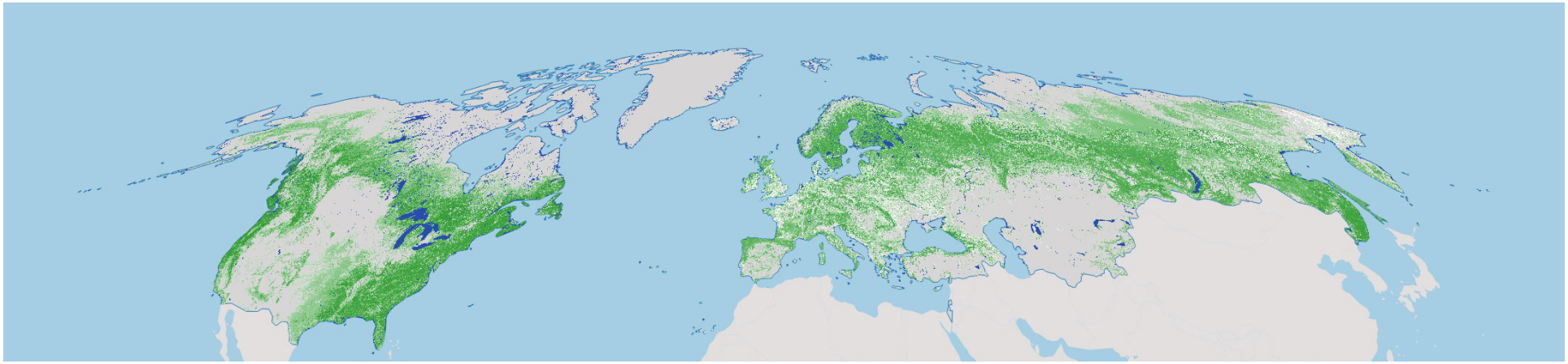
Universität Hamburg
DER FORSCHUNG | DER LEHRE | DER BILDUNG

Erfassung, Stand und Entwicklung der Waldschäden in der UNECE-Region

Michael Köhl, Universität Hamburg
Roman Michalak, UNECE

ECE region



- **42%** of the global total of **forests** are in the **UNECE region**
- **Forests** are the **largest** land use type in the **UNECE region (37.6%)**

Source: FAO FRA 2020

Schaden (damage) vs. Störung (disturbance)

Waldschäden

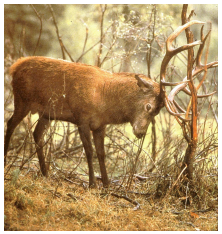
Indikator 2.4 Waldschäden

Vollständiger Text:

Wald und andere bewaldete Flächen mit Schäden, klassifiziert nach Hauptschadensursache (abiotisch, biotisch und vom Menschen verursacht)

Indikator 2.4: Schadursachen

Biotisch



Abiotisch

Unmittelbar vom Menschen verursacht

Regionen des Europäischen Waldberichts

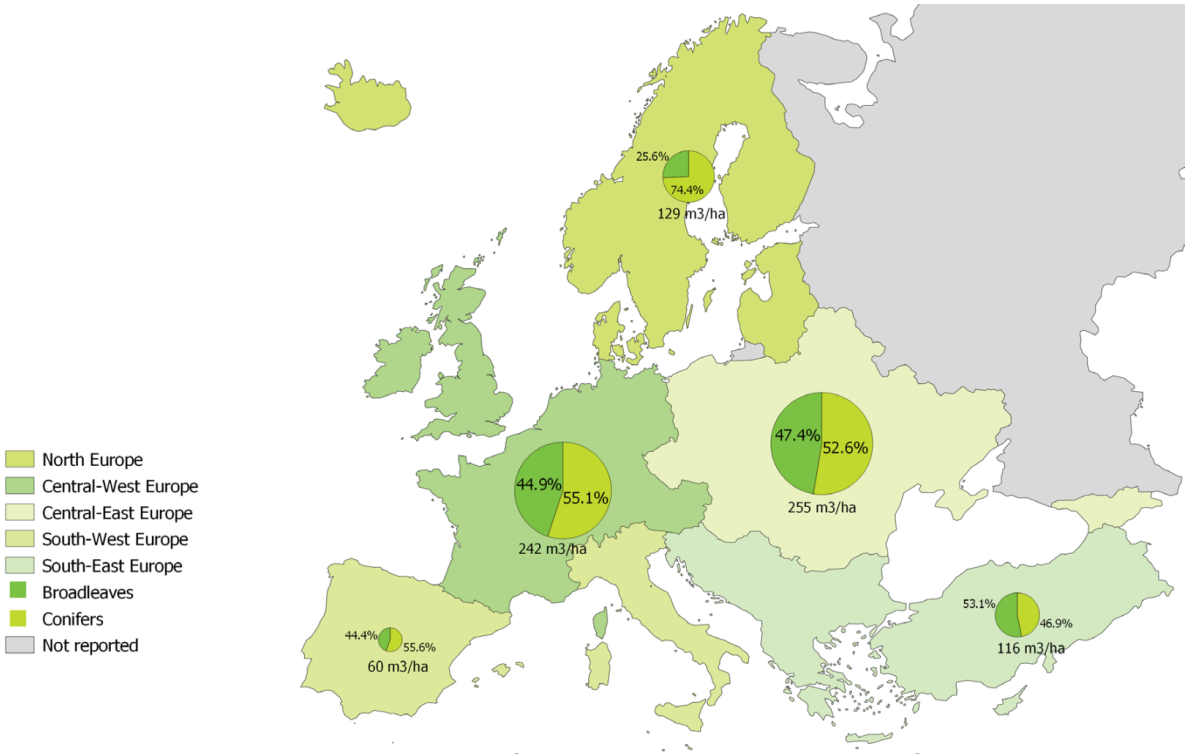
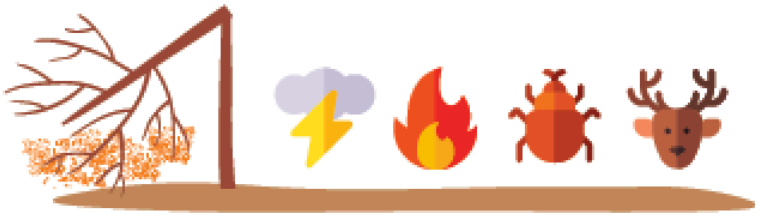


