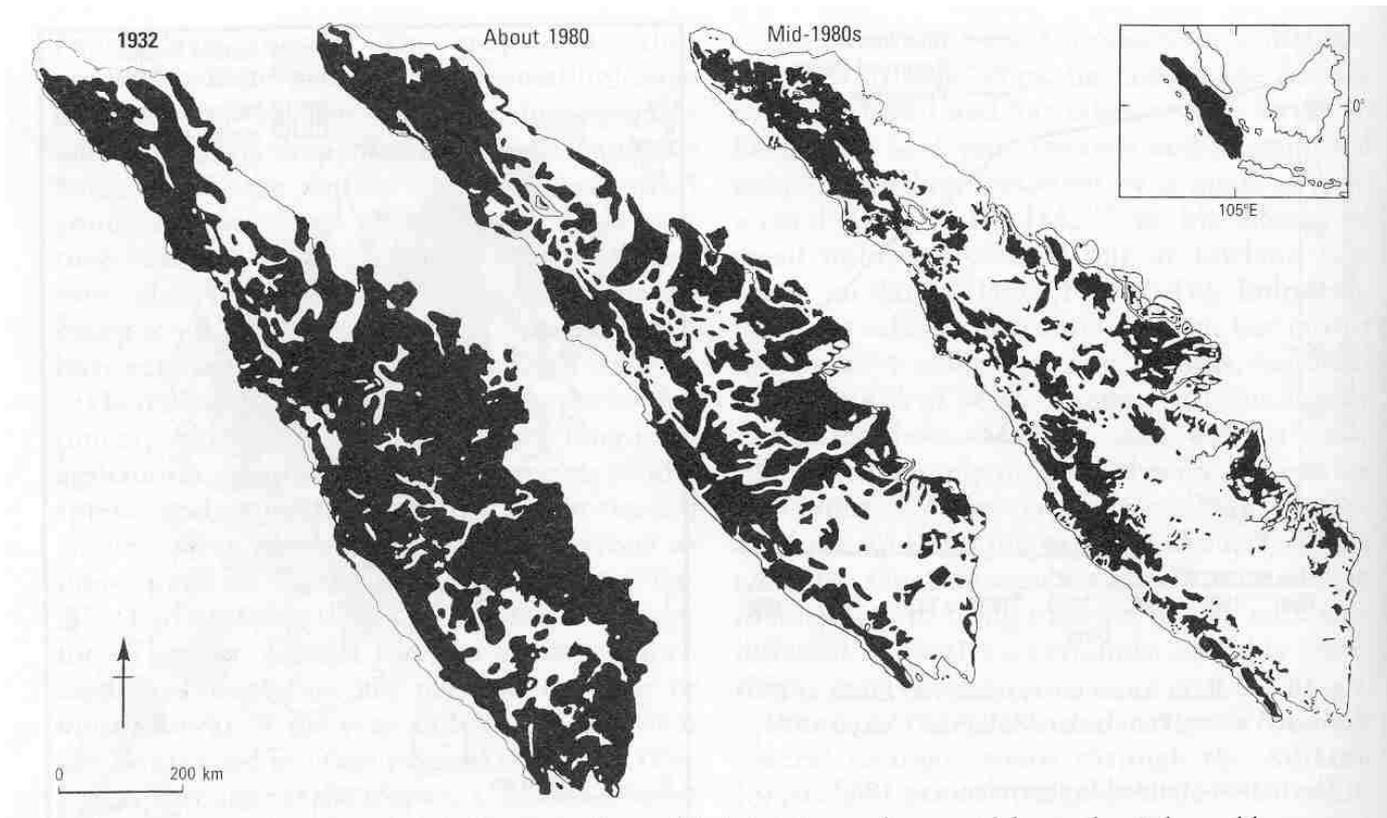


# Climate Change

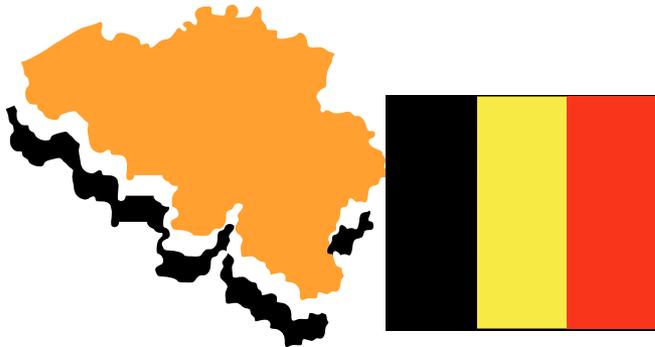


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More than 60% of original forest disappeared



