



 Federal Ministry  
Republic of Austria  
Agriculture, Forestry, Regions  
and Water Management

# FRA reporting on forest damage in the UNECE region

Some interesting findings

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## Assessing Forest Damage and Disturbance

Scientific-Technical Symposium jointly organized by UNECE, FAO and the Austrian Federal Ministry of Agriculture, Forestry, Regions and Water Management

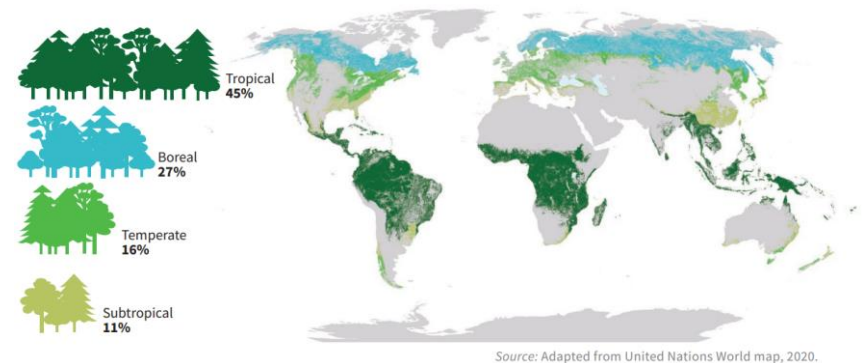
University of Natural Resources and Life Sciences Vienna, Austria  
29-30 September 2022



# Notes on FRA reporting

- **The global forest resource assessment (FRA) has collected data on forests since 1946.**

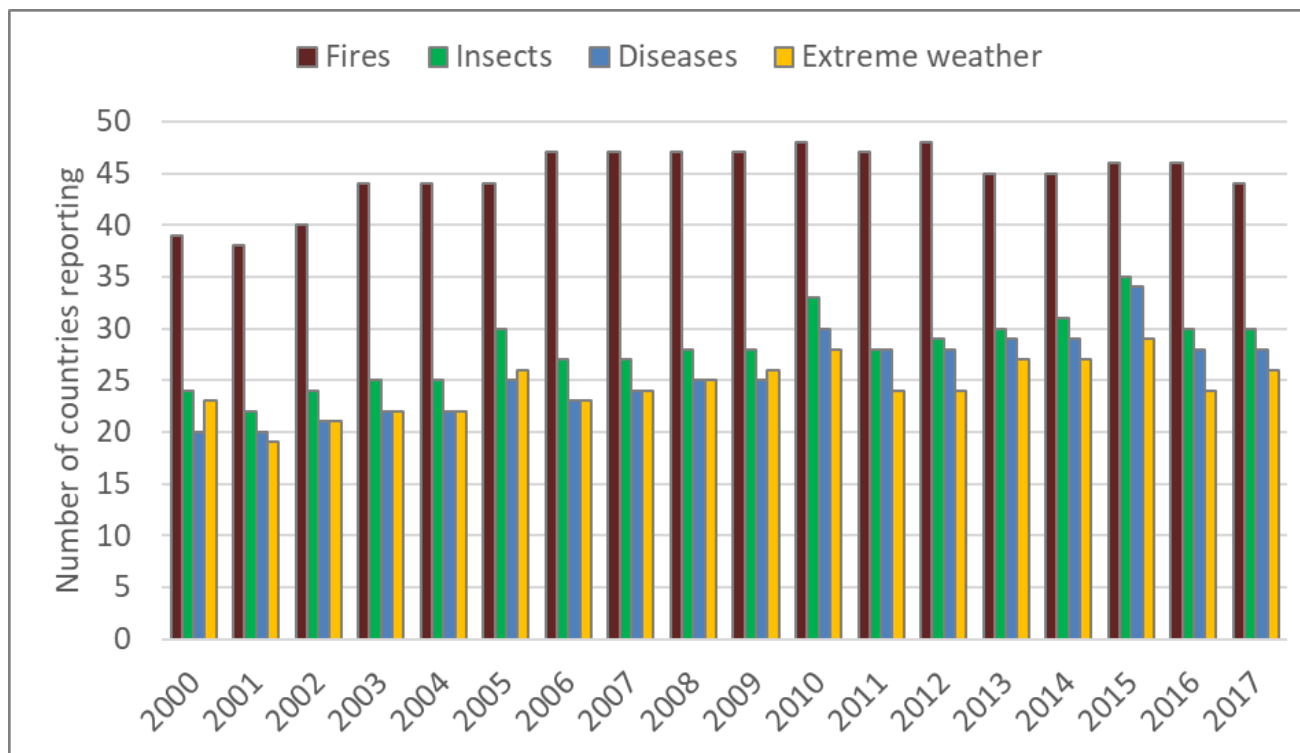
Annual rate of forest expansion and deforestation, 1990–2020