Figure 1.2-1: Growing stock in forest divided into conifers and broadleaves and growing stock density, by region, 2020

Universität Hamburg
DER FORSCHUNG | DER LEHRE | DER BILDUNG

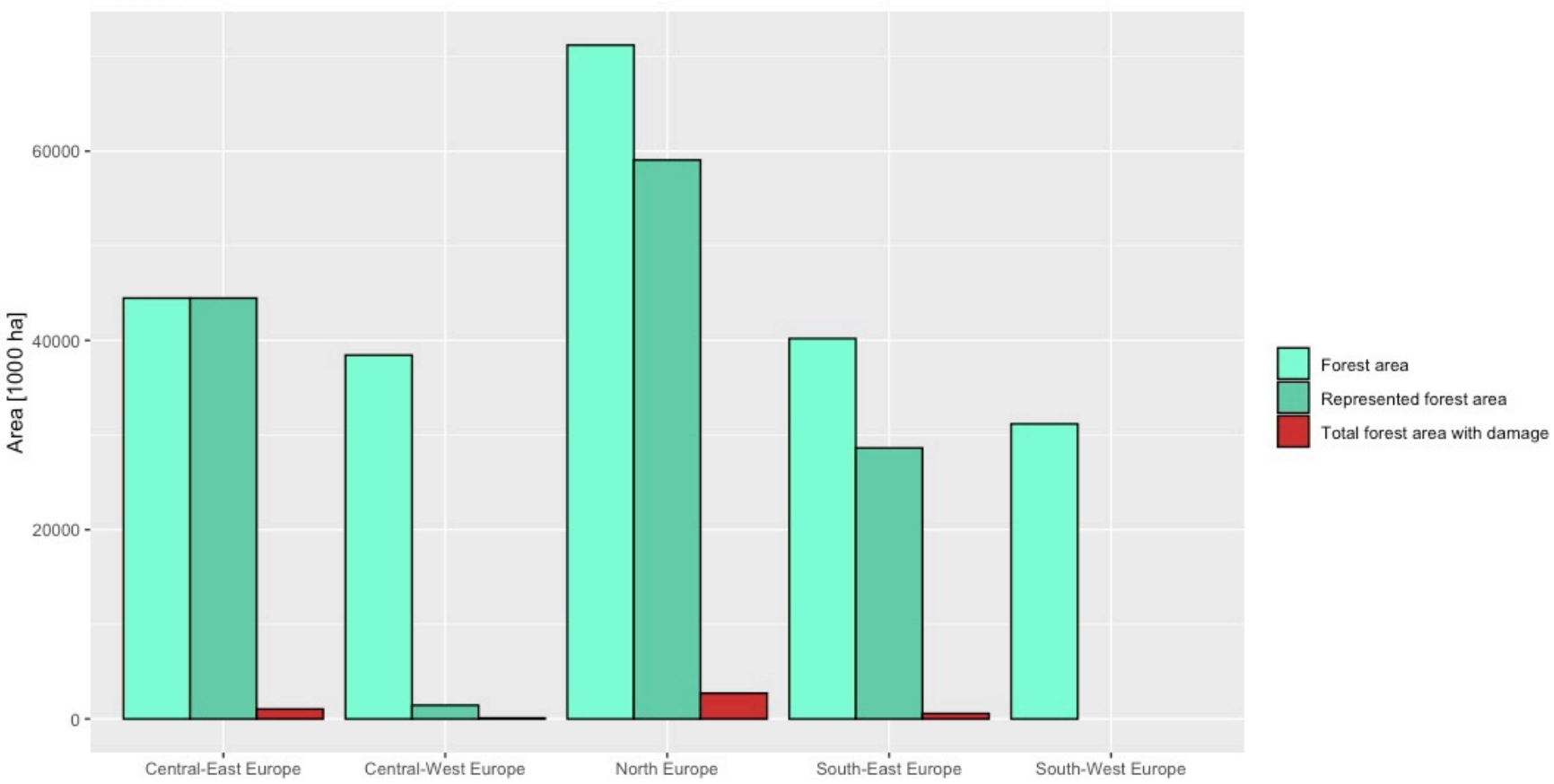
Europäischer Waldbericht (State of Europe‘s Forests) 2020

About 3% of European forests are damaged, mainly by wind, insects, ungulate browsing, and forest fires



Michael Köhl, UHH & Roman Michalak, UNECE

Von Waldschäden betroffene Flächen (SOEF 2020)



Waldfläche nach Schadursache (SOEF 2020)

