The New Zealand Sustainability Dashboard

ARGOS

Biosecurity Bonanza

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The New Zealand Sustainability Dashboard

'Monitoring, reporting & learning at multiple scales'

Sustainability Dashboard

'online tool for data gathering, aggregating and reporting at different scales to facilitate learning'

Today's presentation

- Introduce evidence-based assessment
- Highlight a biodiversity example
- Explore potential for biosecurity/pest management
- Discuss ideas, suggestions, feedback, research collaboration

Better biosecurity …. better outcomes

- Biosecurity/pest management delivers multiple positive outcomes (end results)
  - Biodiversity -- more native species
  - Biodiversity -- more productive farms
  - Access to markets
  - Human health
  - Etc, etc.

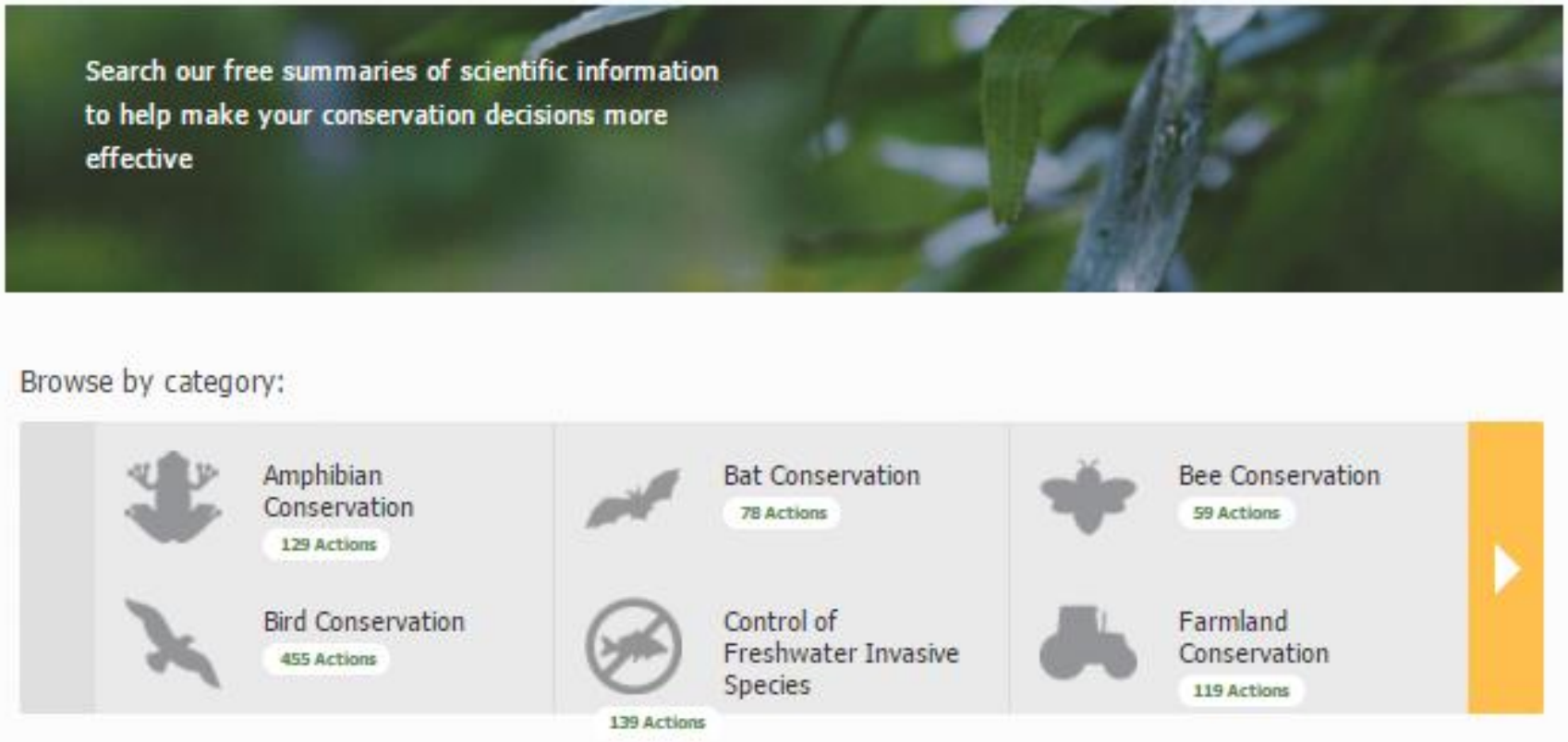
Confidence in outcomes?