- Data on damage/disturbance is reported as “area affected by”
  - How many hectares of forests is annually affected by a given damage agent group
  - The main groups: *fire, insects, diseases, severe weather.*
- We were after:
  - Main findings from FRA 2000–2017; potential issues; additional national datasets; suggestions for the future

# Notes on FRA reporting

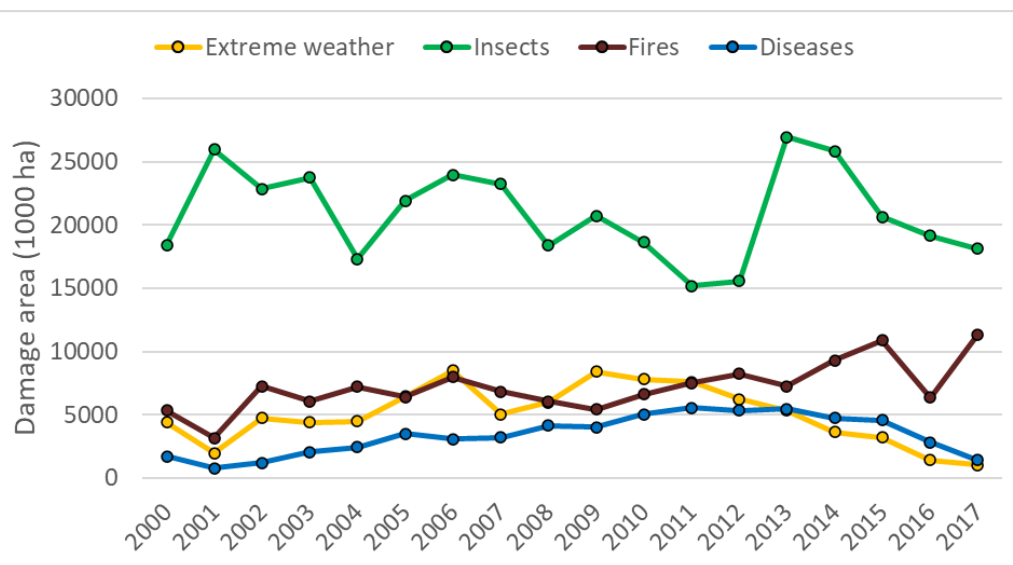
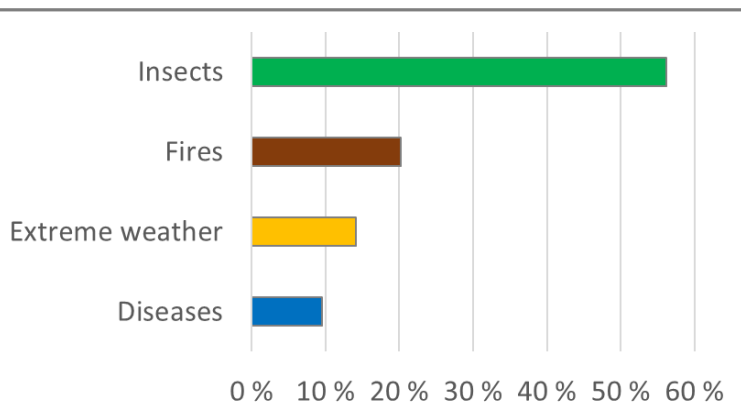
- Between 40 and 49 out of 56 UNECE countries send data to FRA
- The reporting activity varies between years and damage agents



# Notes on FRA reporting

- *Insects* top the UNECE chart in terms of *area affected by*.
  - In Africa, South America and Oceania *fires* top the chart.