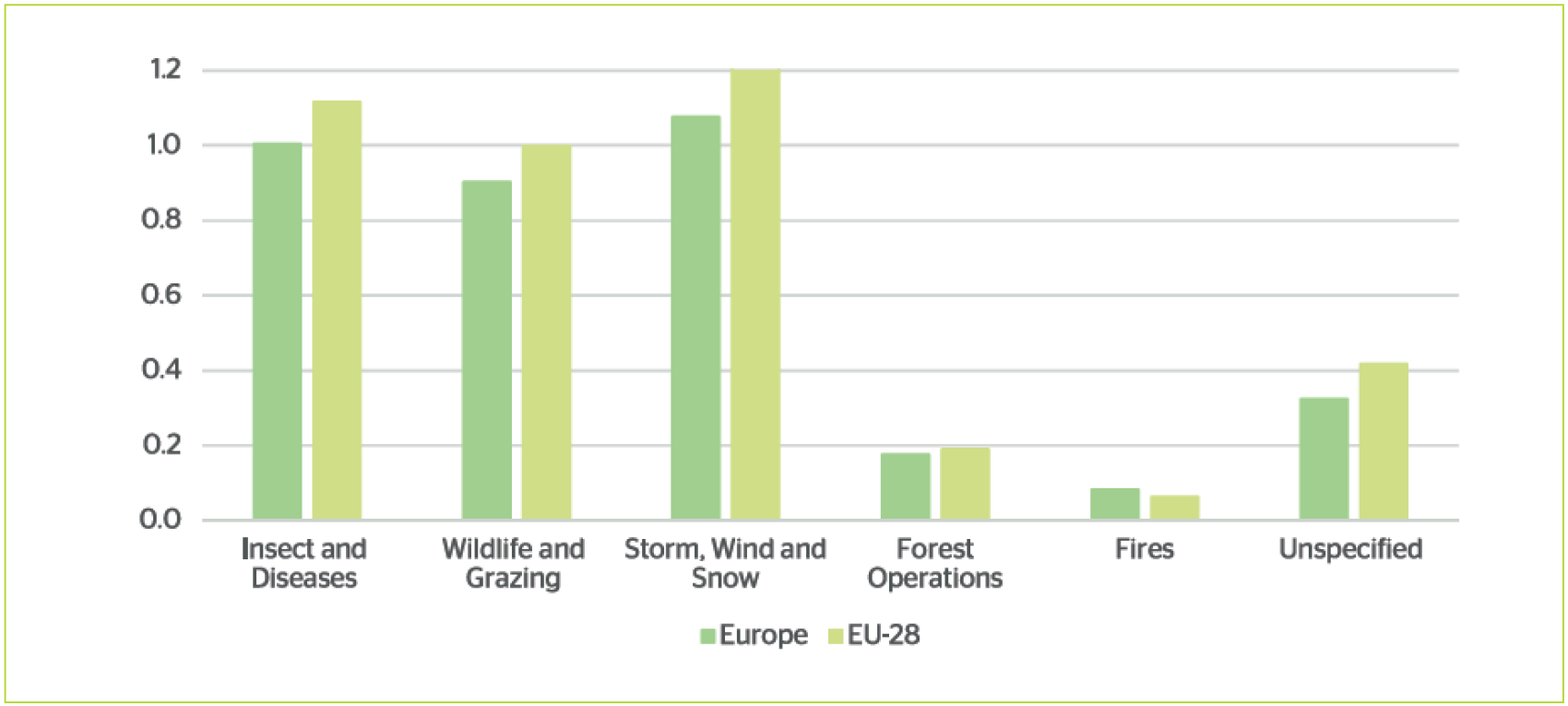


Figure 2.4-1: Percentage of forest area damaged by different agents, 2015

Entwicklung der Waldschäden (SOEF 2020)

