

The value of forest monitoring networks:  
Their role in a changing environment

## Overview of Irish Forest Networks

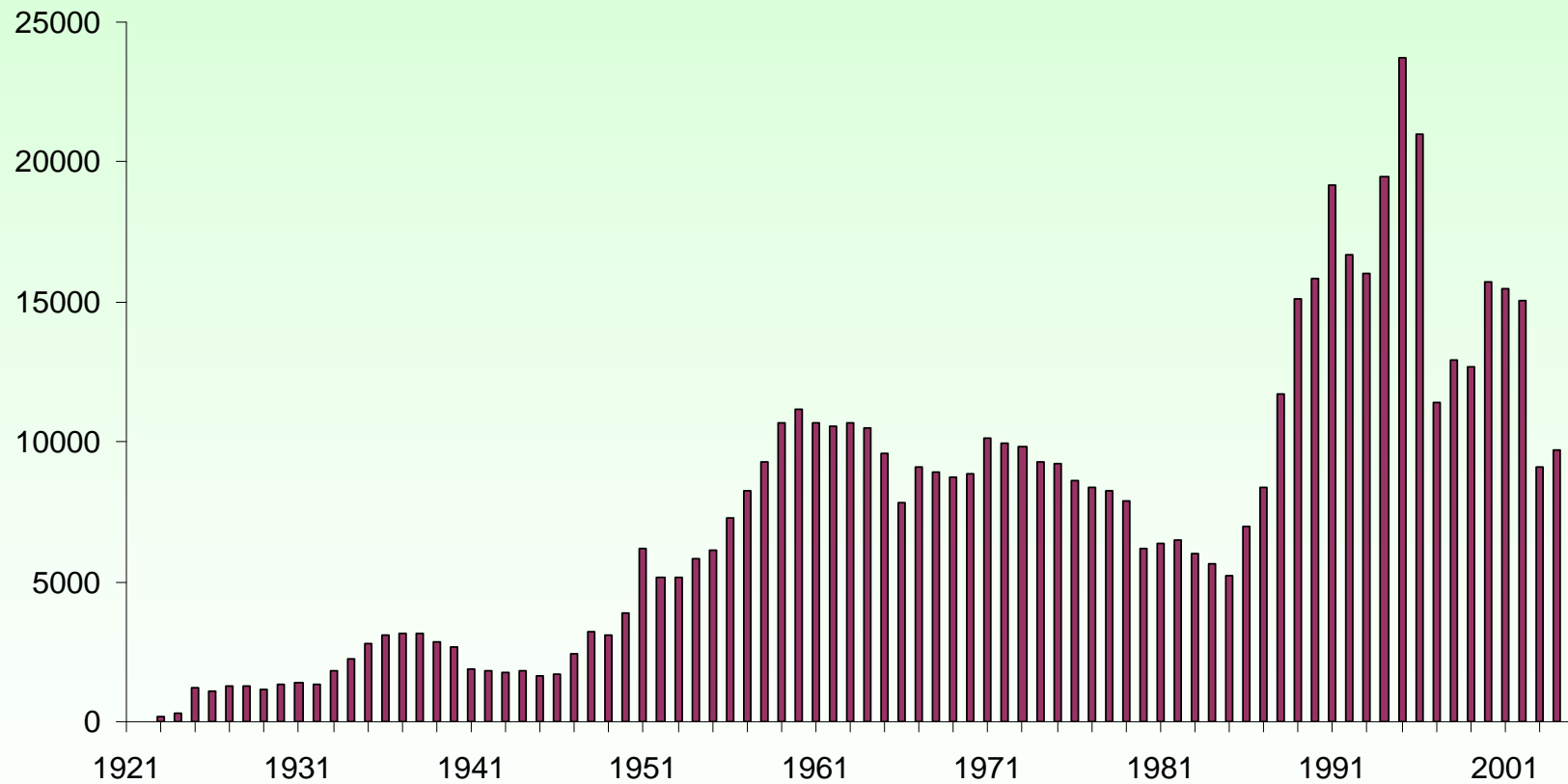
Pat Neville

Research & Environment  
Coillte



# Irish Forest History

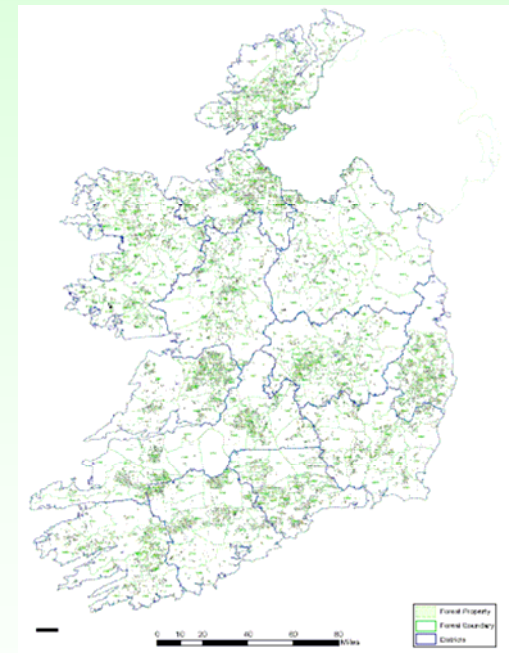
- 1900 ~ 1%
- Today ~ 10%



The value of forest monitoring networks: Their role in a changing environment. Glenview March 2010

# Role of Forests in.....

- Timber
- Biodiversity & nature conservation
- Carbon & climate change
- Recreation & landscape
- Soil protection
- Water cycling
- Places of solitude & reflection



# Forest Monitoring

- We want
  - Healthy, diverse & productive forests
- We need
  - to protect forests from pests & diseases
  - understand changes in functions & processes
- We'd like
  - to understand effects of changing climate
- We have to
  - Deliver forest data to policy makers and public