Per year we cut down an area the size of Belgium

- Provision of timber
- Agricultural land

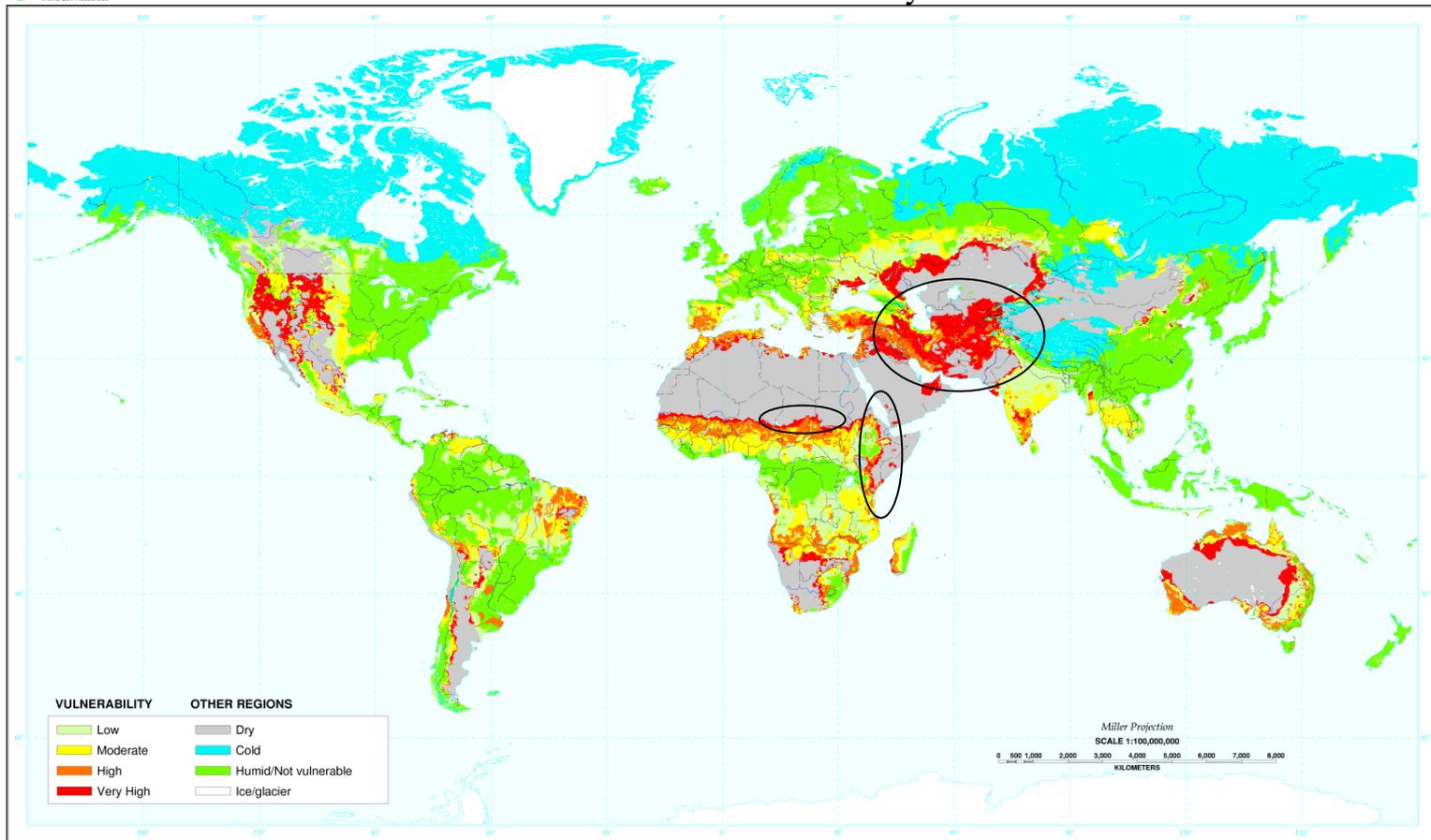
# Desertification & water

- 70.000 km<sup>2</sup> per year
- 250 million people involved
- Overgrazing agriculture deforestation