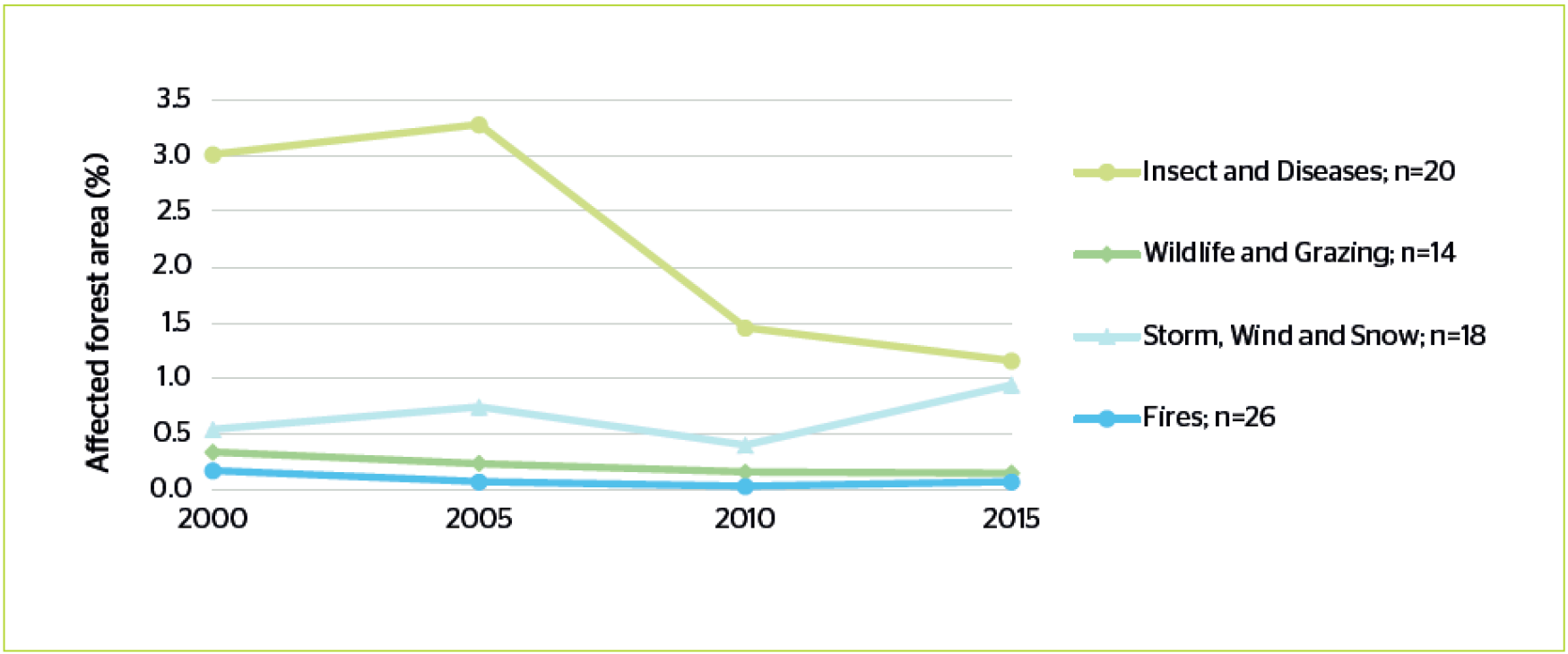
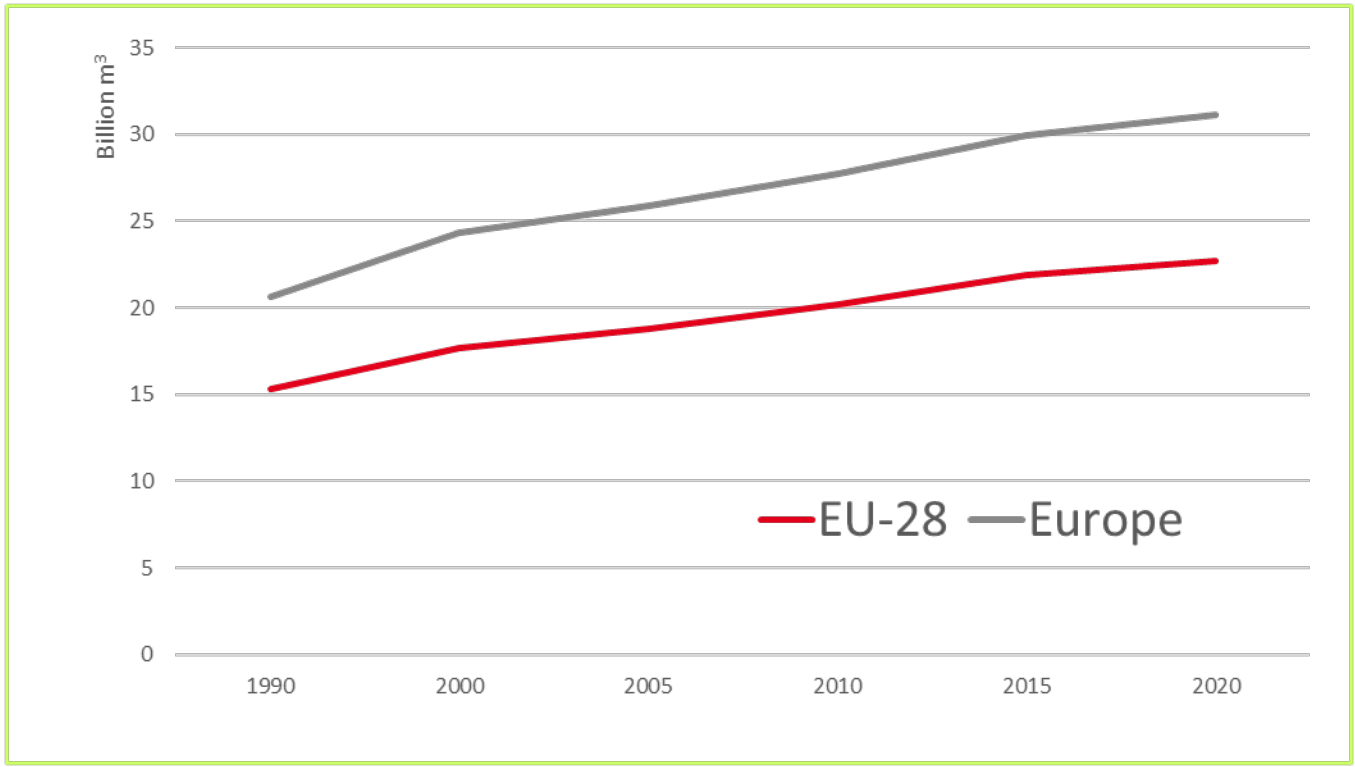


