



PROJECT *In-Tree*

Introduced tree species in European forests:
challenges and opportunities

Frank Krumm and Lucie Vítková



Discussion

- Emotional discussion, often not evidence based
- Contradicting perspectives (forestry, gardening, nature conservation, society, hunting)
- Definitions and terms are used in different ways
- Various reports conducted by the Federal Agency for nature conservation (BFN). Declaration of Douglas fir and red Oak to be invasive in Germany.
- Ongoing activities on the EU level on the establishment of a black list on Alien Invasive Species (IAS)





PROJECT IN-TREE

- Background:

- Pro-active request of the German Federal Ministry for Food and Agriculture (BMEL)
- EFI as a unbiased non national organisation to provide the objective scientific state of the art
- Short project duration with a very tough schedule
- Successful project on integrative approaches as an opportunity for the conservation of forest biodiversity (INTEGRATE), coordinated by the European Forest Institute (Central European Regional Office EFICIENT)
- What about the list on IAS?

With support from



by decision of the
German Bundestag



EFICIENT



PROJECT IN-TREE

Scientific advisory board

- **Annemarie Bastrup-Birk**, European Environment Agency (EEA), Denmark
- **Jürgen Bauhus**, University of Freiburg, Germany
- **Etienne Branquart**, Directorate General for Agriculture, Natural Resources and Environment, Service Public de Wallonie, Belgium
- **Marco Conedera**, Swiss Federal Institute for Forest, Snow and Landscape Research (WSL), Cadenazzo, Switzerland
- **Franz Essl**, University of Vienna and Austrian Environment Agency, Austria
- **Hans-Gerhard Michiels**, Forest Research Institute of Baden-Württemberg FVA, Germany
- **Andreas Rigling**, Swiss Federal Institute for Forest, Snow and Landscape Research (WSL), Birmensdorf, Switzerland
- **Jan Wunder**, Swiss Federal Institute for Forest, Snow and Landscape Research (WSL), Birmensdorf, Switzerland



Key terms and definitions

Term	Definition	Source
Introduction	A process (or an action) that enables a species (or its propagule) to overcome, through a human agency, a major geographical barrier.	Amended from Richardson <i>et al.</i> (2000)
Introduced species (non-native, alien, non-indigenous, exotic)	A species in a given area whose presence there is due to intentional or accidental introduction as a result of human activity.	Gassmann and Weber (2006)
Native species	Species that have evolved in a given area or that arrived there by natural means without the intentional or accidental intervention of humans from an area where they are (or had been) native.	Amended from Pyšek <i>et al.</i> (2004)
Naturalisation	Process whereby the species establishes new self-perpetuating populations, undergoes widespread dispersal and becomes incorporated within the resident flora.	Richardson <i>et al.</i> (2000)
Invasion	A process whereby a species must overcome a series of barriers to be able to spread into novel areas in which it becomes dominant.	Amended from Valéry <i>et al.</i> (2008)
Invasive species	A species that has been naturally reproducing in large numbers over considerable distances causing negative impact on local ecosystems; i.e. by direct competition for natural resources.	-

- Avoid confusion and misunderstanding
- Ensure clarity of the definitions

Ensure consistency of the terms used throughout the book



PROJECT IN-TREE

Achievements:



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- Book publication
- Expert exchanges
- School project / Webinar
- Extended network
- Expert database (Risk platform)
- Various events
- Policy brief





Book publication

- To synthesise current knowledge on introduced tree species across the European continent
- To comprehensively present key challenges and opportunities based on scientific knowledge and case studies:
 - Climate change
 - Pests and diseases
 - Ecosystem services
- To provide a neutral knowledge and evidence-based platform for future activities