# Forest Monitoring

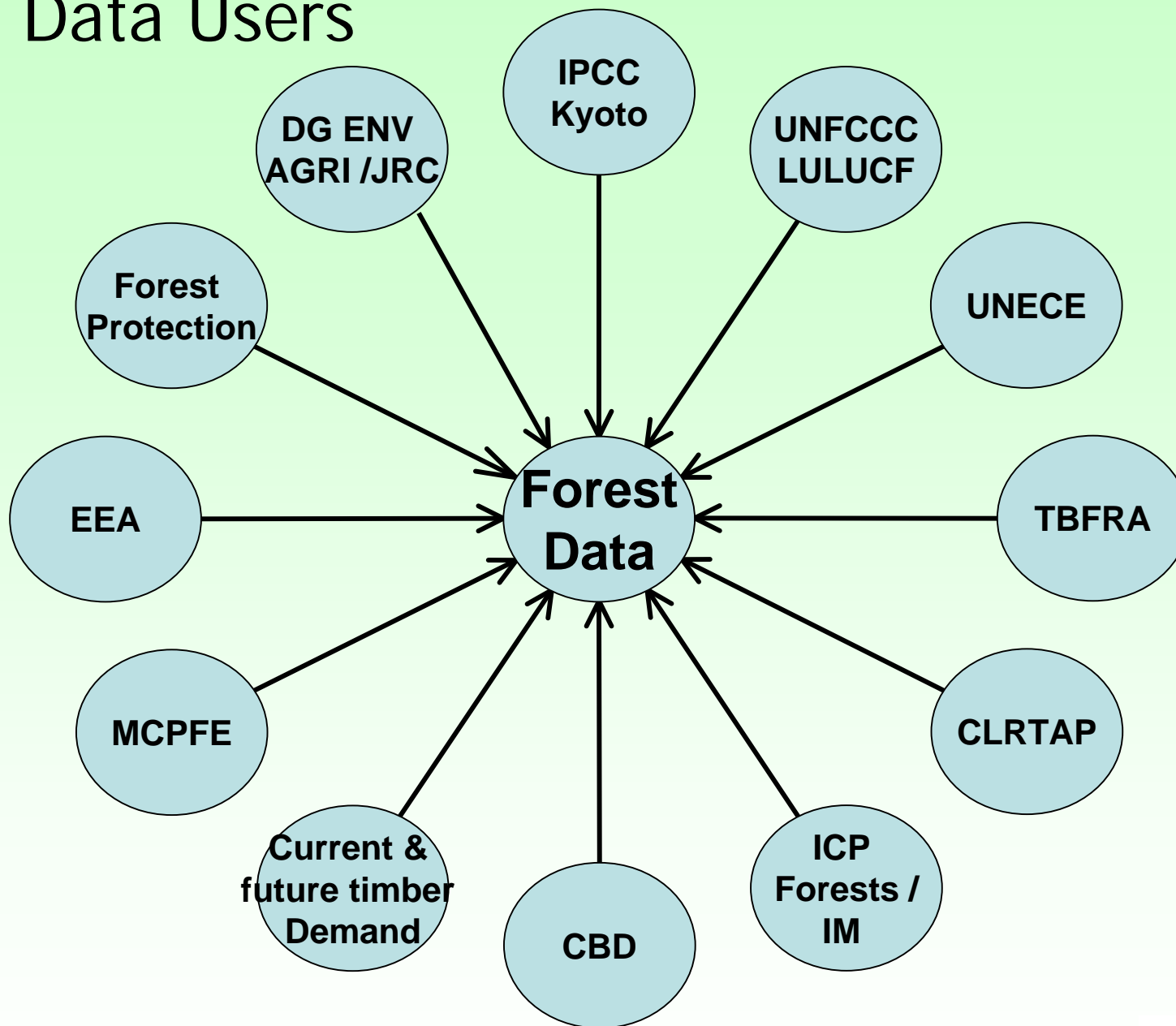
- Data needs to be
  - relevant
  - reliable
  - repeatable
  - robust
  - [reportable](#)
- Today number of different forest monitoring initiatives in Ireland
  - Relevant to different National, EU & Global Processes



# Some Monitoring Initiatives

- **National Forest Inventory**
- Climate Change, Carbon & Forests (CarbiFor, CarboEurope, ForestSoilC, CLI-MIT)
- Forest Health (Abate, Quarantine organisms)
- Long-term monitoring ~ Biogeochemistry & Ecosystem Function (Forest Focus, FutMon, ForEU)