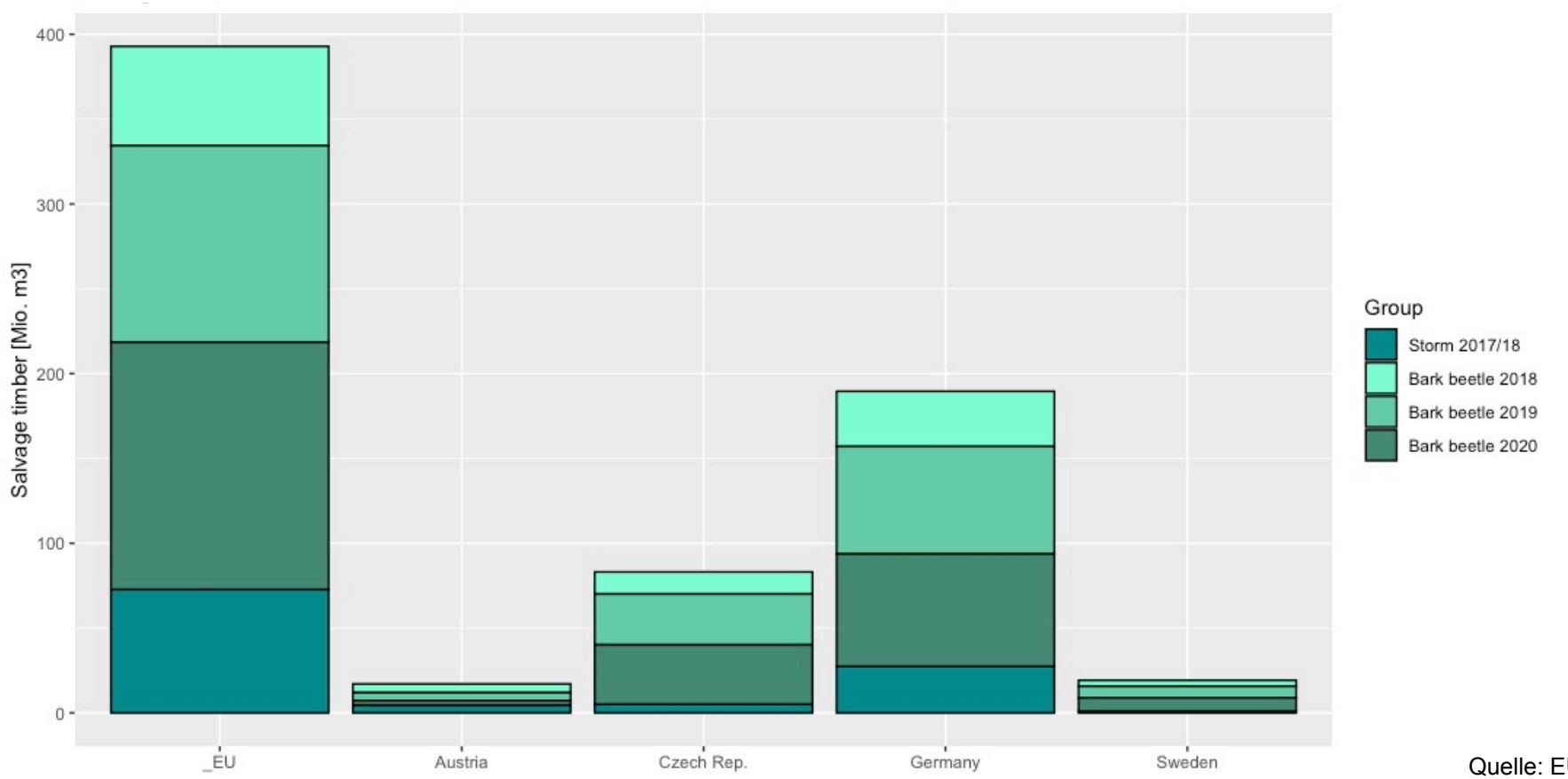
Figure 2.4-2: Trends in damaged forest area by agents, 2000-2015