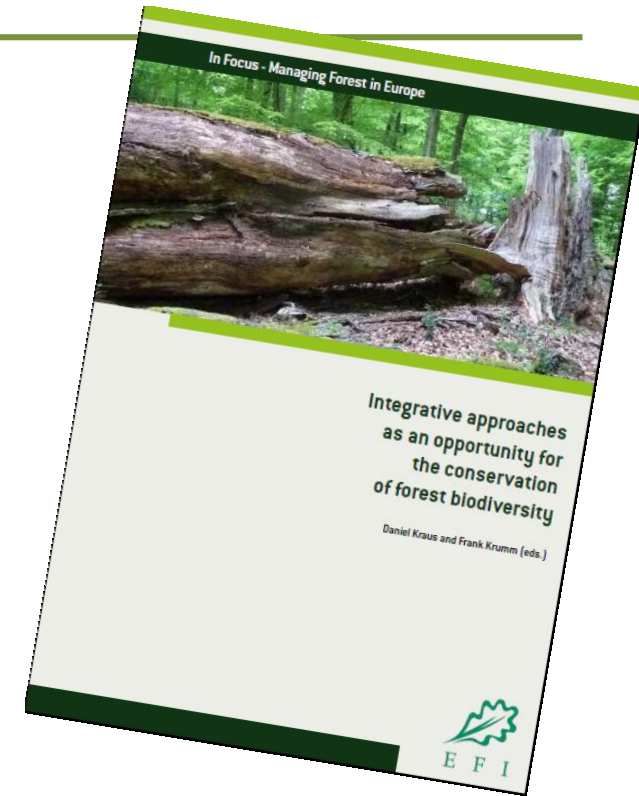
*Fact and evidence based
compilation of scientific
and practice knowledge*





Book publication: authors

- Selection of authors:
 - Proven track of:
 - Relevant experience
 - Academic record of relevant literature
 - EFI and *IN-TREE* team's network
 - Availability / Capacity
 - Recommendations of experts and advisory board
 - International Symposium in July 2015
- What's expected:
 - Contribution by spring 2016
 - Review other chapters
 - Translations into French and German
 - Facts and evidence based information





Content

Authors

- ✓ 89 authors from research and practice
- ✓ from 18 different countries across Europe and beyond
- ✓ Representing 45 different institutions and enterprises



Policy brief



In-Tree policy brief

“A forest pest is not always a forest pest”

Frank Krumm, Lucie Vítková,
Tim Green and Andreas Schuck



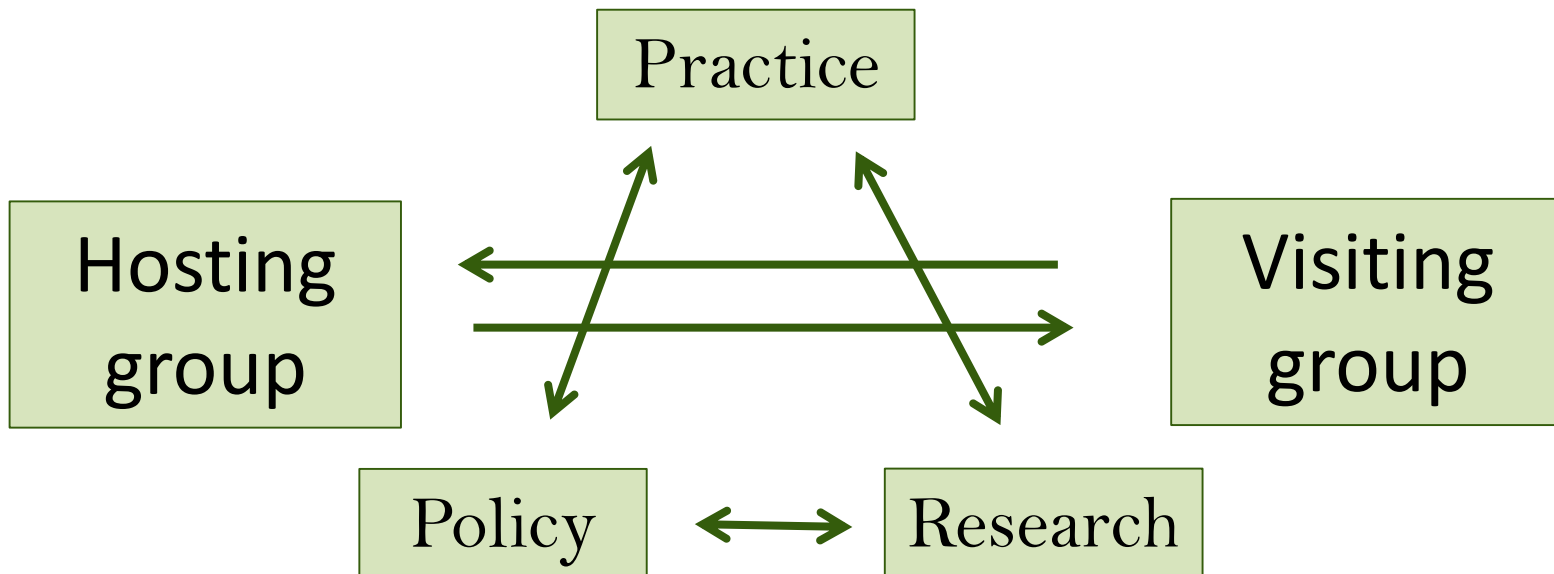


Expert exchanges



Three Exchanges took place in Freiburg City Forest, in southern Ireland and in western Czech Republik.

