



#### **Biosecurity in Scotland**

Mariella Marzano







#### The Projects

PHC2019\_04: Assessment of large-scale plant biosecurity risks to Scotland from non-specialist and online horticultural sales

PHC2019\_05: Assessment of plant biosecurity risks to Scotland from large-scale plantings for landscaping and infra-structure projects

PHC2019\_06: Assessment of plant biosecurity risks to Scotland from large-scale tree plantings for environmental benefits

Start date: March 2020

End Date: Sept 2020







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SRUC

University of St Andrews Scotland's first university – 1413

Beth Purse, Louise Barwell with support from Dan Chapman, University of Stirling & Adam Kleczkowski, University of Strathclyde



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St Andrews Botanic Garden

Katy Hayden, Leonie Alexander, Aline Finger



Royal Botanic Garden Edinburgh





# The Advisory Panel

- The Scottish Government CONFOR
- SASA
- APHA
- Woodland Trust
- Forest and Land Scotland
- Scottish Forestry
- HTA
- BALI
- Landscape Institute

- SNH
- Growforth nursery
- Alba trees
- J Smart & Co Ltd
- RSPB
- Plantlife
- Cairngorms National Park





#### Social Researchers









Chris Pollard Mariella Marzano

Mike Dunn

Berglind Karlsdottir







## Stakeholder mapping



- Review and updating of stakeholder databases Additions (where missing for Scottish relevance)
- Growers and retailers (who and where)
- Online sales (who and where)
- Construction companies & intermediaries
- Landscape architects, contractor, garden designers
- Conservation, charity, estates, community groups





#### Non-specialist & online retailers

- What types and numbers of plants are being moved in and out of Scotland?
  - Incl. volume, range, suppliers, customer base, different supply chains
- What are current levels of biosecurity knowledge and how do these influence practices?
  - Incl. procurement policies & processes, costs, reputation of supplier, consumer demand
- What are the perceived (and actual) risks of current practices?
  - e.g. plant selection, suppliers, quarantine, waste disposal, supply chains
- Who are the relevant individuals/organisations /industry and what are their biosecurity responsibilities (where, how & when)?







#### Methods

- What do we already know? Rapid review and synthesis of existing datasets
- **Survey** of online retailers (relevant to Scotland) or retailers who also sell online.
  - Assess types & volumes of plants, awareness & biosecurity practices, consumer demand for biosecure plants, appetite for accreditation
- **Semi-structured** interviews with large retailers in Scotland e.g. supermarkets, DIY, Lifestyle stores
  - Also include nurseries due to their knowledge and experience of non-traditional retailers of plants













## Landscape & infrastructure

- Where are major infrastructure and landscaping projects getting their plants from?
- What are the risks and challenges associated with complex supply chains?
  - e.g. local supply capacity, tracing, packaging, transport, survival/establishment rate, replacement costs
- Who are the key players & what do they know about plant biosecurity risks?
- How to promote better biosecurity?











#### Methods

- What do we already know? Rapid review and synthesis of existing datasets
- Desk-based tracing exercise of c10 existing large-scale projects – plant specifications approved vs what's happened on the ground.
  - Map key decision-makers relevant in procurement and in supply chains
- **Survey** (or interview) on knowledge, risks & actions
- Three **case studies** mapping decision-making processes relating to landscaping component from start to finish
- Focus groups to assess value of risk models (incl. trade networks, pest host range, climate suitability etc.) to inform decision-making on biosecurity







## Environment

- Who are the major players & decision-makers in:
  - Woodland creation/expansion
  - Habitat restoration/regeneration
- What are the biosecurity risks from planning to planting?
- What are the major drivers & trade-offs informing location, species, procurement, forecasts?
  - E.g. volumes, size of plants, sourcing & availability of biosecure plants, transport, establishment rates, costs, staffing
- What are the opportunities for implementing lessons learned and promoting good biosecurity?











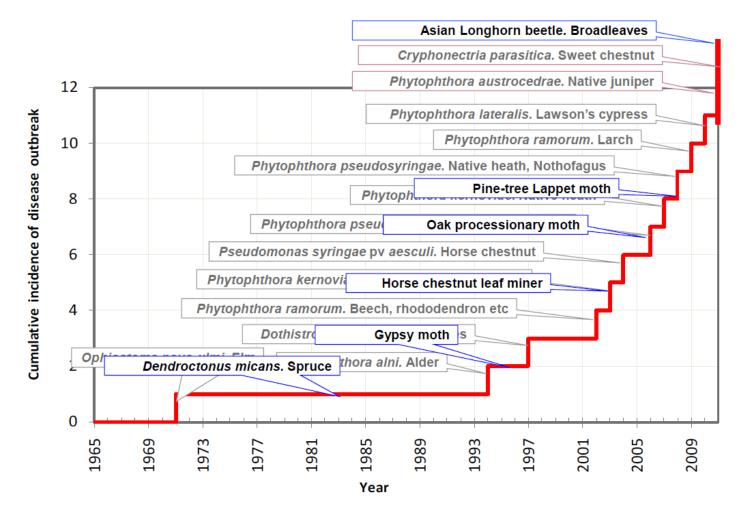
#### Methods

- What do we already know? Rapid review and synthesis of existing datasets.
- **Case studies** to understand drivers and trade-offs from Past, Current, Future example:
  - Restoration planting of existing vulnerable habitats
  - New planting for habitat/native woodland creation
  - Commercial forestry
- Focus groups and semi-structured interviews of key players involved in specifying, sourcing and planting
- Multi-stakeholder workshop to assess usefulness of geographical risk models to inform planting choices (e.g. integrating trade scenarios with vulnerable habitats and hosts)





#### Pests and diseases are increasing...



Images: Plant Health Task Force, with additions





#### ...and already impacting



#### Phytophthora ramorum on larch (Scottish Borders)

Images: Forestry Commission, S. Hendry



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#### A lot of trade!

#### Trade during 2017: Q1

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# Can you help?

- Would you like to be part of the project?
- Are you well-connected? E.g. non-specialist retailers Supermarkets, DIY & lifestyle stores, small independent shops
- Do you know of any online retailers we can approach?
- Do you have contacts in the building industry or have experience/contacts from any major infrastructure/housing projects that have a landscaping element?
- What would you like to know?







