

CLIMATE DATA INFRASTRUCTURE

International examples of climate data tools and integrated data views this initiative will deliver

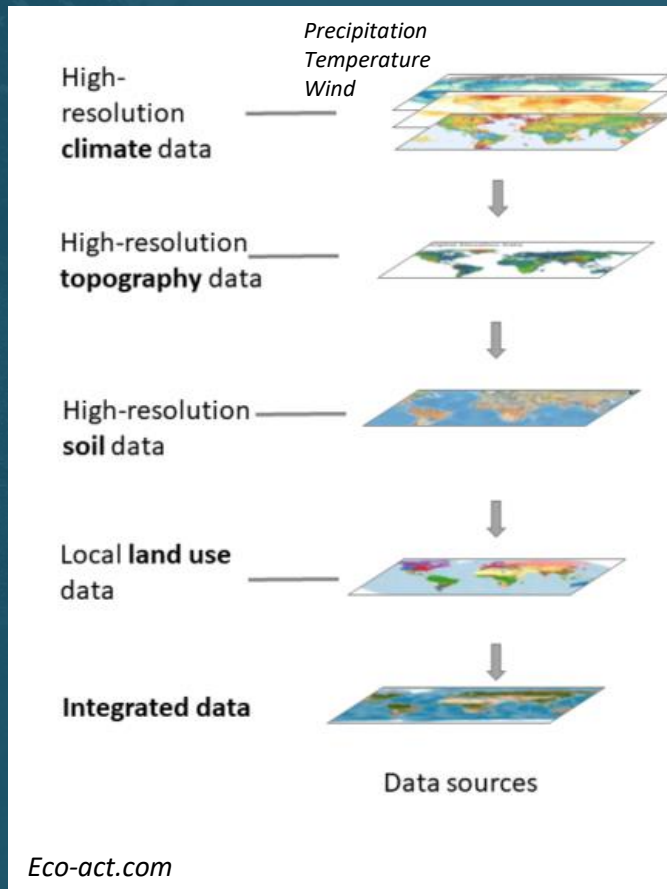
↑ BETTER CLIMATE DATA

↑ BETTER DECISION-MAKING

↑ BETTER CLIMATE ACTION

INTEGRATED CLIMATE DATA VIEW OUTPUTS – Example Only

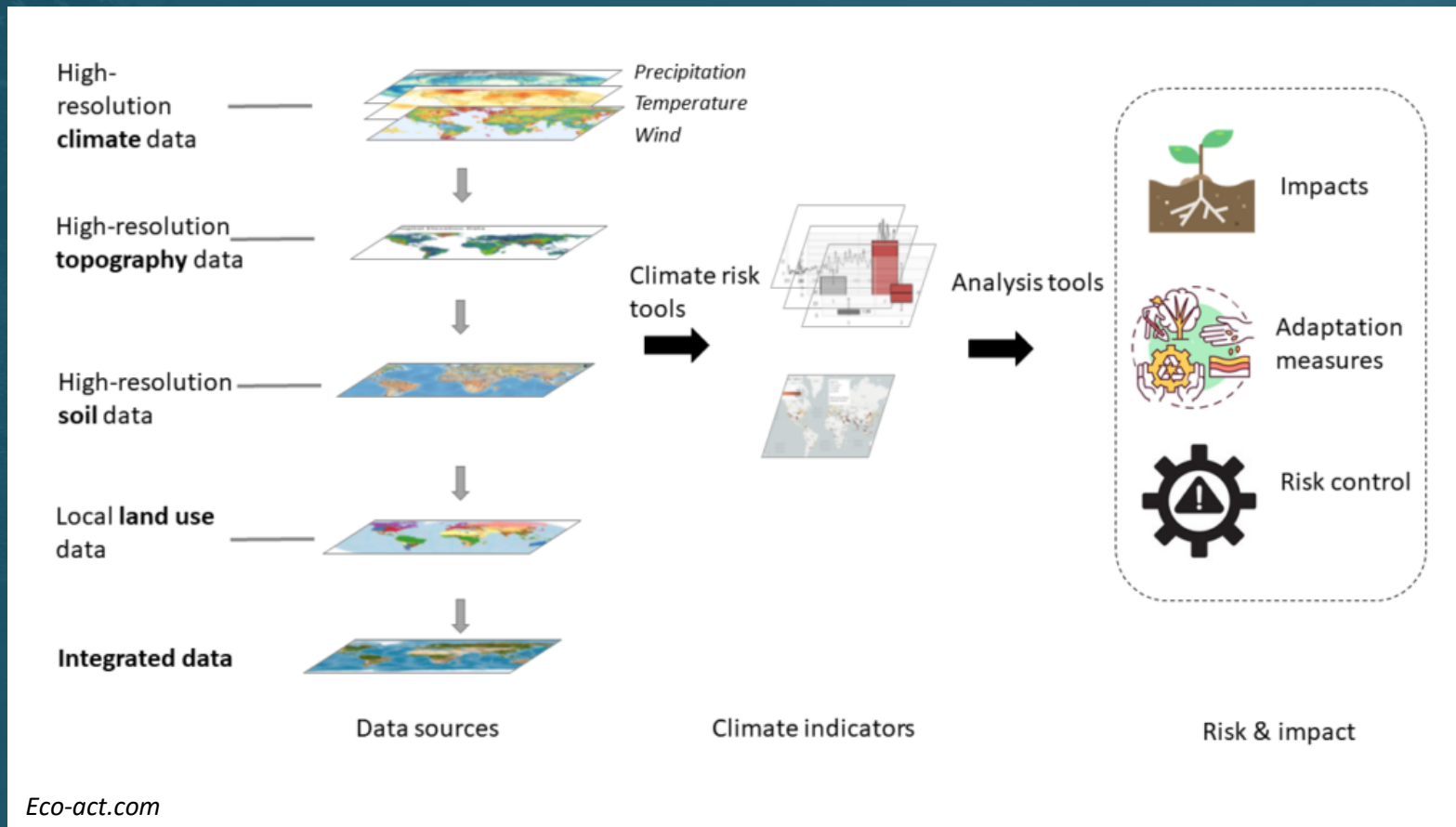
Integrated climate data views refer to linked data structures, databases, data tables, or virtual repositories which allow for the easy inspection, exploration, manipulation and understanding of multiple climate data sources.