- Very high risk
- High risk
- Moderate risk



Desertification Vulnerability



# The Netherlands



cultuurland in 1890



cultuurland in 2010

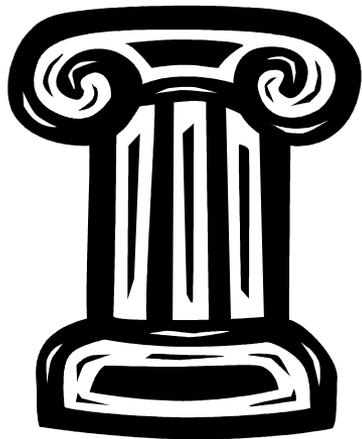


# But it's not all gloom

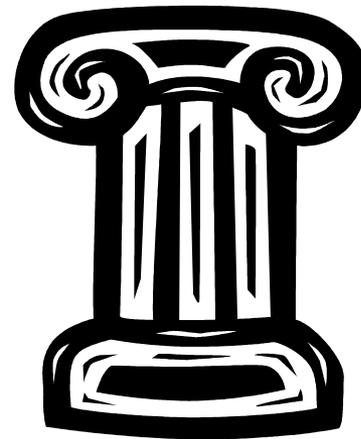
- Forest cover in the western world is increasing (at the expense of the tropics)
- Payment for ecosystem services (REDD)
- Dutch agriculture increased yields 3x while strongly reducing pollution sinceXXXX
- Sustainability important goal for governments
- Growing awareness in the private sector
  - DSM Task force biodiversiteit
  - Unilever
  - ING richtlijnen biodiversiteit in duurzaam beleggen
  - ENECO

# The philosophy behind the Ecology & NRM track

Sustainable use of our natural resources is crucial and possible. Strong ecological knowledge and research expertise can contribute to achieve this.



Ecological expertise



Application to NRM

## Theoretical courses (15 ECTS)



**Ecology & Natural Resources Management:** The ecological knowledge and expertise needed to address NRM related problems (Ecology & Biodiversity (Mariet Hefting, Niels Anten)

Ecological expertise



**Management of Natural Resources in Context :** Show you the techniques and theory involved in NRM: the policy and management interface (Science, Technology & Society, Pita Verweij, Jos Dekkers)

Application to NRM



# Major research project

Ecological expertise

Important to obtain research experience in a rigorous setting

## **Research groups**

Ecology & Biodiversity (Jos Verhoeven or me)

Science Technology & Society (Pita Verweij, Jos Dekker)

Plant Microbe Interactions (Corne Pieterse)

Ecophysiology of Plants (Rens Voesenek)

Palaeoecology (Andy Lotter)

Biomarine sciences (Henk Brinkhuis)

