

October 17, 2023

Chilean Institute for Disaster Resilience: Resilience Data Platform

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World Context of Disasters (2000-2019)

Ten Deadliest Disasters (2000-2019)

	Earthquake & Tsunami	Indian Ocean	2004	226,408
	Earthquake	Haiti	2010	222,570
	Storm	Myanmar	2008	138,366
	Earthquake	China	2008	87,476
	Earthquake	Pakistan	2005	73,338
	Heatwave	Europe	2003	72,210
	Heatwave	Russia	2010	55,736
	Earthquake	Iran	2003	26,716
	Earthquake	India	2001	20,005
	Drought	Somalia	2010	20,000

Total number of people affected by disaster type (2000-2019)

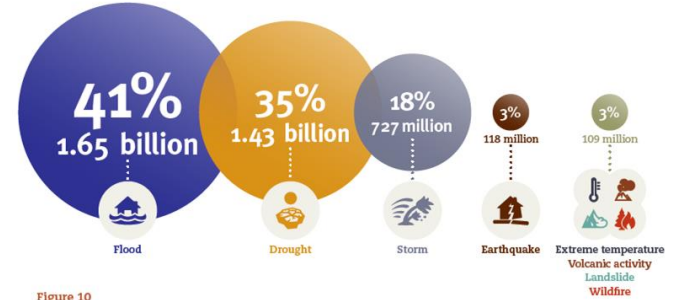
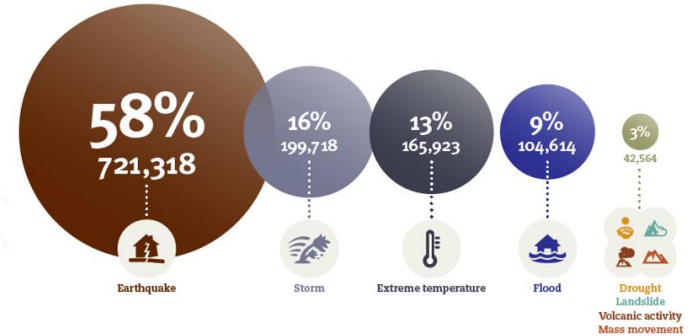
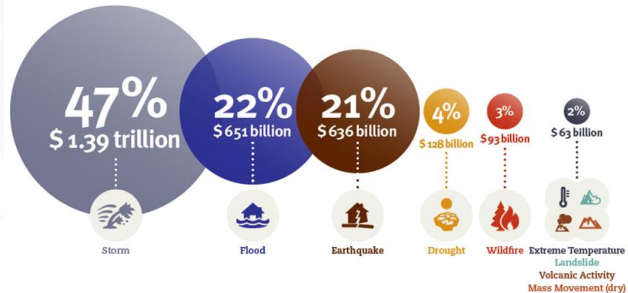


Figure 10

Total number of deaths by disaster type (2000-2019)



Breakdown of recorded economic losses (US\$) per disaster type (2000-2019)



The human cost of disasters: an overview of the last 20 years (2000-2019) UNDRR, CRED



► At least 13 million people in Chile have experienced a natural event and disaster in the last decade

Leading to:

- More than 4 million affected people;
- At least 800 deaths



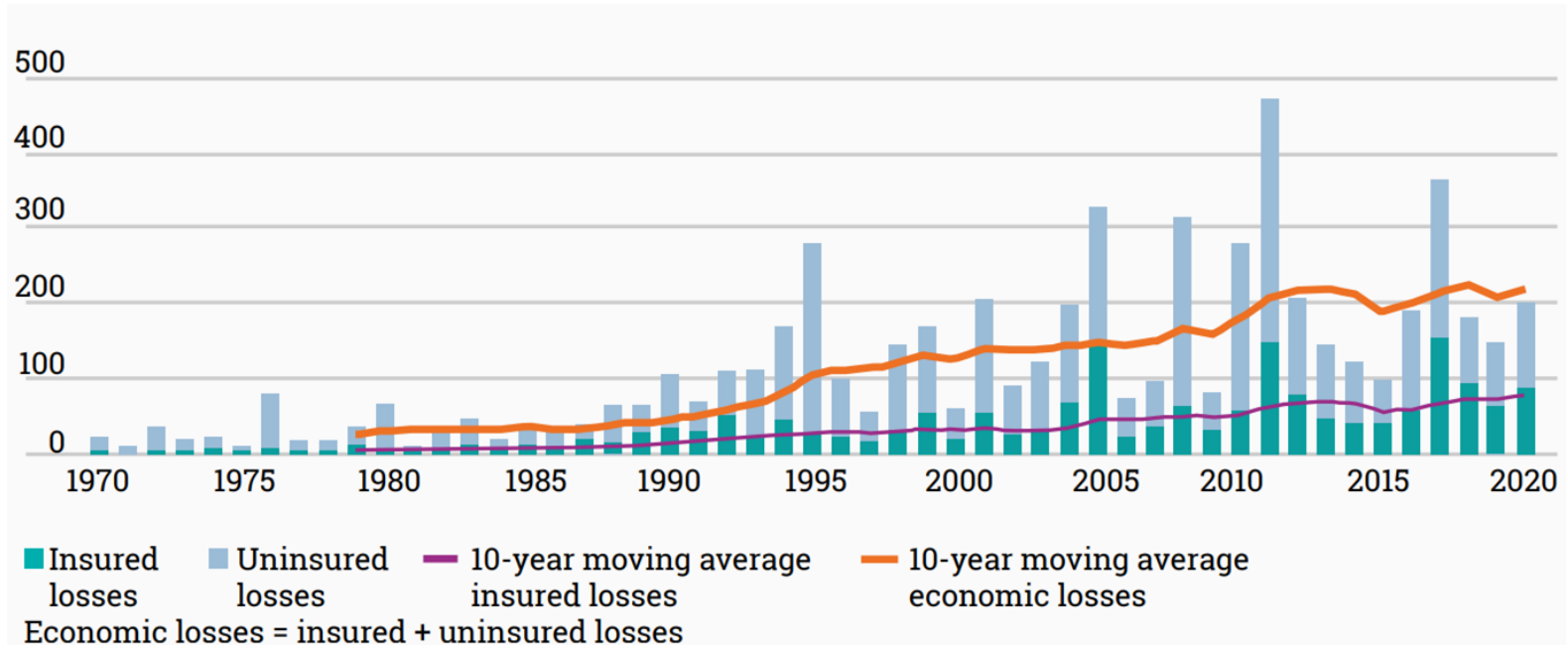
World
investment on
prevention

=

1%

Of the world's expenditure on post-disaster
response and recovery

Figure 2.28. Insured and uninsured losses (\$ billion at 2020 prices), 1970–2020



From CREDEN to the Institute: a long-term initiative



Phase 1



December
Project
approved

MISSION

To create public goods and services and articulate research and scientific-based innovation capacities in Chile, to reduce the economic, social and environmental impact of disasters, and translate this knowledge into an opportunity for the development of future value for our society.