- In this example the integrated climate data view essentially ‘stacks’ different geospatial climate datasets on top of one another.
- Observational climate data (e.g. precipitation and temperature) are ‘stacked’ on top of topography, soil, and land-use data. This structure can be used to quickly identify which local agrarian economies will undergo the most significant rainfall and temperature changes from climate change.

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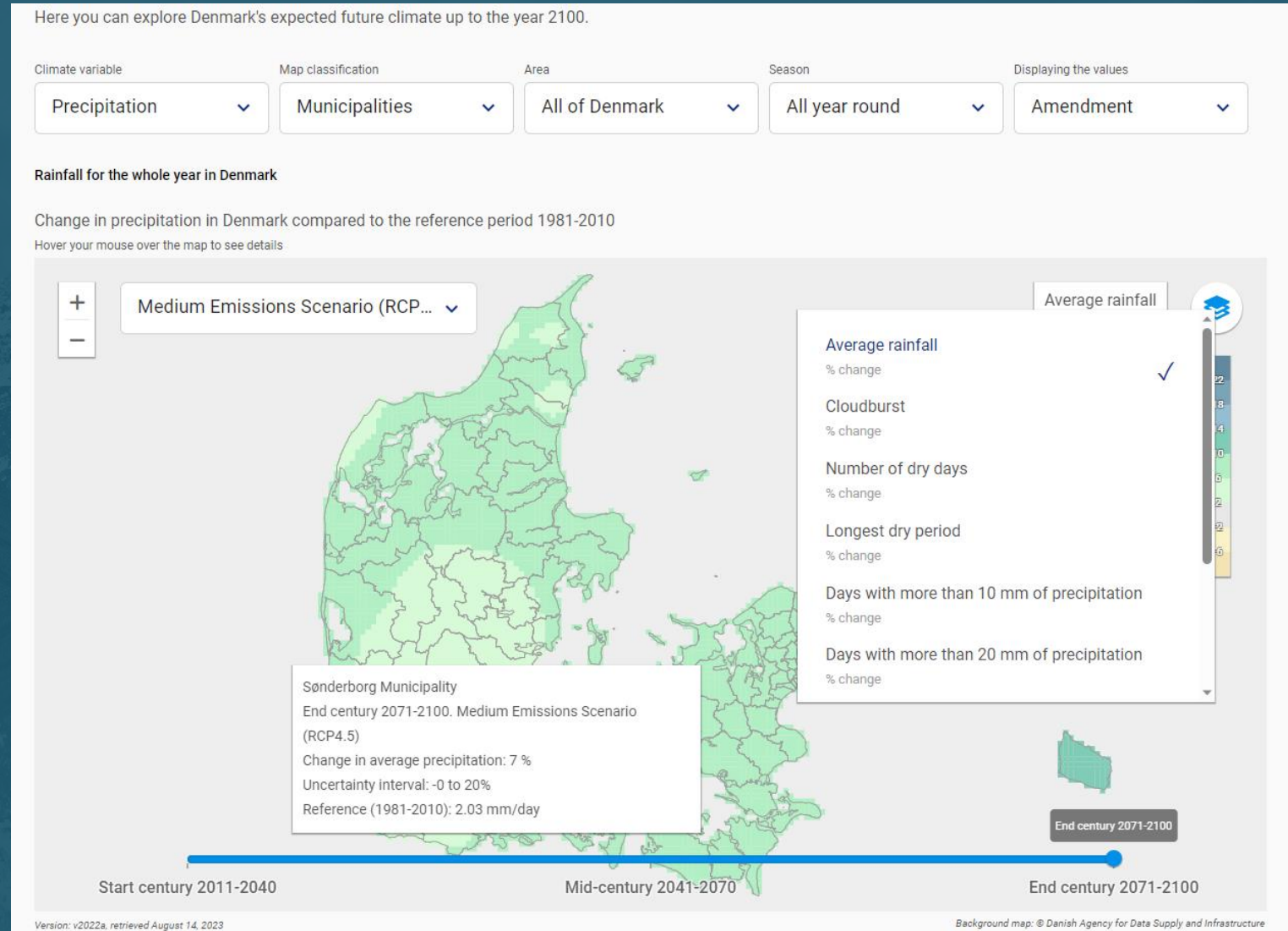
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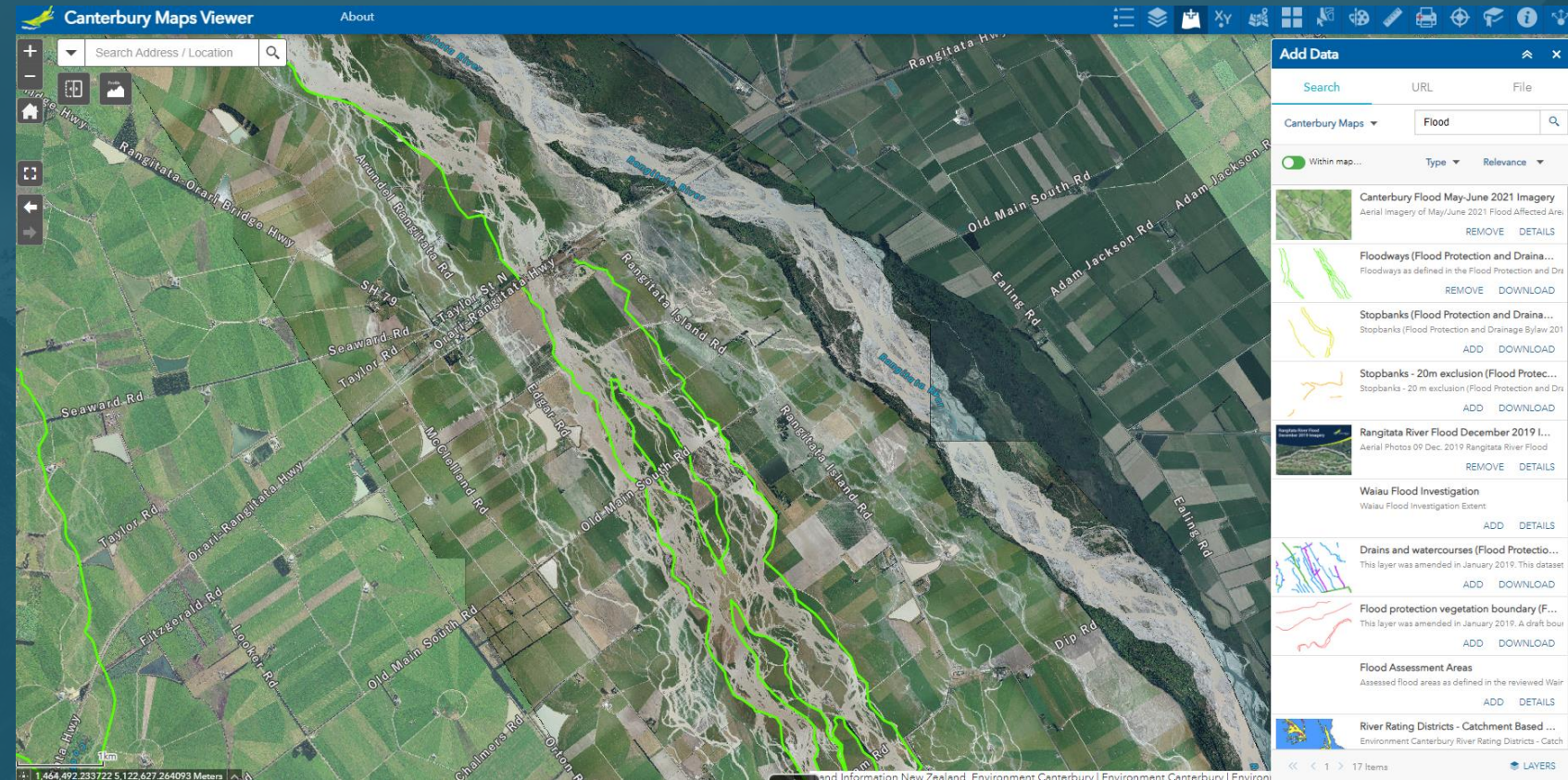
- The integrated data views then serve as the underlying data infrastructure to develop tools, applications which analyse the data to support climate decision making.
- The integrated data views also serve as the underlying evidence base to develop core climate indicators which track progress towards NZ's climate goals.