Reported damage in the UNECE (2000-2017) by groups

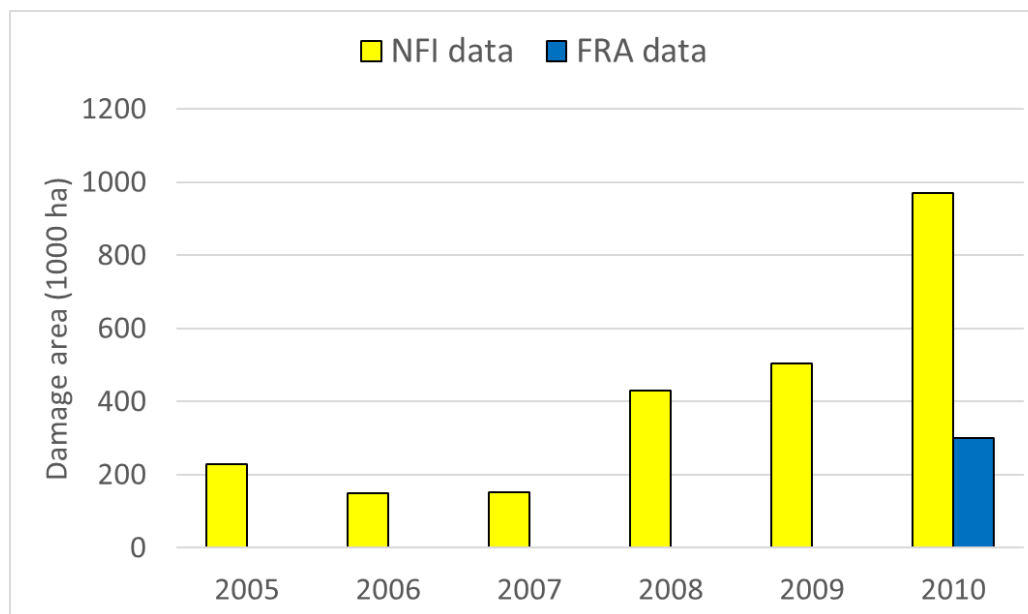


- Important: results are affected by the reporting activity.
  - For example, Canada reports NA for diseases

# National datasets vs FRA data

## - Temporal resolution of the data

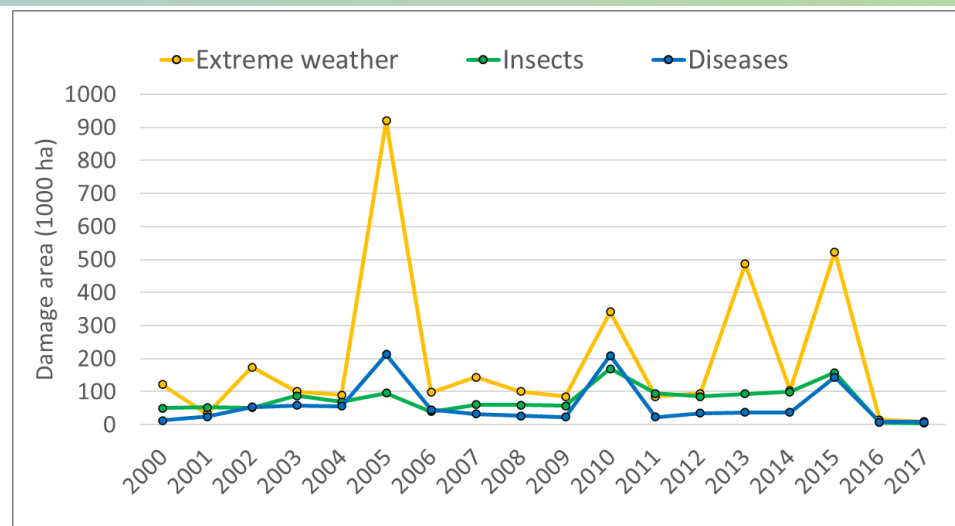
- Area of forests affected by *insects* in Finland
- Does this matter?