- Forest Biodiversity (BioForest, PlanForBio, BioSoil)
- Natura 2000 network (Art. 17)
- NPWS surveys e.g. native woodlands
- High Conservation Value Forests
- Forest waters, nutrient cycling & fluxes (Hydrofor Sanifac, ForFlux)
- Silvicultural (Code of best forest practice, standards)
- Ongoing NGO & other works

# Forest Data Users



# National Forest Inventory



- NFI
  - Extensive spatial network
  - Statistically robust 2 x 2 km grid
  - 1742 forest plots
  - Range of parameters collected

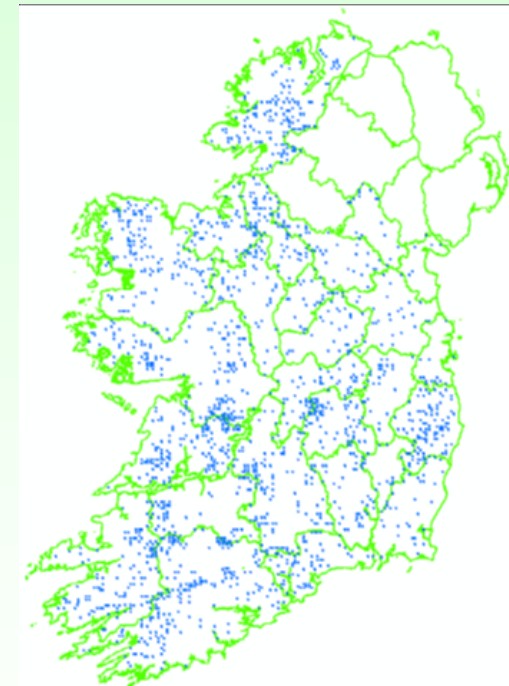


Image downloaded from [www.coford.ie](http://www.coford.ie)