Phase 2

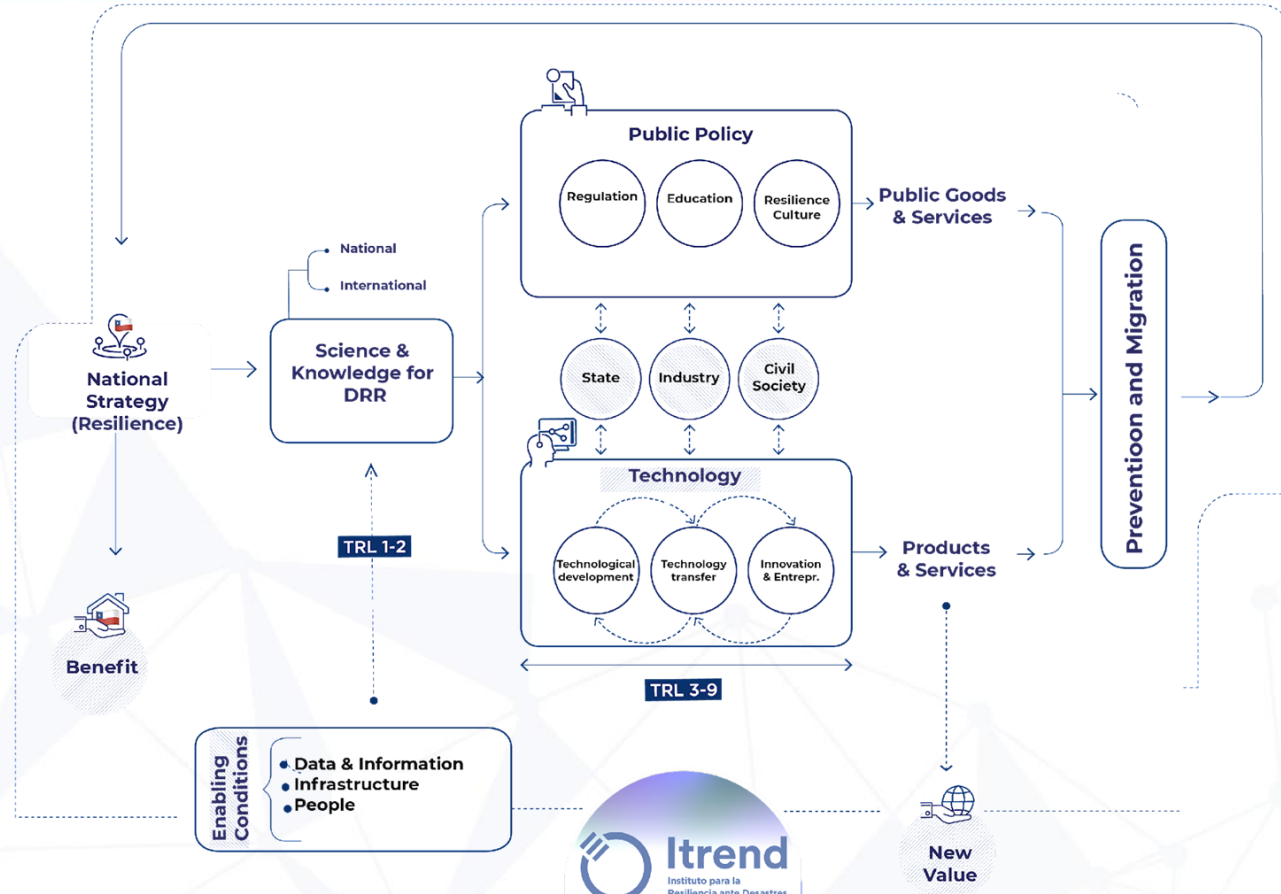


February
Creation of
a new legal
entity

Phase 3



Technological and Research Public Institutes are organizations whose fundamental role is to provide public goods and services that solve market or systemic failures.