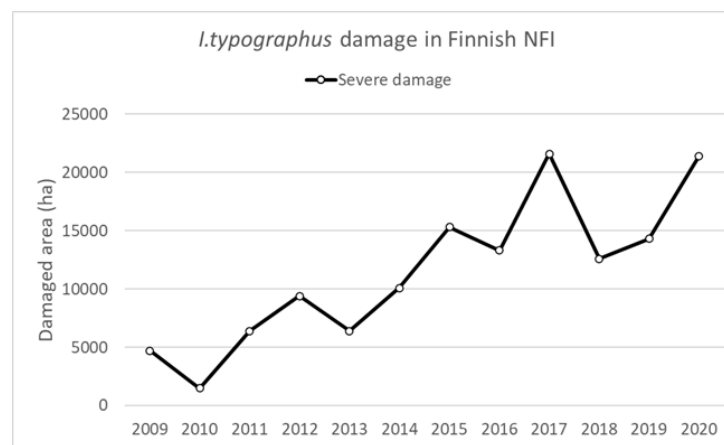
# National datasets vs FRA data

## - Temporal resolution of the data

- Yes, it matters.
- FRA data for *North Europe* vs NFI cycles of Finland and Sweden:



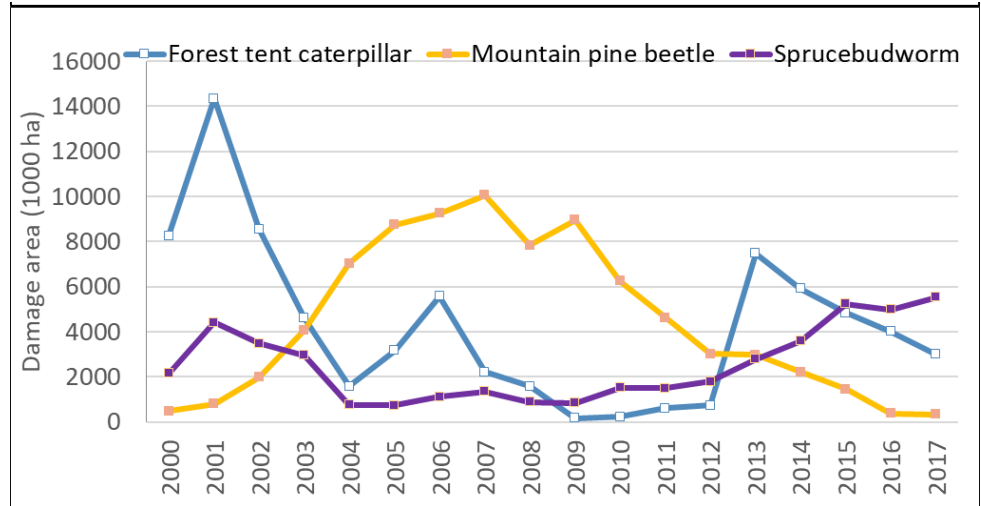
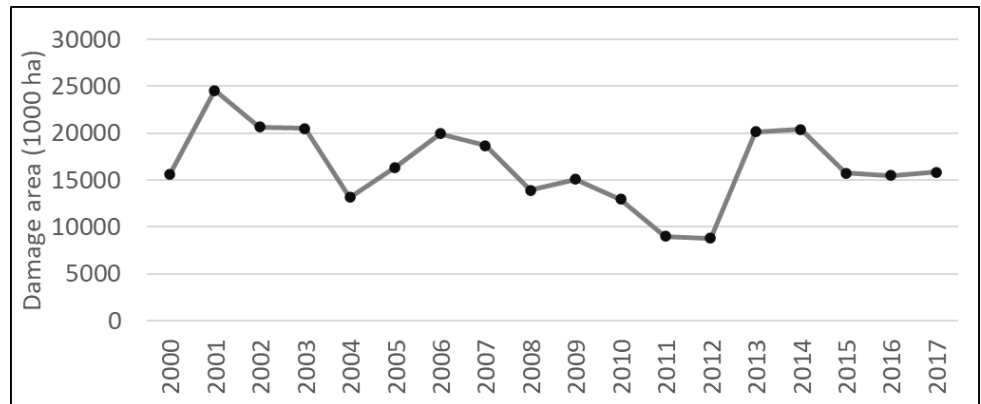
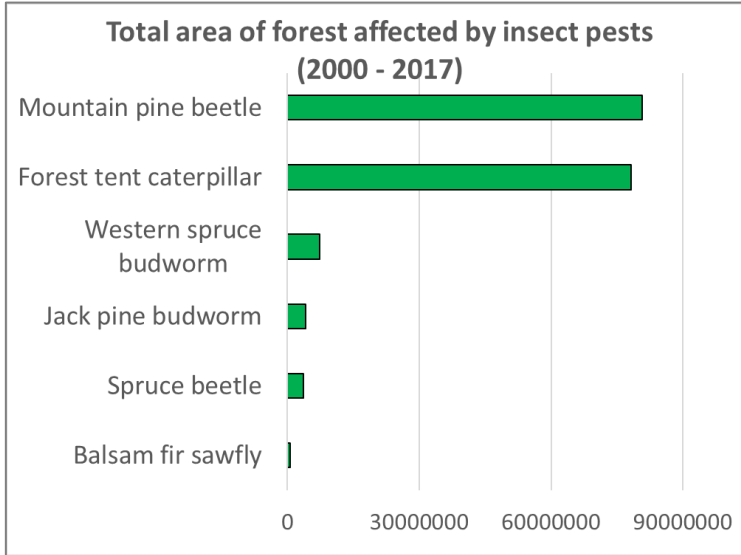
- The group "Insects" also masks out potential trends:



# National datasets vs FRA data

## - Level of detail

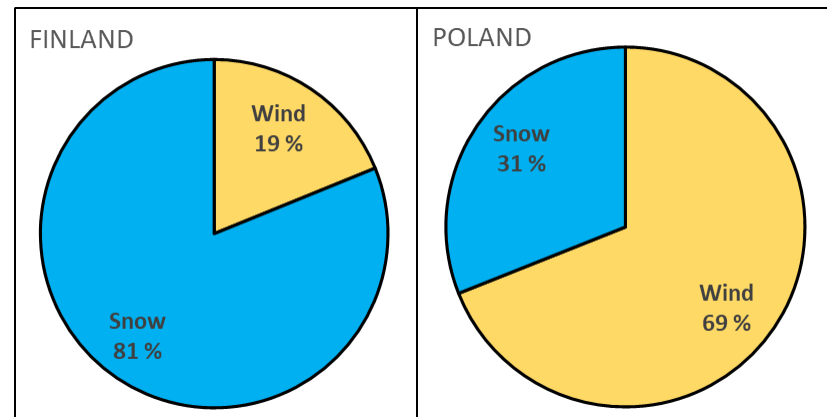
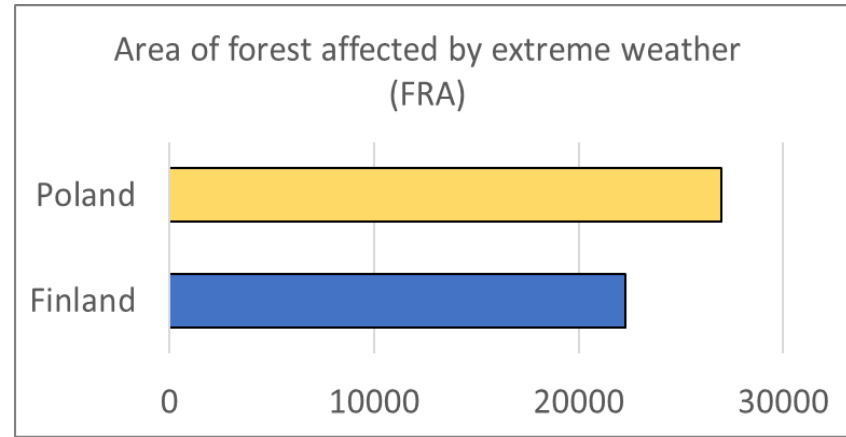
- Insect damage in Canada (FRA & NFI)



