THE BOOKS OF INVASIONS: LOOKING AT HISTORIC FORESTY PESTS & PATHOGENS

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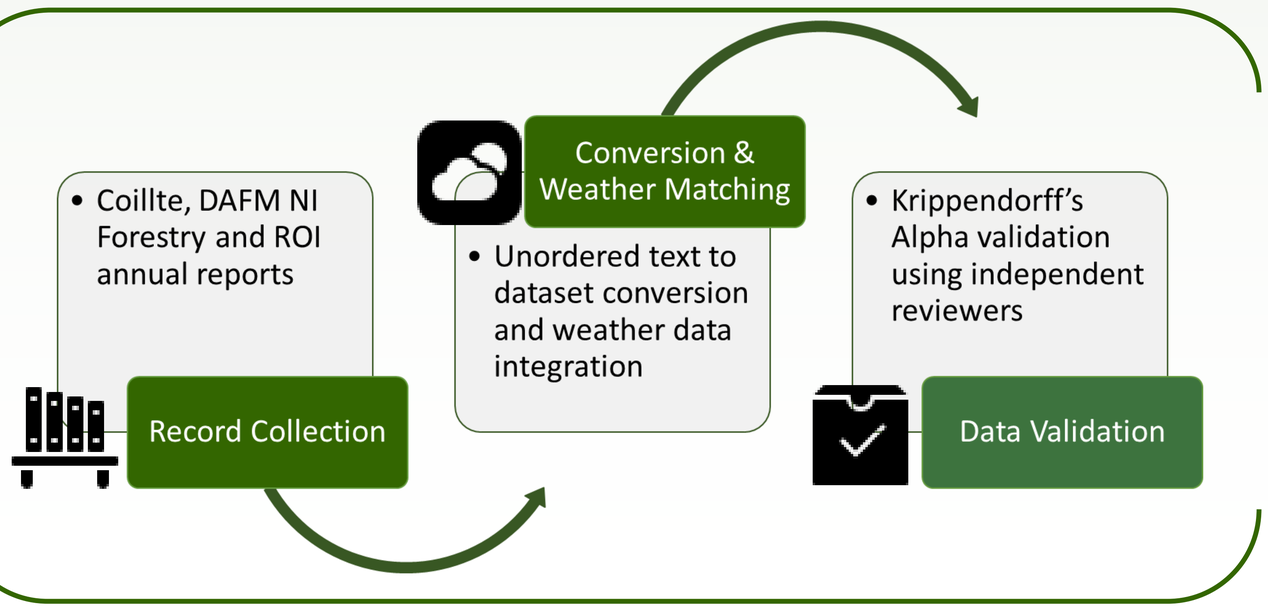
Introduction

Invasive alien species (IAS) are identified as one of the greatest threats to biodiversity. Globalisation and a warming climate have increased the risk of potential introduction of IAS, particularly forestry pests and pathogens, on the island of Ireland.

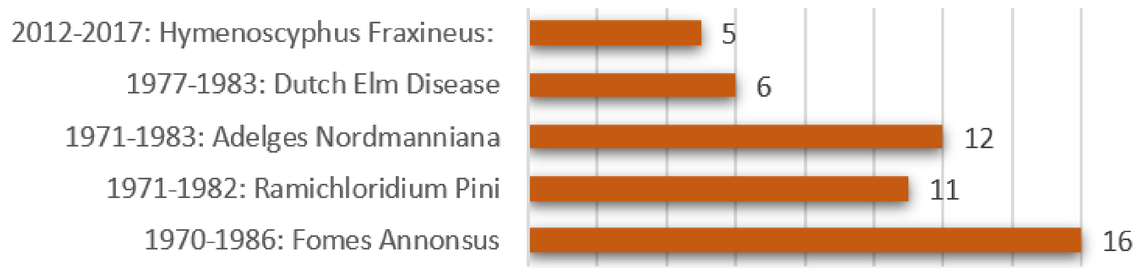
This poster details the how & when of pest characteristics between 1970 & 2020, changes in pest control measures over time, and how this dataset can be used in the future.



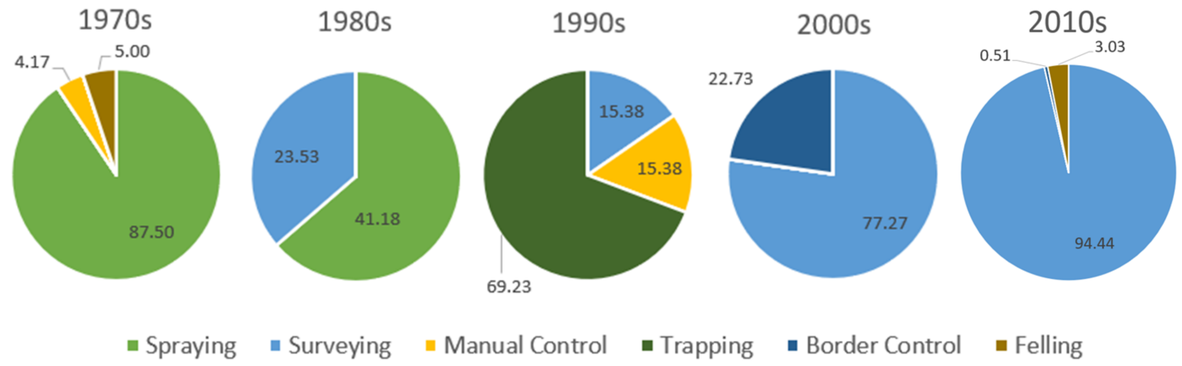
Data Analysis

Pest Information

Significant Pests: Introduction to Widespread Invasion in Years



Change in % Use of Control Measures by Decade:



1. Millenium Ecosystem Assessment (2005) 'Ecosystems and Human Well-Being: Biodiversity Synthesis' World Resources Institute, Washington DC.

2. Duffy, C. et al. (2020) 'Application of hierarchical clustering to identify high risk pests to Sitka spruce: Ireland as a case study', *Forestry, 94, 86-101. DOI:*

3. Tuffen', M.G., & Grogan, H.M. (2019) 'Current, emerging, and potential pest threats to Sitka spruce plantations and the role of pest risk analysis in preventing new pest introductions to Ireland', *Forestry, 92, 26-41. DOI: 10.1093/forestry/cpy036*

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Fig. 1: Effects of Horse Chestnut Leaf Miner:
Discoloration of leaves due to *Cameraria ohridella* larvae. The pest can affect up to 75% of the leaf area of the 13 Horse Chestnut tree species native to the Northern Hemisphere.[4] The species was first found in Ireland in 2013.

KEY POINTS

Forestry protection measures have changed from reactive to proactive alongside emerging research in under 50 years.

A dataset of forestry pests, control measure use and change in reported population over time will be produced for further use in research.

This pest dataset can be used to validate future horizon scanning techniques as part of the AdaptForRes Project

AdaptForRes

This work is part of pillar three of the four year AdaptForRes project funded by DAFM and DAERA, with partners from academia, governmental institutions, private and semi-private enterprises. This pillar looks to take an all Ireland approach to enhancing forestry protection measures through a novel risk-based monitoring network.

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