Itrend Network +169 institutions

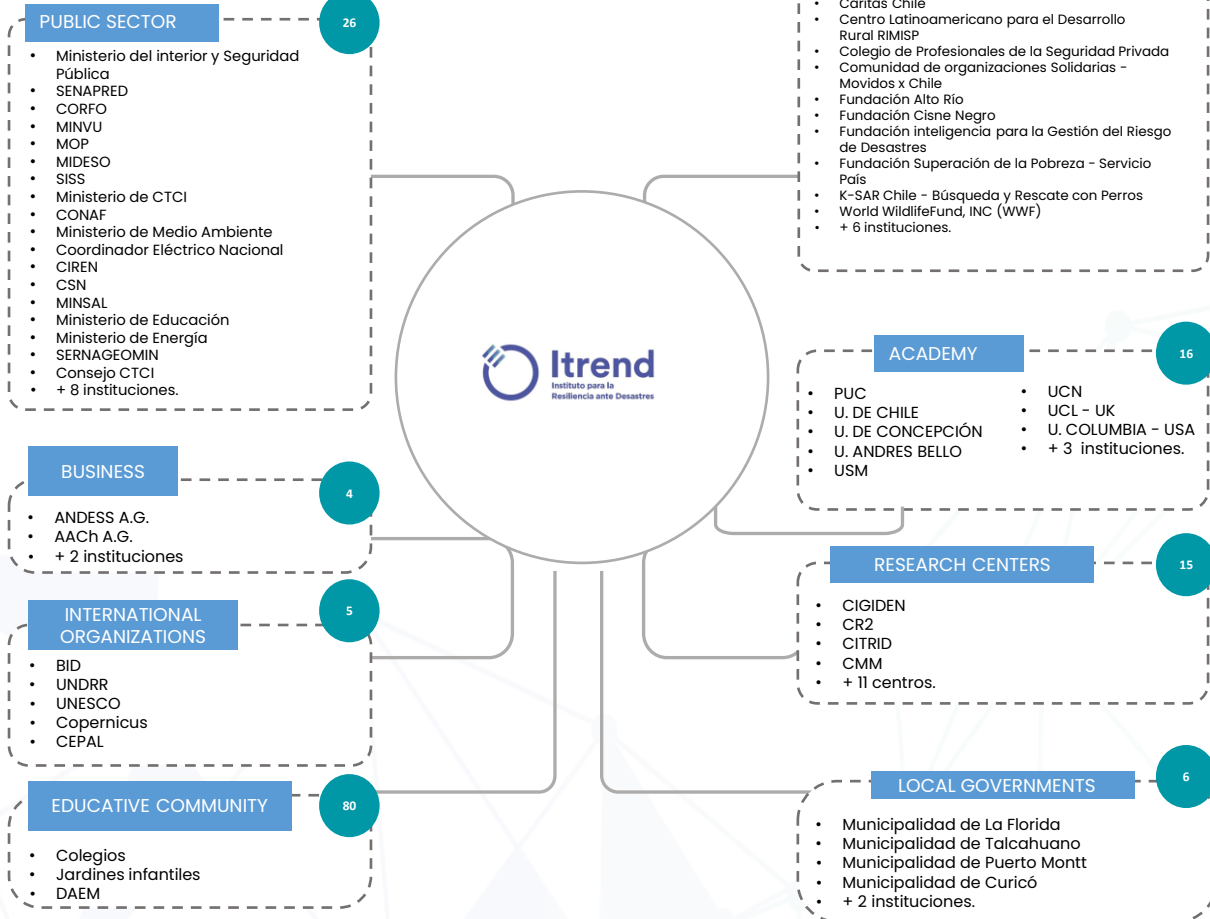
PARTNERS

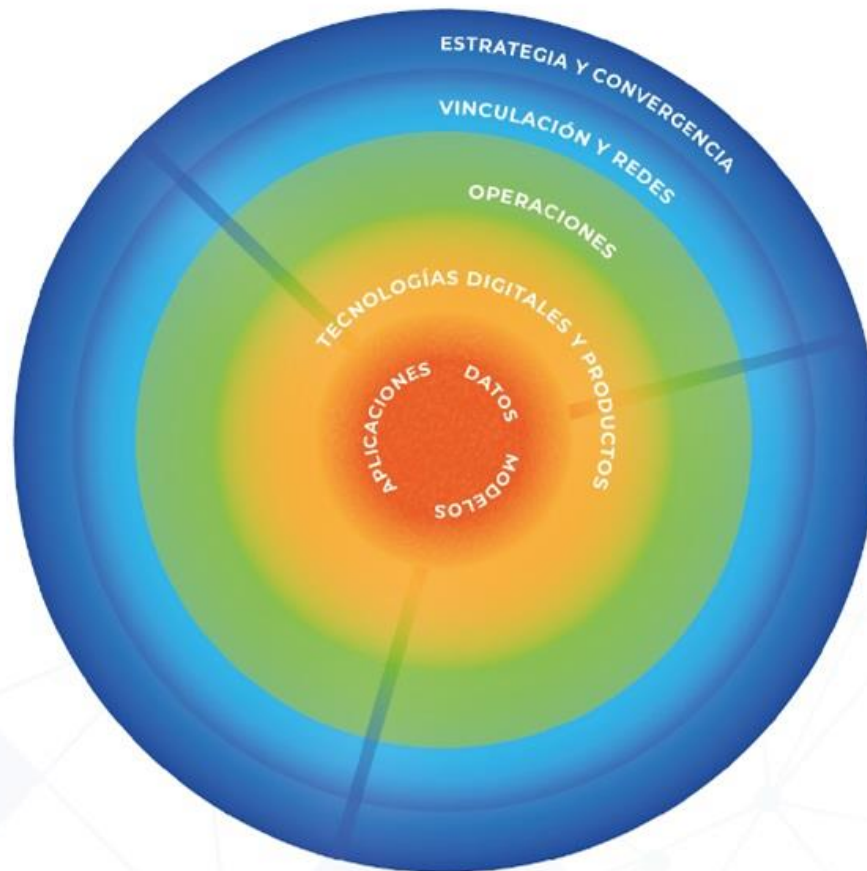


ASSOCIATES

11 members of the Civil Society Council.

10 members of the Public Organizations Council.



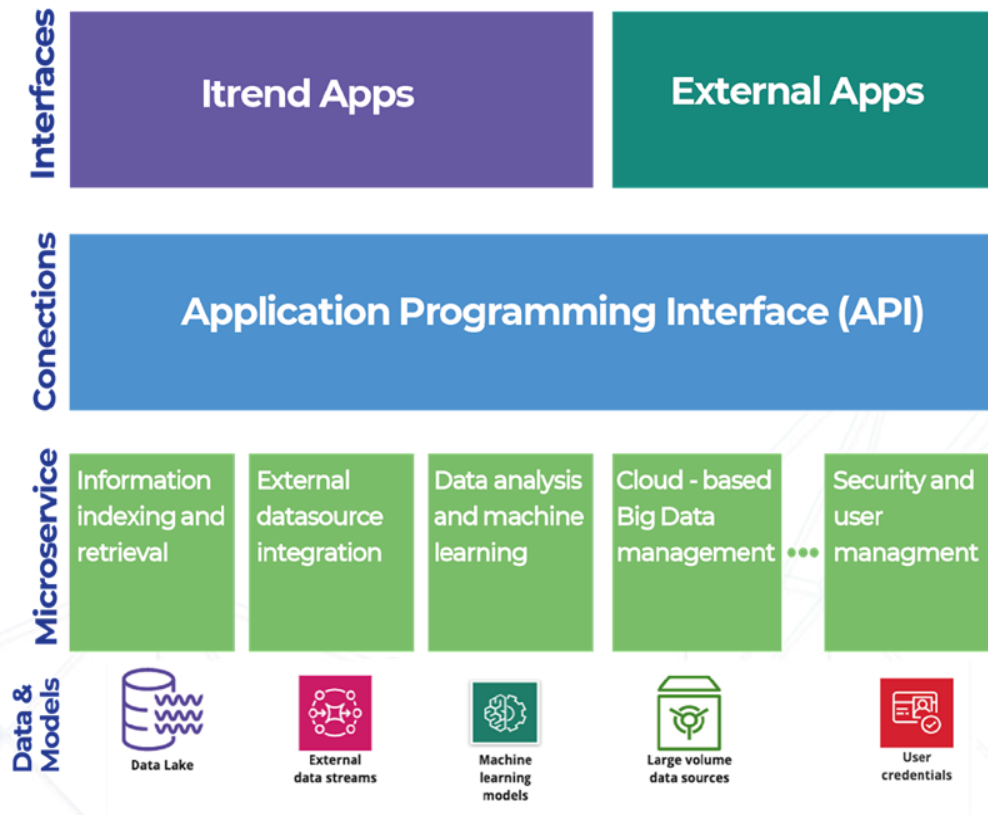


Data and information gaps

Limited access, high fragmentation, inconsistency and lack of systematization in the collection, processing and availability of data and information on disaster resilience.

Digital infrastructure

Itrend is developing a digital enabling infrastructure to create a data marketplace in resilience at the service of the national and international R&D+i ecosystem for disaster resilience in Chile.