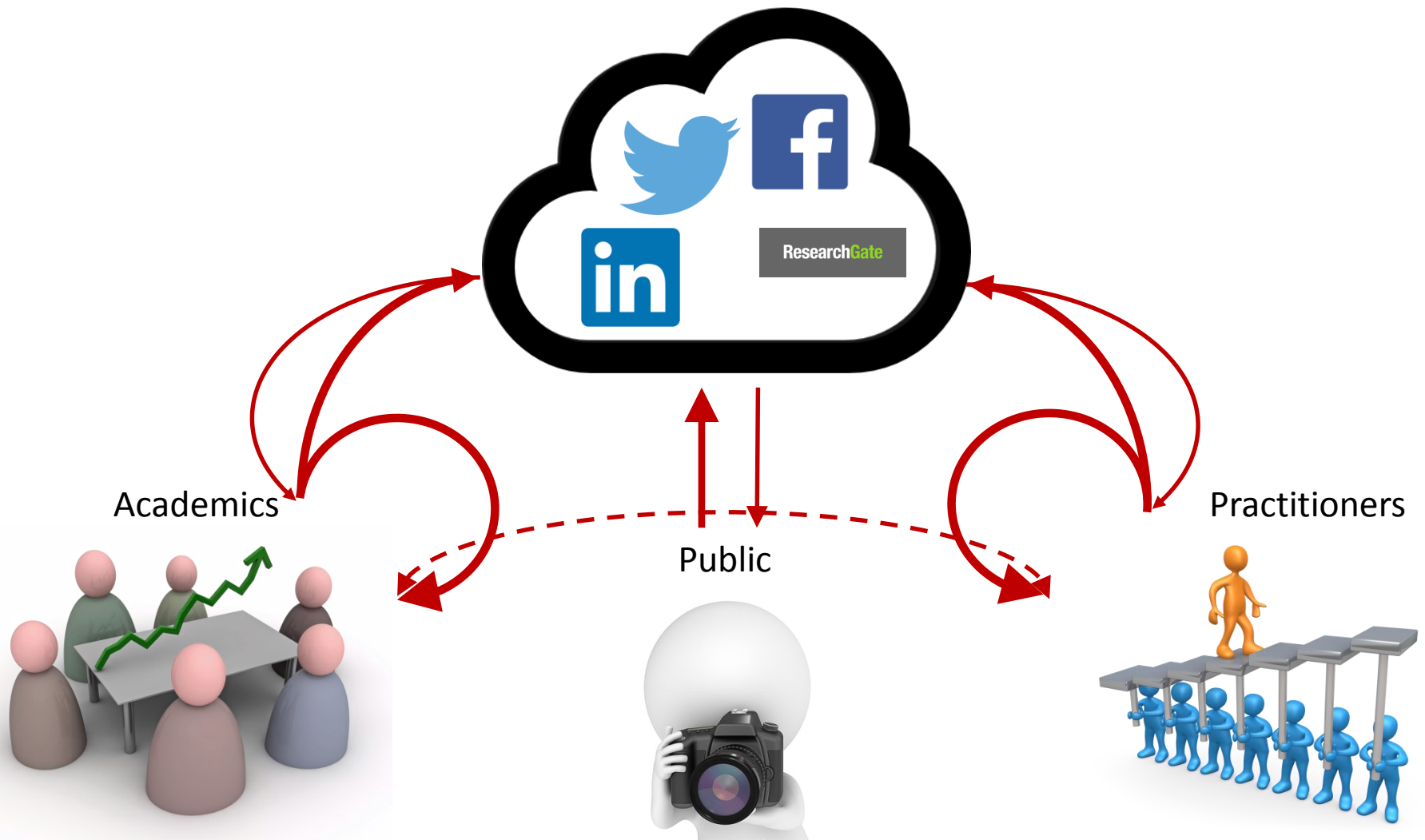
The participating institutions are planning further activities on on their own initiatives as this was proven to be a very succesful tool!