- How can we be more confident that management actions will lead to certain outcomes?
- What evidence is there? How reliable? How much?
- How to quantify results of what's being done on farms or elsewhere?

Use an evidence-based tool

- Evidence database
  - Line of sight between action and outcome
- Cool Farm Biodiversity Tool --
  - Online calculator of biodiversity effects
  - For Europe and US
  - NZSD adapting for New Zealand
  - Option -- include a biosecurity component?
  - Would it be a useful tool?
- Need input from users/stakeholders

Conservation Evidence Database



- 1000s peer reviewed articles on "what works"

How it works

- 30 yes/no questions (mostly)
- Scoring is evidence-based, data accessible
- Actions with high quality evidence from many studies get extra points
- Actions with less evidence get fewer points

For example:

- What evidence for effects of 5% RTC vs 1%?
- How widely accessible is that evidence?

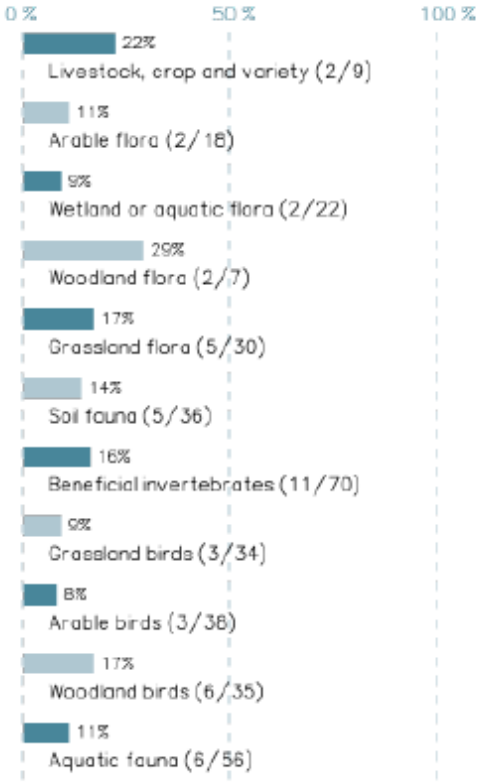
Biodiversity assessment

Name: Kevin's bach

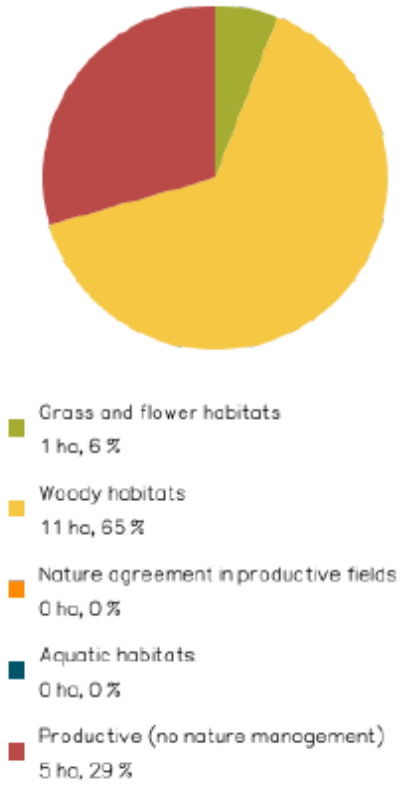
General scores, per-component

Farmed products:	**24%**	Farming practices:	**28%**
Small habitats:	**12%**	Large habitats:	**29%**

Species group scores



Land use



Tool's strengths

- International experience to draw on
- Evidence based; builds confidence
- Transparent, balanced, repeatable
- Easy to use
- Can incorporate many actions
- Continued improvement with new evidence, new research & technologies

Adaptations needed for NZ

- Evaluate existing evidence for NZ context
- Need to include special features of NZ ecology & identity
  - Pests!
- Trade-offs between the environmental outcomes of different management
  - Stream fencing -- water quality vs weed corridors

Other issues

- Currently, CFT ignores species origin (indigenous vs introduced)
  - -- "weeds" that are indigenous plants
- Ecosystem services (e.g. pollination on farms) depend on introduced species
- How can data be used and by whom?
  - Not just a biodiversity/biosecurity issue

Dashboard research plan

- Get stakeholder/user feedback!
- Identify missing relevant sectors and biomes
- Align to NZ priorities
- Better align the tool to NZSD
- Re-evaluate evidence scores in the NZ context
- Trial app as a proof-of-concept

Pest management evidence-based tool?