Integration of data and information on disaster resilience: Resilience Data Platform

The project

An **open access platform** that integrates data and tools for analyses related to risk and natural disaster resilience.

The data comes from several sources and have been curated and standardized in order to foster **research, development, innovation and entrepreneurship**.

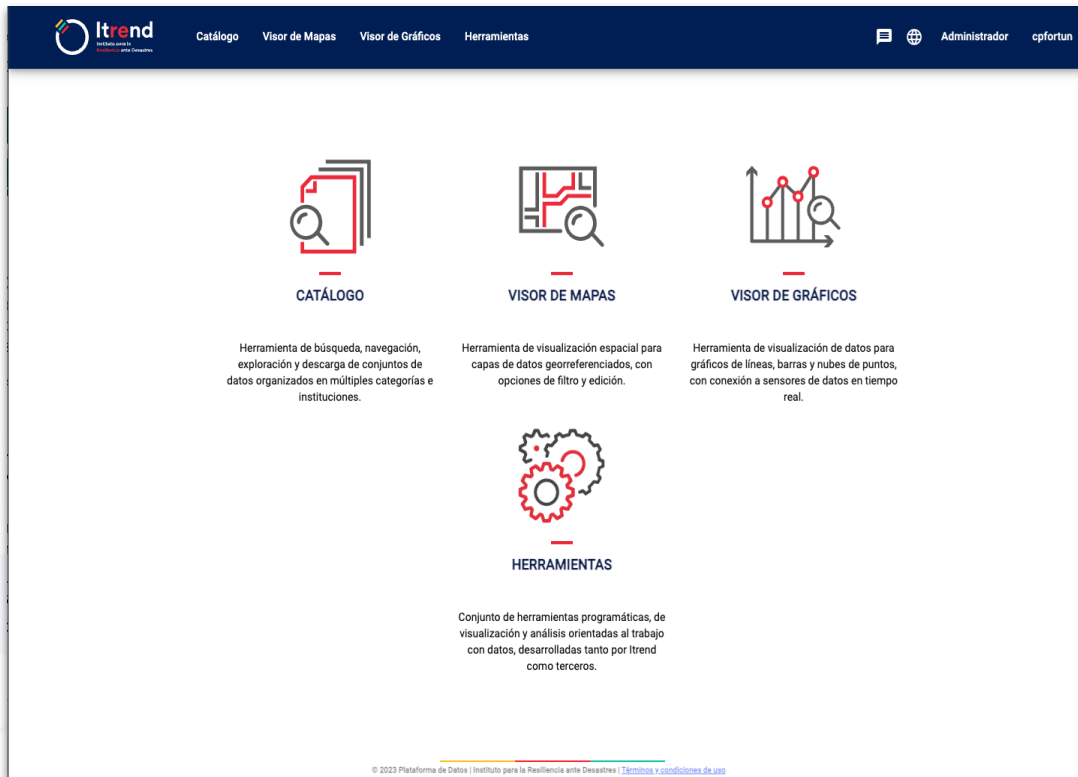
804 registered users on the Data Platform.
(Sept. 23)

Catalog : Search, browse, view, download and export to users' workspace.

Map Viewer : Visualization of georeferenced data layers, exploration of related information and download.

Time Series: Visualization of data sequences, connection to real-time data sensors and download.

Available at: www.plataformadedatos.cl



The screenshot displays the Resilience Data Platform interface. At the top, there is a dark blue navigation bar with the Itrend logo on the left and menu items: 'Catálogo', 'Visor de Mapas', 'Visor de Gráficos', and 'Herramientas'. On the right side of the navigation bar, there are icons for a document, a globe, and the text 'Administrador' and 'cpfortun'. The main content area is white and features four large icons representing different tools: 'CATÁLOGO' (a magnifying glass over a document), 'VISOR DE MAPAS' (a map with a magnifying glass), 'VISOR DE GRÁFICOS' (a line graph with a magnifying glass), and 'HERRAMIENTAS' (interlocking gears). Below each icon is a brief description of the tool's functionality. At the bottom of the page, there is a small copyright notice: '© 2023 Plataforma de Datos | Instituto para la Resiliencia ante Desastres | Términos y condiciones de uso'.