Entwicklung des Holzvorrats, 1990-2020



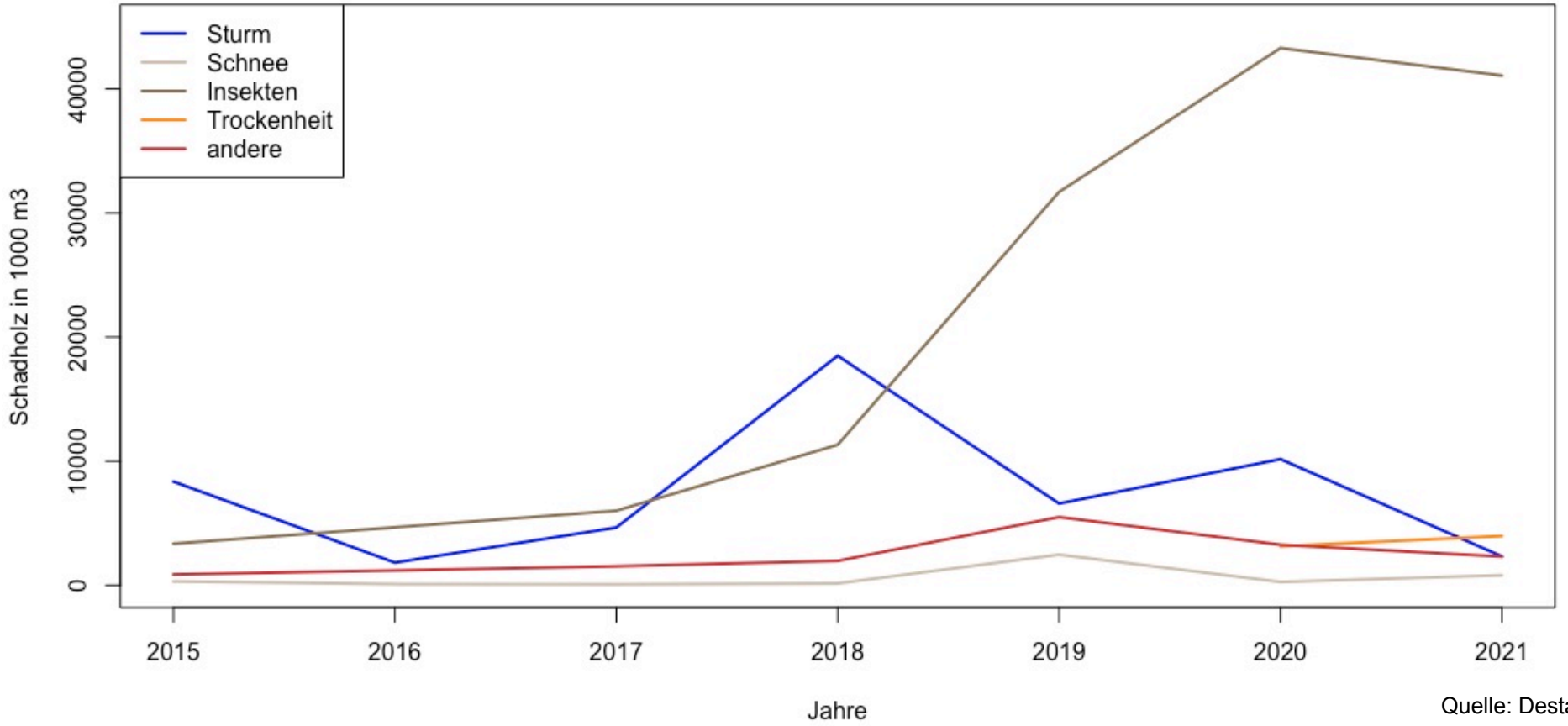
Quelle: FAO/ECE

Schadholzanfall



Quelle: EUWID

Schadholzaufkommen Deutschland



Quelle: Destatis

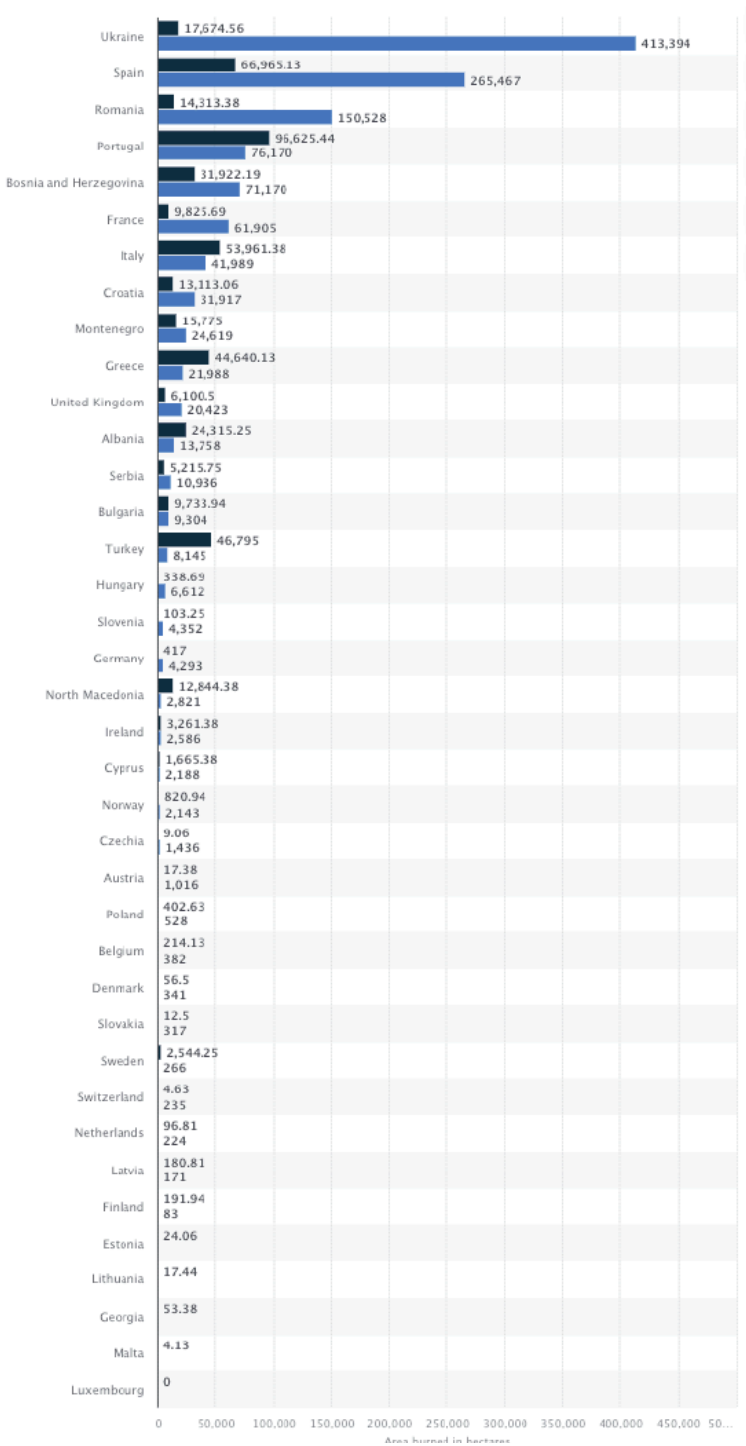
Sturmschäden

Storm	Year	Regions affected	Maximum wind speed ($m\ s^{-1}$)	Timber disturbed (Mill m^3)
Vivian (Wiebke)	1990	Germany, Great Britain, Ireland, France, The Netherlands, Belgium, Switzerland, (marginally northwestern Italy)	> 55.6	60–70
Lothar & Martin	1999	France, Belgium, Germany	71	240
Gudrun (Erwin)	2005	Ireland, Great Britain, Denmark, Norway, Sweden, Russia	> 50	75
Kyrill	2007	Ireland, France, Belgium, The Netherlands, Denmark, Sweden, Austria, Germany, Czech Republic, Slovakia, Switzerland and Poland	> 72	66
Klaus	2009	France, Germany, Italy, Switzerland, Spain, Andorra	> 55.6	NA
Xynthia	2010	Belgium, Denmark, France, Germany, Poland, Portugal, Spain, Sweden and United Kingdom	32.62	NA
Nicklas	2015	United Kingdome, The Netherlands, Belgium, Germany, Switzerland, Austria, Poland, Czech Republic, Slovakia	53	NA
Derecho	2017	Poland	> 42	8
David (Fiederike)	2018	France, Germany, Switzerland, Italy, Poland, Czech Republic	53	NA
Vaia	2018	Italy	> 55.6	6.0–8.0
Sabine (Ciara)	2020	United Kingdom, Ireland, Isle of Man, Spain, Germany, Austria, France, The Netherlands, Poland, Italy, Norway and Sweden	61	NA

Quelle: Sanginés de Cárcer et al., 2021)