Projected climate hazard tracker / Climate projections tool

- Example from Denmark – Climate Atlas ([link](#))
- This tool could allow users to investigate latest downscaled climate change projections, and (when available) future climate risks at a national scale.
- MfE is currently in conversations with developers of Denmark Climate Atlas to understand lessons learnt and what can be leveraged
- MfE officials are exploring how this tool can be linked with Climate Adaptation Bill policy work to inform local adaptation plans (lifting and shifting Denmark’s approach)

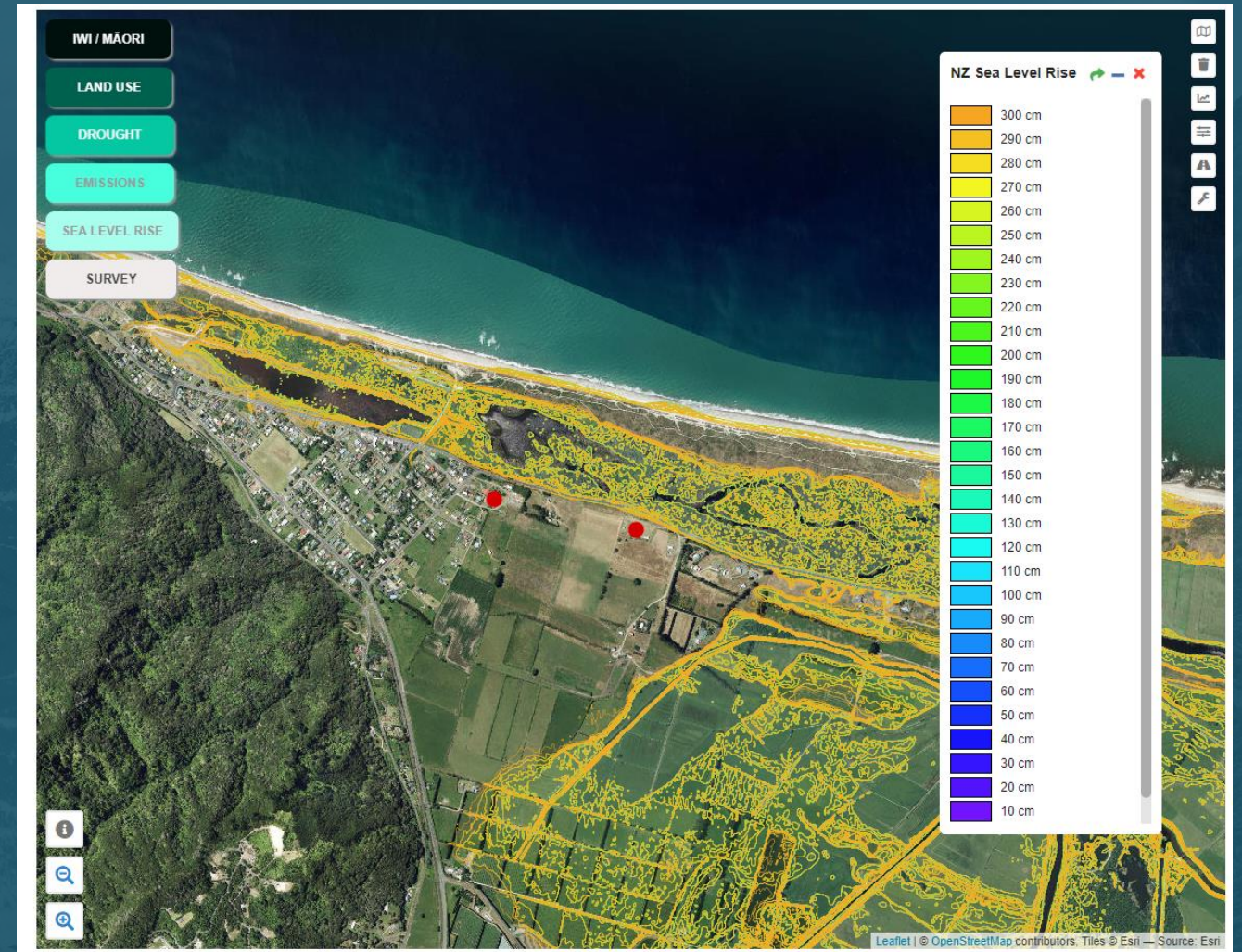


- Example from regional equivalent – Canterbury Maps [\(link\)](#)
- This tool allows users to toggle on and off different hazard information for a specific area
- The CDI will develop a similar tool but at the national level, instead of regional Canterbury.
- There are several similar existing existing map viewers across LG the CDI can leverage for a national level tool for build.
- The data used in this tool will be a subset of wider integrated climate adaptation, risk assessment, and historical earth observation data



Mātauranga Māori access mechanism for climate

- Example from Ihirangi ([link](#))
- This tool will be supported by both Te Puni Kōkiri and Ihirangi. MfE aims to provide a tailored tool with mātauranga and data needed to inform adaptation decision making for Māori.
- The CDI can support these efforts by providing the underlying data or capability to developing these tools.
- This will require a considerable Māori climate data improvement programme. Methods which integrate Māori climate data with western climate data, or analyse western climate data in the context of mātauranga Māori is required.



CRFD emissions data portal and reporting dashboard

- Example from Zero Tracker (business tracker) ([link](#))
- This tool would allow Central Government and public to access and monitor CRFD emissions data (and therefore private sector emissions reduction transition)