CATÁLOGO
Herramienta de búsqueda, navegación, exploración y descarga de conjuntos de datos organizados en múltiples categorías e instituciones.

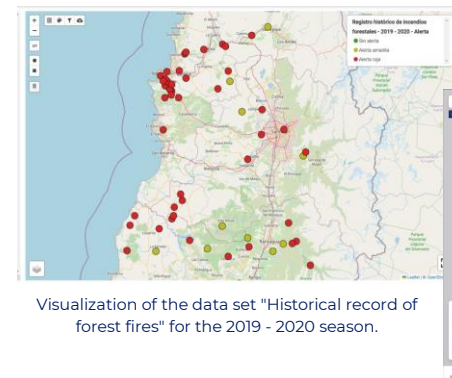
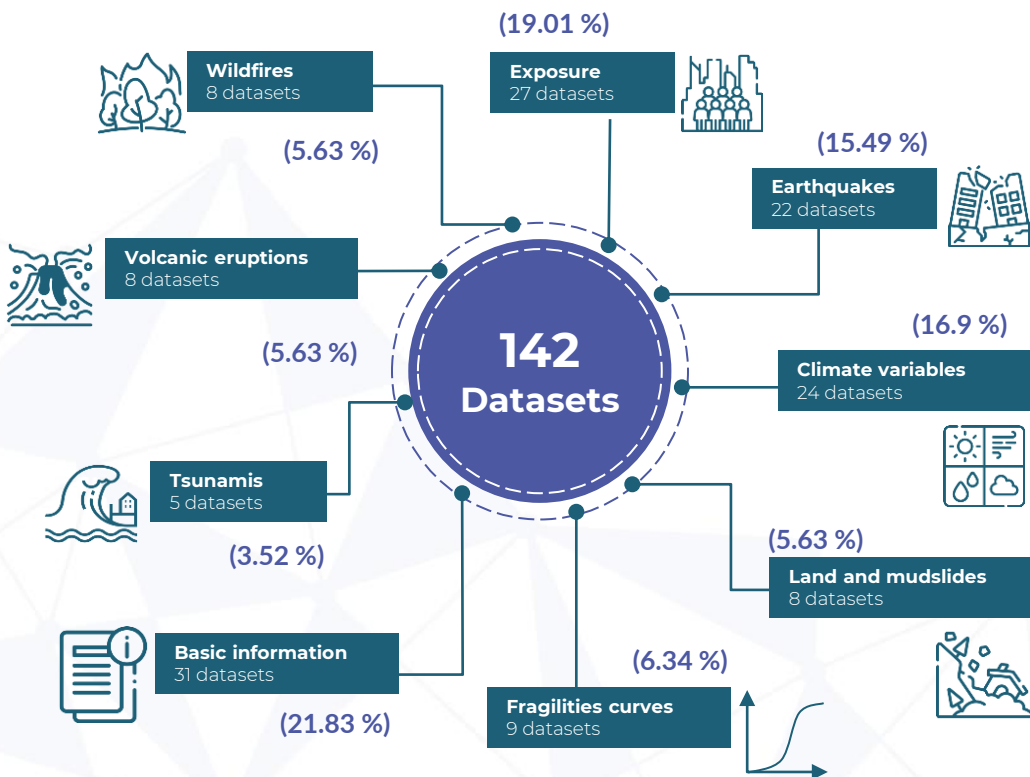
VISOR DE MAPAS
Herramienta de visualización espacial para capas de datos georeferenciados, con opciones de filtro y edición.

VISOR DE GRÁFICOS
Herramienta de visualización de datos para gráficos de líneas, barras y nubes de puntos, con conexión a sensores de datos en tiempo real.