Universität Hamburg
DER FORSCHUNG | DER LEHRE | DER BILDUNG

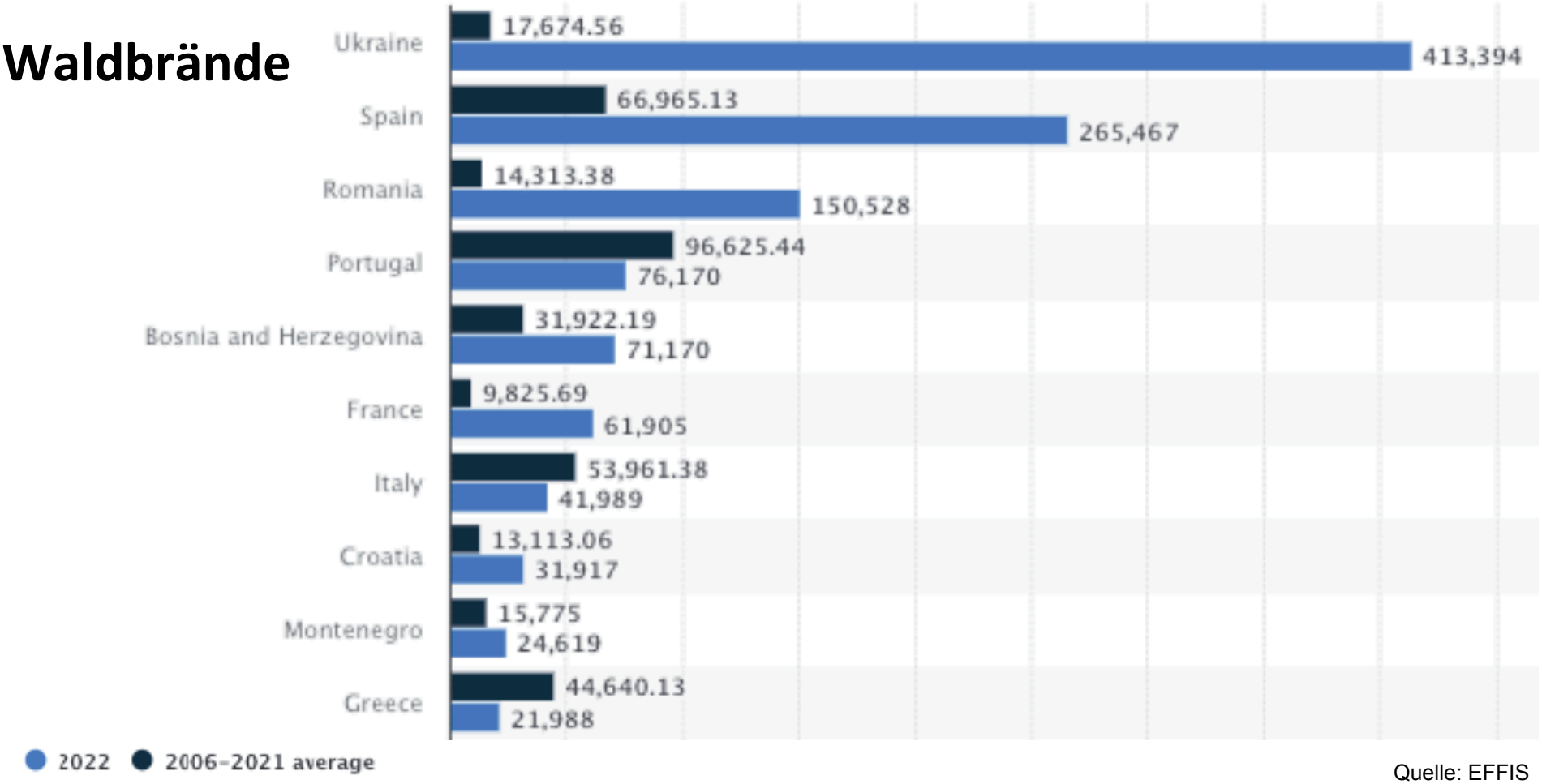
Waldbrände



Quelle: EFFIS

Michael Köhl, UHH & Roman Michalak, UNECE

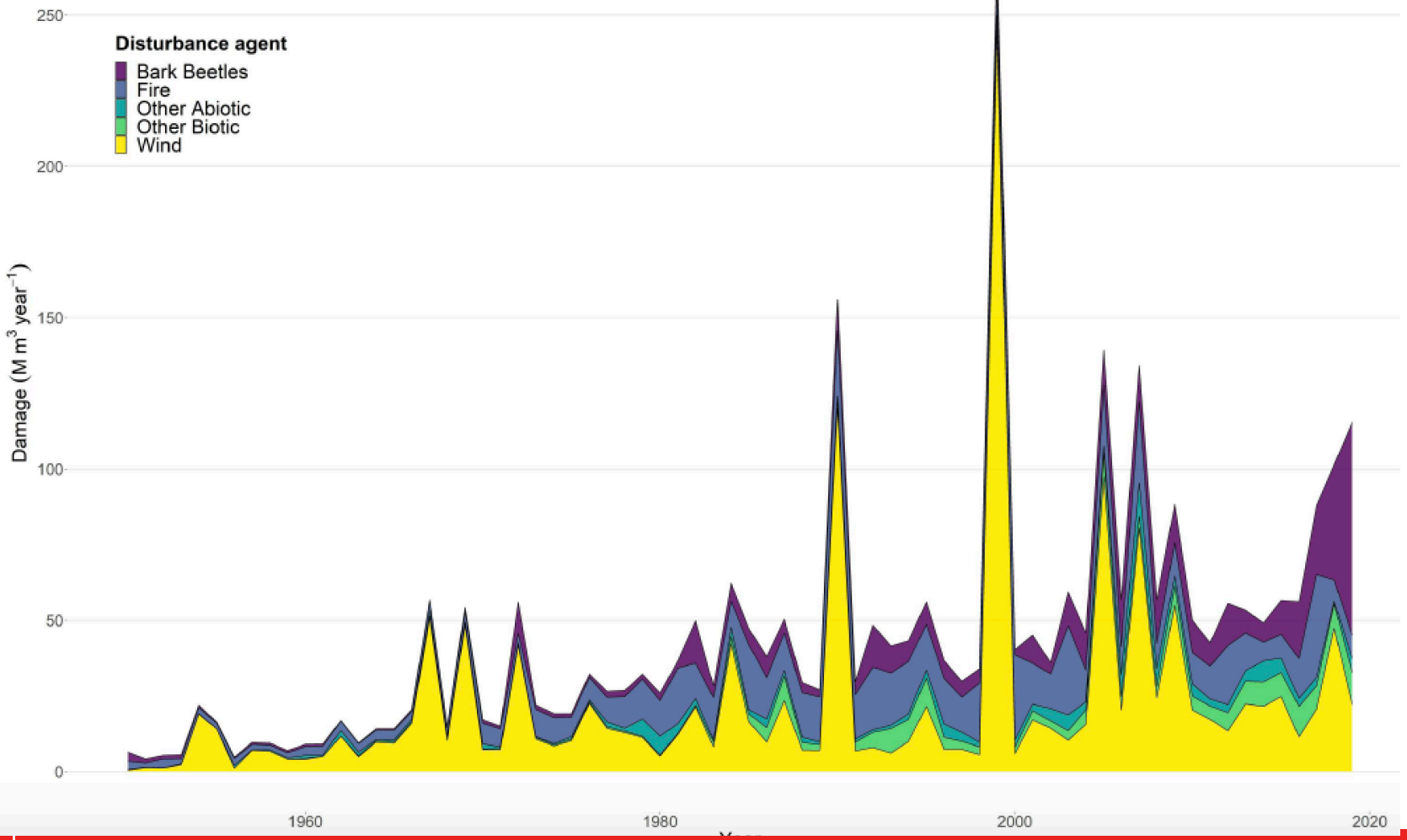
Waldbrände



Quelle: EFFIS

Universität Hamburg
DER FORSCHUNG | DER LEHRE | DER BILDUNG