- Standardises data and evidence required for CRFD reporting
- CRFD businesses can also track towards their strategic emissions reductions goals and targets

NAME	COUNTRY	SECTOR	ANNUAL REVENUE	TARGET YEAR	TARGET TYPE	END TARGET STATUS	INTERIM TARGET	DETAILED PLAN	REPORTING MECHANISM	SCOPE 3 COVERAGE	CARBON CREDITS
↑↓	↑↓ All	↑↓ All	↓	↑↓ All	↑↓ All	↑↓	↑↓ All	↑↓	↑↓	↑↓	↑↓
Walmart	USA	Retail	\$559bn	2040	Net zero	In corporate strategy	2025	●	●	●	●
Apple	USA	Retail	\$379bn	2030	Carbon neutral(ity)	In corporate strategy		●	●	●	●
UnitedHealth	USA	Services	\$298bn	2035	Net zero	Declaration / pledge	2030	●	●	●	●
Amazon	USA	Retail	\$296bn	2040	Net zero	In corporate strategy	2025	●	●	●	●
PetroChina.Co	CHN	Fossil Fuels	\$281bn	2050	Zero carbon	Proposed / in discussion	2025	●	●	●	●
Exxon Mobil	USA	Fossil Fuels	\$281bn	2050	Net zero	In corporate strategy	2030	●	●	●	●
Toyota Motor	JPN	Manufacturing	\$281bn	2050	Carbon neutral(ity)	In corporate strategy	2030	●	●	●	●
BP	GBR	Fossil Fuels	\$272bn	2050	Net zero	In corporate strategy	2025	●	●	●	●

- MfE Proof of Concept tool in development shown (data and metrics are not quality checked and **placeholder data is shown only**, expected delivery is late 2023 or early 2024)
- This product ensures consistency across several emissions data sources as primary evidence base for reporting towards achieving emissions budgets, sector sub-targets, nationally determined contributions or the Paris Agreement.
- Improves accessibility of data products such as GHG projections, GHG Inventory, ERP policies and sufficiency analyses.
- Allows for user modelling of emissions to understand emissions forecasts under different economic and policy scenarios for actionable and timely insights.
- Significantly reduces time lag to analysing emissions reporting data.
- Reduces administrative impact of filling external data requests or Ministerial requests.