# National datasets vs FRA data

## - Level of detail

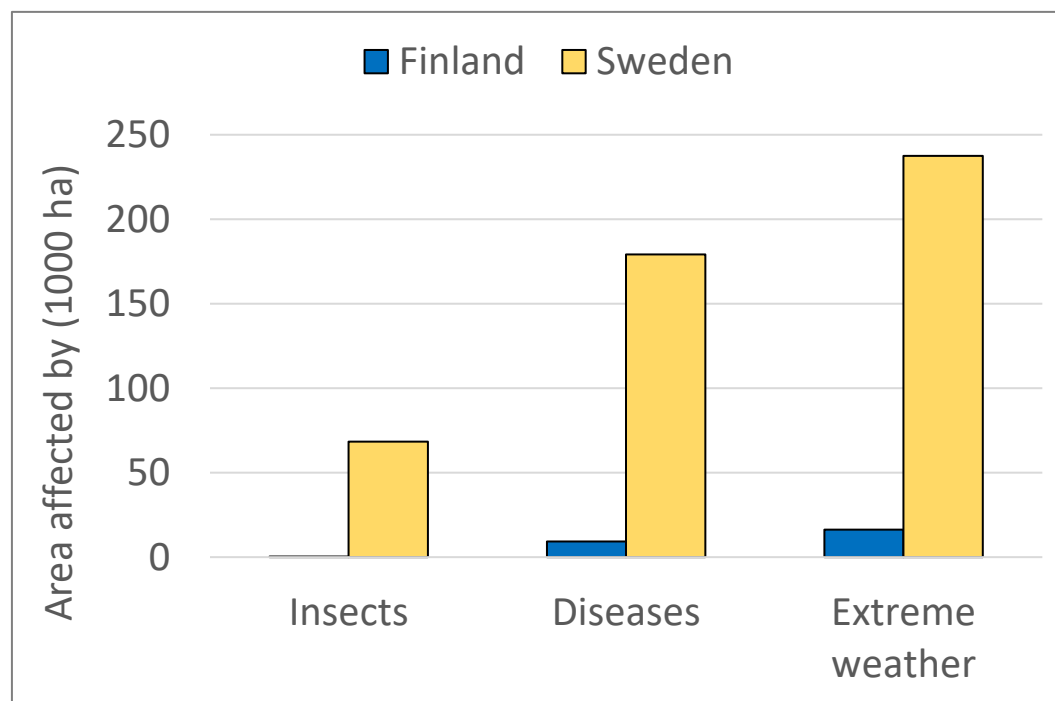
- Extreme weather – anything but uniform between regions.
- Wind and snow, major damage agents in Poland and Finland.
- We got more detailed data on the topic.