Michael Köhl, UHH & Roman Michalak, UNECE

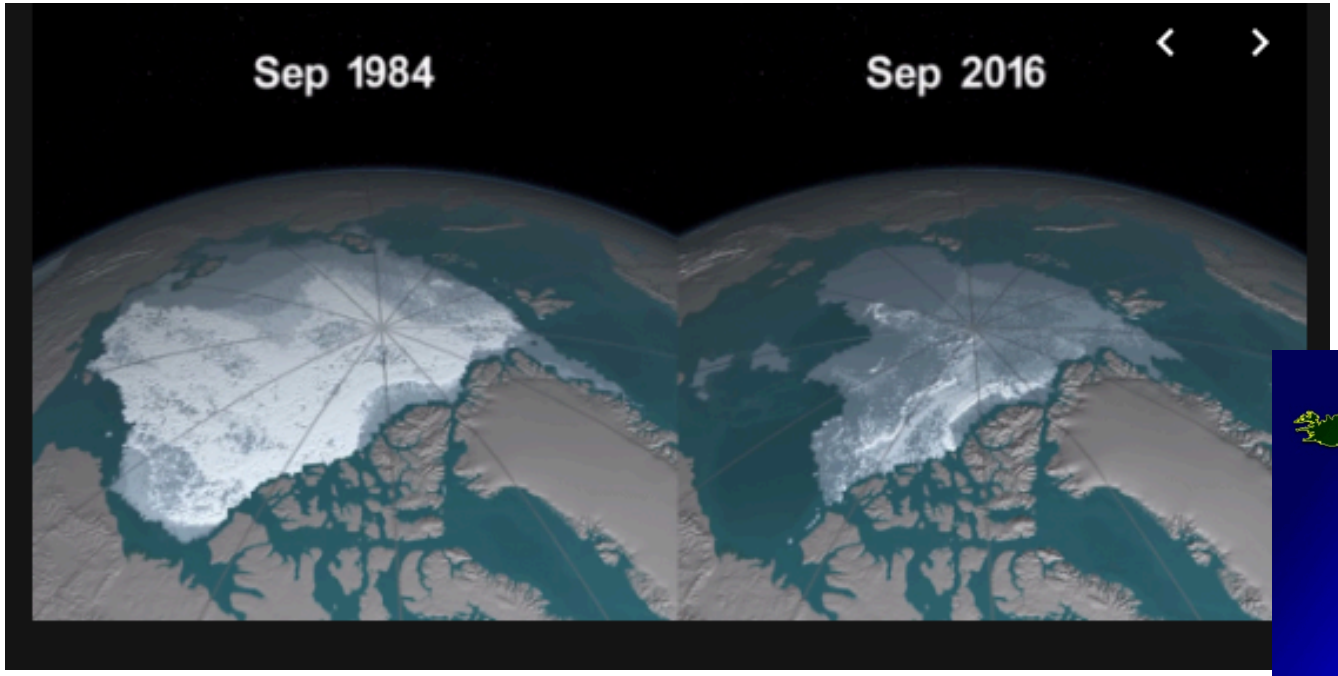


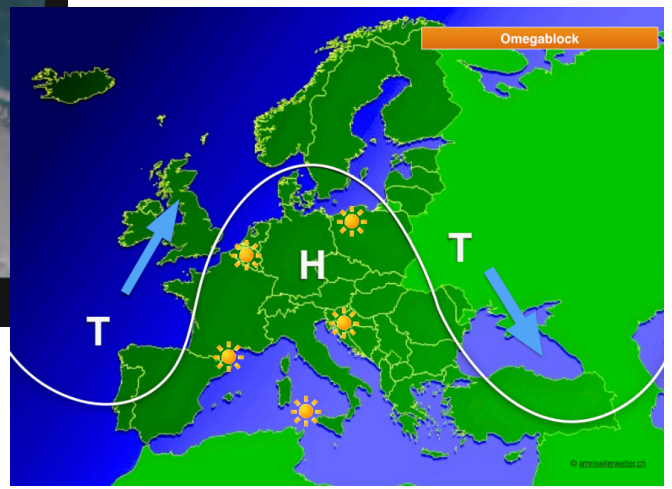
Quelle: Patacca, 2022

Klimawandel

Quelle: Michael Boettinger (DKRZ), Jochem Marotzke (MPIM)

Die Zukunft?





Universität Hamburg
DER FORSCHUNG | DER LEHRE | DER BILDUNG

Michael Köhl, UHH & Roman Michalak, UNECE