Risk platform

Use of social networks





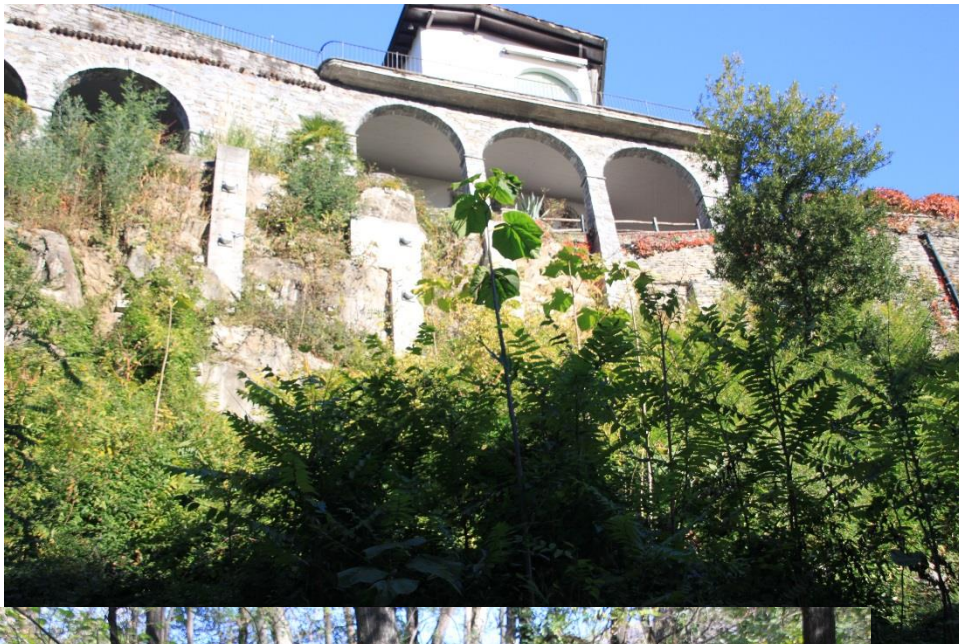
Risk platform

Possibilities

- Use RISK Platform as an expert database. Share, collaborate and enhance your network.
- Get most useful information from the field. E.g. observations documented with photos
- Use the information from other networks, not only the scientific view
- Use your rating for your CV



Events - Monte Verità





FUTURE

Assessment of invasiveness of introduced forest tree species in Europe

PhD Thesis - Anja Bindewald



Forstliche Versuchs- und Forschungsanstalt Baden-Württemberg



Professur für Waldbau /
Chair of Silviculture
Albert-Ludwigs-Universität Freiburg

1st step

Comparison of risk classifications using various European risk identification protocols



Limits and gaps of existing risk assessments for introduced tree species

2nd step

- Criteria catalogue for the invasiveness assessment
- Overview on available quantitative data for the selected criteria



Risk approach specifically for the assessment of invasiveness of introduced forest tree species in disturbed and undisturbed forest ecosystems based on available data

3rd step

Case studies on the potential invasiveness of introduced forestry species



Possible application of the risk assessment approach based on quantitative data (e.g. forest inventory databases)



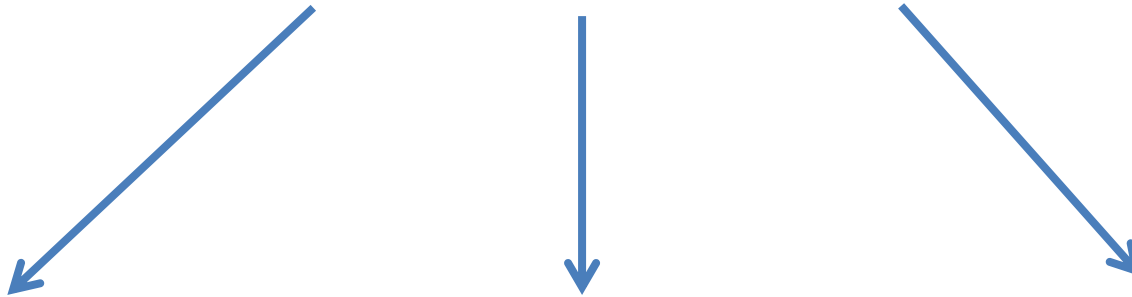
Bindewald & Michiels
2016

Quantifying invasiveness of Douglas fir on the basis of natural regeneration in southwestern Germany



FUTURE

Further Publications under development



**Crosslink to the
Forest Risk
Facility (Friskgo)
in Bonn (EFI)**

**Planned special
issue in a
scientific
journal with a
cross
continental
view**

**Special issue
in a
practitioners
journal
Swiss
Journal of
Forestry**



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