- Underlying design of the biodiversity tool readily transferable to biosecurity issues
- How valuable? Is there a need?
- What biosecurity issues to prioritise?
- Who is the target market?
  - Farmers managing agricultural weeds?
  - Groups doing in predator control?
  - Councils measuring RPMP effectiveness?
- That's why I'm here today

Thank you

Thanks to co-authors Catriona and Angela!

Questions?

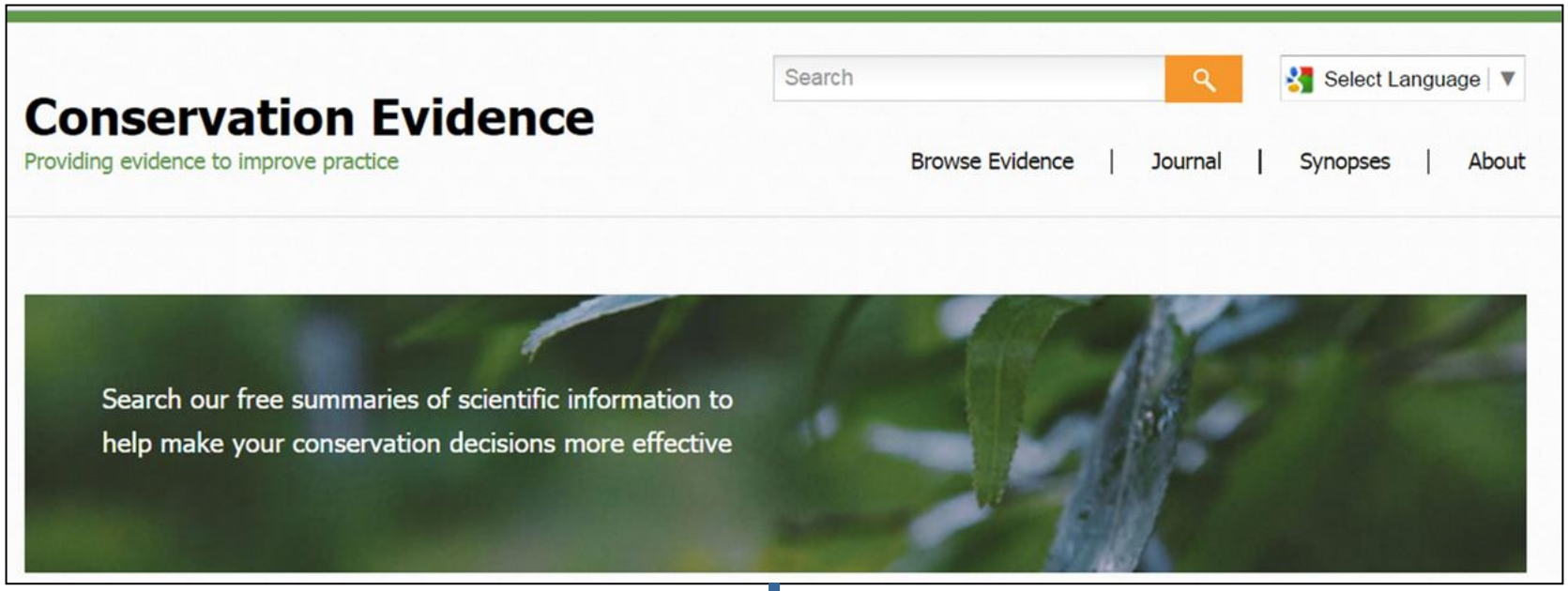
R & D: Phase 1

- Seeking stakeholder engagement from multiple sectors & scales of reporting
  - Industry sectors at regional & national level
  - Government agencies & nonprofits
- Identify sustainability priorities & needs of stakeholders
  - Form & aspects of tool that would be most useful
  - Meet both government & industry reporting needs
- Begin to re-evaluate tool in NZ context

Your feedback

- Form & aspects of tool:
  - Interest from farmers and councils?
  - Which pest management actions to incorporate?
  - Which farm practices are key?
  - Evidence database for NZ
  - Breadth of scope (nationwide vs sector focus)
  - Aid with specific research objectives

Tool's strengths: Evidence



Expert panel assessment

Incorporate evidence into biodiversity tool

Tool development plan

- Research & development: phase 1
  - Proof-of-concept with stakeholder endorsement
  - Within next 18 months
- Research & development: phase 2
  - Focussed research objectives guided by form of tool desired by stakeholders
- Implementation

→ In collaboration with Cool Farm Alliance