Field, lab and computer work  
Netherlands and many other  
parts of the world



Minor (31 ECTS): Internship with an societal organization or private company

Getting hands on experience with the real work of NRM

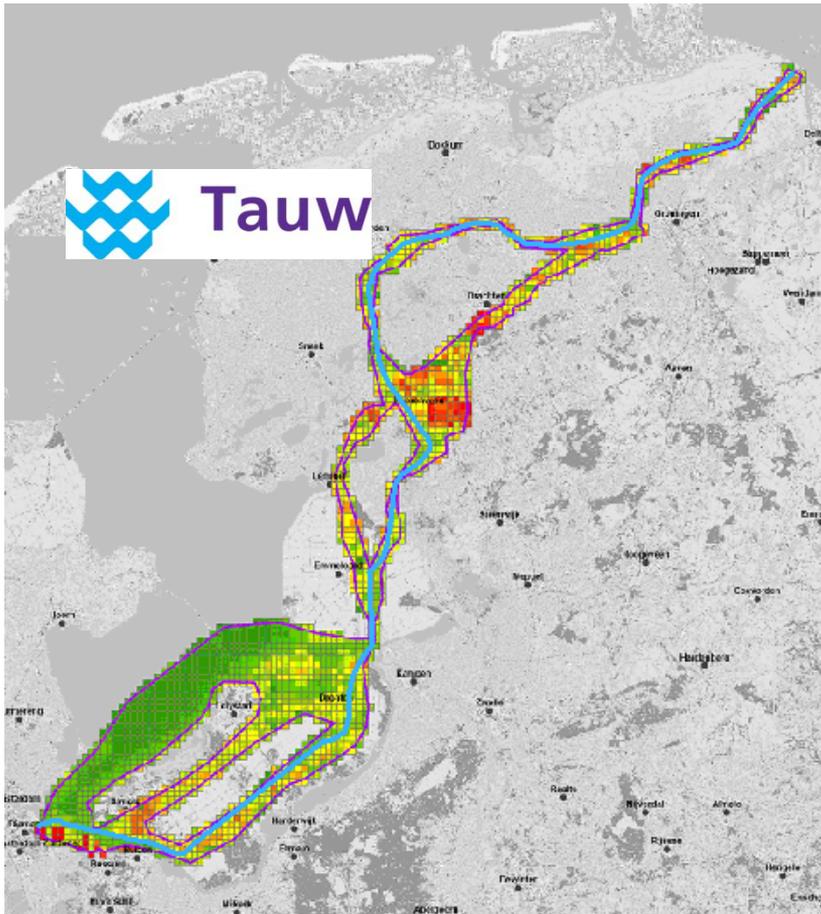


Application to NRM

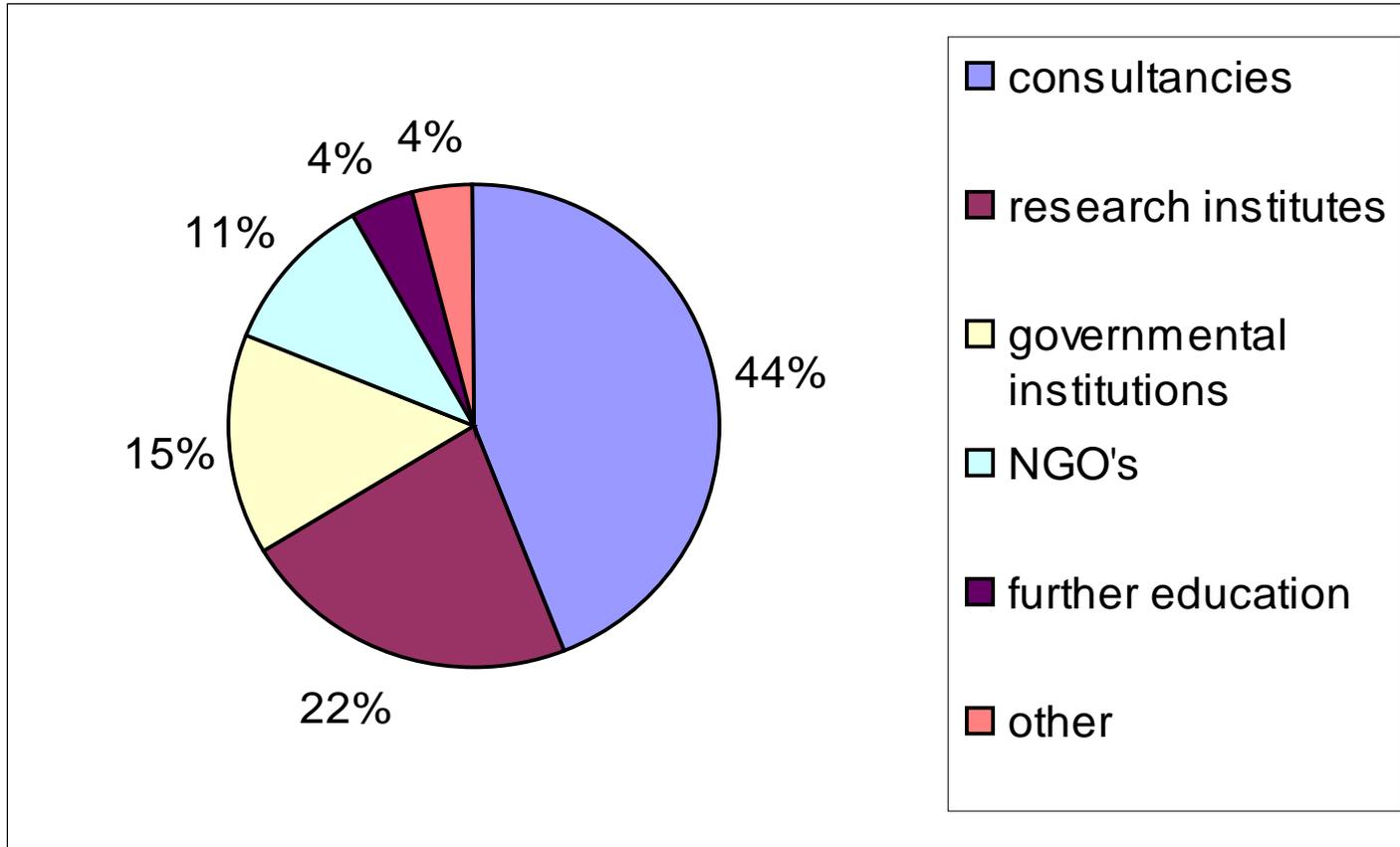


# Possible route “Noordwest380” with minimum impact

# Forest conservation through REDD



# Job prospects



>90% of E & NRM students have a job at graduation time!

# Utrecht School of Life Sciences

**More information?**

**<http://web.science.uu.nl/environmentalbiology>**

**Or by mail to: [N.P.R.Anten@uu.nl](mailto:N.P.R.Anten@uu.nl)**