# National datasets vs FRA data - Thresholds for “damage”

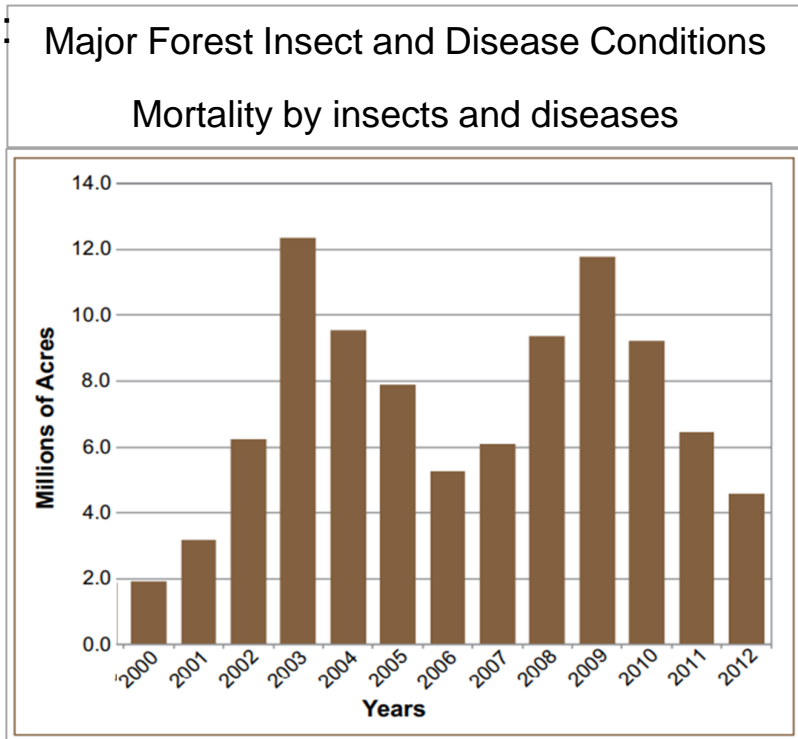
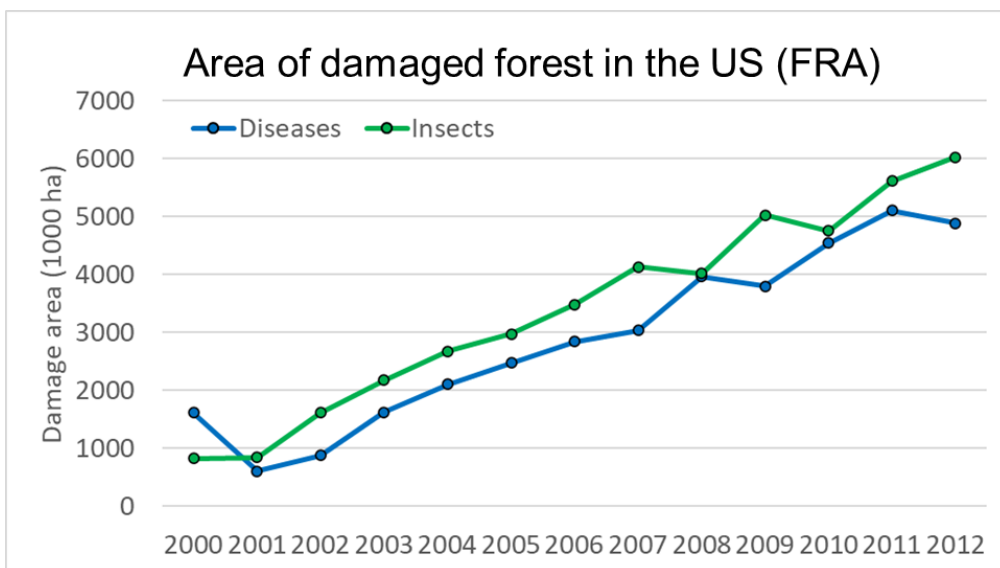
- Finland and Sweden in FRA – so similar, so different?



# National datasets vs FRA data

## - Different dataset, different story

- *Insect damage in the US (2017)*
  - FRA: **1.64 mill.** ha of forests affected by *Insects*
  - *The Major Forest Insect and Disease Conditions* -report: **mortality in 1.7 mill.** ha of forests (by most severe pest insects alone).
- *Insects and diseases in the US through time:*



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# To conclude

- The FRA is **-by far-** the most global effort to collect forest data.
- Yet, as we are about ~~perfection~~ improving things..
- Perhaps worthy of considering for future:
  - Synchronized reporting years? (Finland, Sweden and the NFI cycles)
  - Threshold of damage? (Finland and Sweden)
  - Level of detail? (Groups *Insects* and *Extreme weather*)
  - Additional datasets? (*Insects* and *Diseases* in the US)
- Things are changing... monitoring is there to catch it.
- The global FRA is an excellent system, let's continue developing it.



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# THANK YOU

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