# FutMon

- Long term European forest ecosystem monitoring programme
  - Extensive time series data (1987 L1 & 1990 L2 to today)
  - Longest ecosystem monitoring programme in Ireland?
- Formerly Forest Focus, Reg. 3528/86, Forem
- FutMon co-funded under National funds & LIFE+
  - 2009 & 2010
- ForEU project proposed
  - 2011 to 2013
  - Ireland's participation uncertain



Forest Service



Department of  
**Agriculture,  
Fisheries and Food**  
An Roinn  
**Talmhaíochta,  
Iascaigh agus Bia**



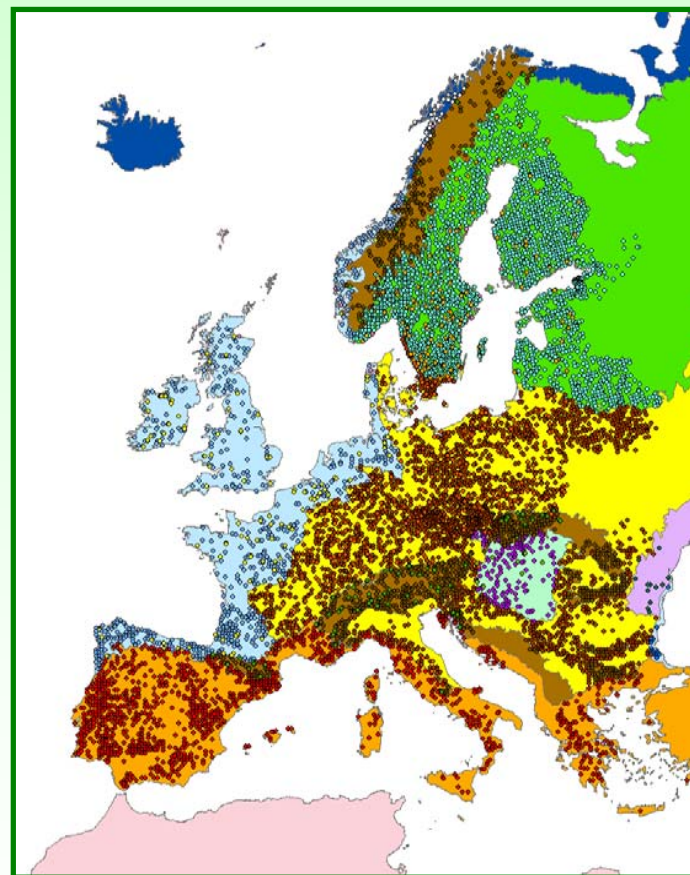
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[www.futmon.org](http://www.futmon.org)

