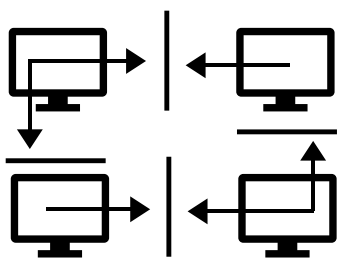
A Predator Free 2050 effort

PREDATOR RELATED DATA STANDARDS

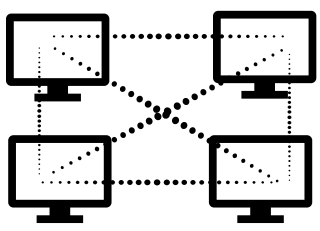
For the full report please visit:
https://pf2050.co.nz/funded-projects

THE PROBLEM



- Too many disparate predator control datasets
- A lack of consistent vocabulary and data formatting
- Varying quality of data
- Data isn't accessible
- Underutilisation of data

THE VISION



- A co-designed and co-owned data standard
- A unified strategic view of quality predator control data that supports decision making
- Quality data that is readily available for data exchange (i.e. a data portal)
- An established framework for sharing data (e.g. data-sharing agreements, data commons)
- Supported interoperability such that data can be more easily aggregated and analysed across organisations who are using different tools
- A data standard to follow for the development of new tools

WHAT IS A DATA STANDARD?

DATA STANDARDS ARE DOCUMENTED AGREEMENTS ON REPRESENTATIONS, FORMATS, AND DEFINITIONS OF COMMON DATA

US ENVIRONMENTAL PROTECTION AGENCY

CONSISTENCY ENSURES THERE'S ONLY ONE WAY OF TALKING ABOUT EACH DIFFERENT PIECE OF INFORMATION

STATSNZ

WHY DO WE NEED A DATA STANDARD

TRANSPARENCY

Promotes common, clear meanings for data that is often reused

ENABLES ACCESS

Simplifies data retrieval and encourages sharing

REUSE

Encourages and enables reuse of data for multiple purposes

CONSISTENCY & COMPARISON

Allows comparisons & creates consistent results with data retrieval

DECISION MAKING

Improves data quality for better decision making

BUILDING BLOCK

Drives interoperability, scalability and serves as a building block for innovation

A GOOD DATA STANDARD

Community

It's free and easily accessible to its target community

Neutrality

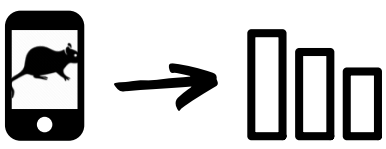
Its format captures data in a way that is not specific or tailored to a certain agency

Clear focus

It is very clear on its objectives and primary use-cases

"You cannot create a data standard by just creating a specification, irrespective of how beautifully presented it is, how much analysis and review goes into it, or how much governance and control you wrap around it. A data specification that is not widely adopted is not a data standard....and data standards initiatives that don't focus on implementation are doomed to failure." (Youell, A., Creative Commons)

PREDATOR CONTROL DATA MANAGEMENT ACROSS NEW ZEALAND



*Over the course of several weeks, Predator Free 2050 Limited spoke with **systems developers, data gatherers, data analysts, field staff, pest control contractors, community groups, Regional Council representatives, project managers,** and **data management consultants**. Common themes emerged around their concerns and recommendations for predator control data collection, management and analysis:*

1. Data gathered needs to be sufficient for answering important **management questions**
2. Data is required for a **range of purposes** and each purpose requires a different set of data
3. Both **social** and **technical** challenges of implementing a data standard needs to examined
4. An **alliance** is needed between multiple organisations who would **co-design** and **co-own** the data standard
5. Is a **single system** approach OR a **data standard** approach where data is ingested from each tool following the data standard better for New Zealand?

CREATING & IMPLEMENTING A DATA STANDARD

Governance and technical development

Governance

An advisory group, organisation, trust or other entity could become the data steward and be responsible for:

- Creating and overseeing an implementation plan
- Defining the data standard principles
- Preparing the data standard
- Making the standard accessible
- Managing the standard review process

Governance structure options

1. Create a Data Standards Advisory Group e.g., www.wildlifeinsights.org
2. Publish the data standard as a part of a journal, for example, Biodiversity Data Journal or Biodiversity Information Science and Standards
3. Utilise an existing organisation that is independent from any data collection tools, for example, https://econet.nz

Technical- *outcomes from the first data standard workshop*

Defining the purpose of the data standard (Mandatory vs. Optional)

Mandatory: This version of the data standard would allow high-level data sharing between data collection tools to inform on,

- Mapping trapping effort
- Predator catch
- Time effects
- Index of abundance
- Bycatch
- Relative device performance

Optional: These fields would outline best practice for using additional data fields that allow for further analysis of predator control data, to assess:

- Lure type and effectiveness
- Bait type and bait take
- Vegetation cover
- Predator age patterns
- Predator gender patterns
- Asset management and/or trap status upon check/visit

See full report for list of suggested Mandatory and Optional data fields

TIMELINE

"Strawman" data standard
November 2019

2nd Data Standard workshop
December 2019 or January 2020

First draft data standard consultation
February 2020

Finalisation workshops
February and March 2020

Governance & implementatioon
Ongoing

Published Data Standard
June 2020