# FutMon

## Forest Ecosystem Monitoring at two levels (1)

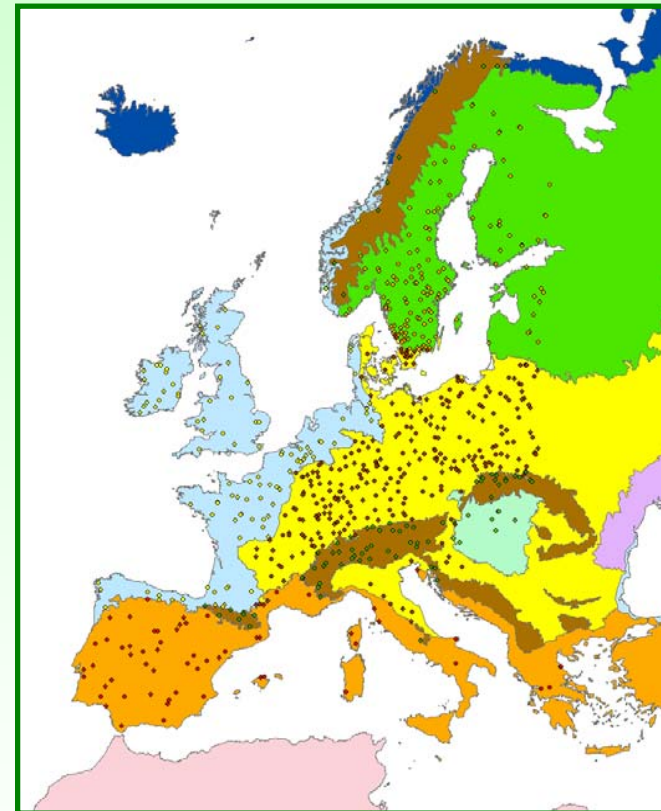
- Extensive network of observation points (16 x 16 km grid)
  - Level 1
    - 6,000 plots Europe
    - 37 plots Ireland,
  - Crown condition
    - annually
  - Soil
  - Foliage
  - Biodiversity
    - x 10 years



# FutMon

## Forest Ecosystem Monitoring at two levels (2)

- **Intensive** network of observation points
- Level 2 plots
  - 300 plots Europe, 3 plots Ireland
- Surveys of
  - Crown condition
  - Deposition
  - Soil & soil waters
  - Foliage
  - Growth
  - Ground vegetation
  - Meteorology
  - Phenology
  - Leaf area index



# Biodiversity

- **BioForest**

- Extensive Coford / EPA project
- 2001 to 2005
  - Biodiversity assessment of afforestation sites (24 sites)
  - Assessment of biodiversity at different stages of the forest cycle (44 sites)
  - Investigation of experimental methods to enhance biodiversity in plantation forests (60 sites)
- Surveys of ground vegetation, epiphytes, lichens, birds & invertebrates



**UCC**

Coláiste na hOllscoile Corcaigh, Éire  
University College Cork, Ireland



**coillte**

# Biodiversity

- **PlanForBio**

- Extension of BioForest Project
- 2007 to 2012

- Managing for biodiversity in a range of Irish forest types
- Achieving effective rhododendron control
- Optimum scenarios for Hen Harrier conservation in Ireland
- Implementation of an assessment and monitoring programme for biodiversity in Irish and Scottish forests
- Repeat visits to some BioForest sites
  - Monitoring?





# BioSoil

21 participating  
countries

4234 plots sampled

Results being  
evaluated at JRC



# Challenges

- Many different monitoring programmes ongoing in Irish forests
  - Different institutes & agencies
  - Different topics of interest reported
- Data & information sometimes available as
  - Research reports
  - Peer reviewed publications
  - Websites
  - Other grey literature



# Challenges

- But.....
- Visibility of monitoring community is low
- Data availability often unclear
  - data sharing ?
  - access ?
  - acknowledgements ?
- Reports often science heavy & technical
- Long-term ecosystem monitoring needs
  - Stable funding platforms



# Opportunities

- Many advantages of establishing “presence” for monitoring community
- Build on existing programmes and data collected
  - Validate process models with real empirical data
  - Opportunity for value added & other studies
    - e.g BioSoil
  - Integrated data evaluations
  - Improved funding opportunities

# Conclusion

- Healthy activity of forest monitoring ongoing in Ireland
- Forest monitoring valuable exercise
  - Gathering data and understanding forest processes
  - Fulfilling reporting and data need requirements
- Secure funding platform remains an issue
- Potential synergies exist within monitoring community and should be exploited

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Thanks!

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