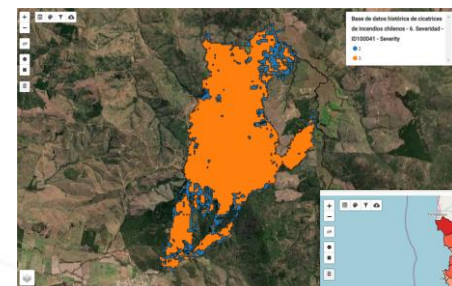
HERRAMIENTAS
Conjunto de herramientas programáticas, de visualización y análisis orientadas al trabajo con datos, desarrolladas tanto por Itrend como terceros.

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Datasets: some examples



Visualization of the data set "Historical record of forest fires" for the 2019 - 2020 season.



Scar from a forest fire published in collaboration with (CR)2

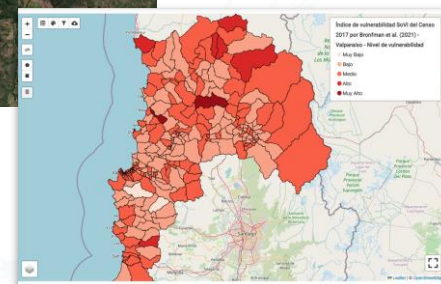
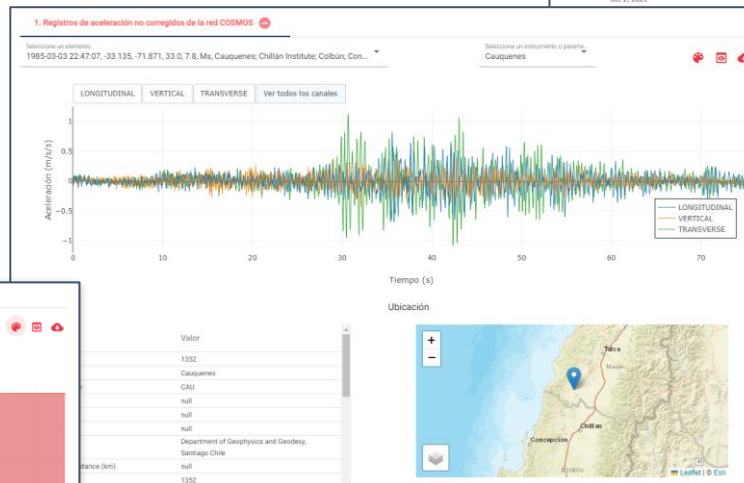
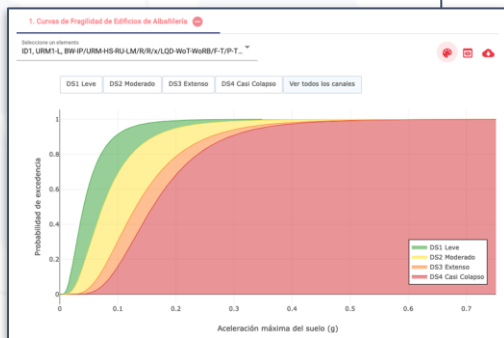


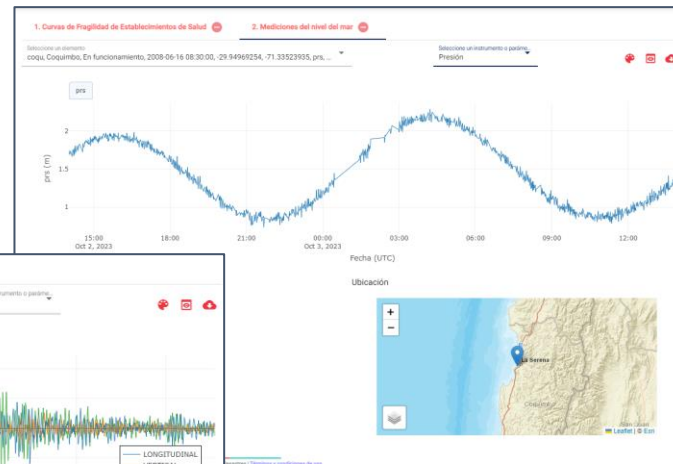
Chart Viewer

The Data Platform graph viewer allows you to view many data packages with historical information and others in quasi-real time.

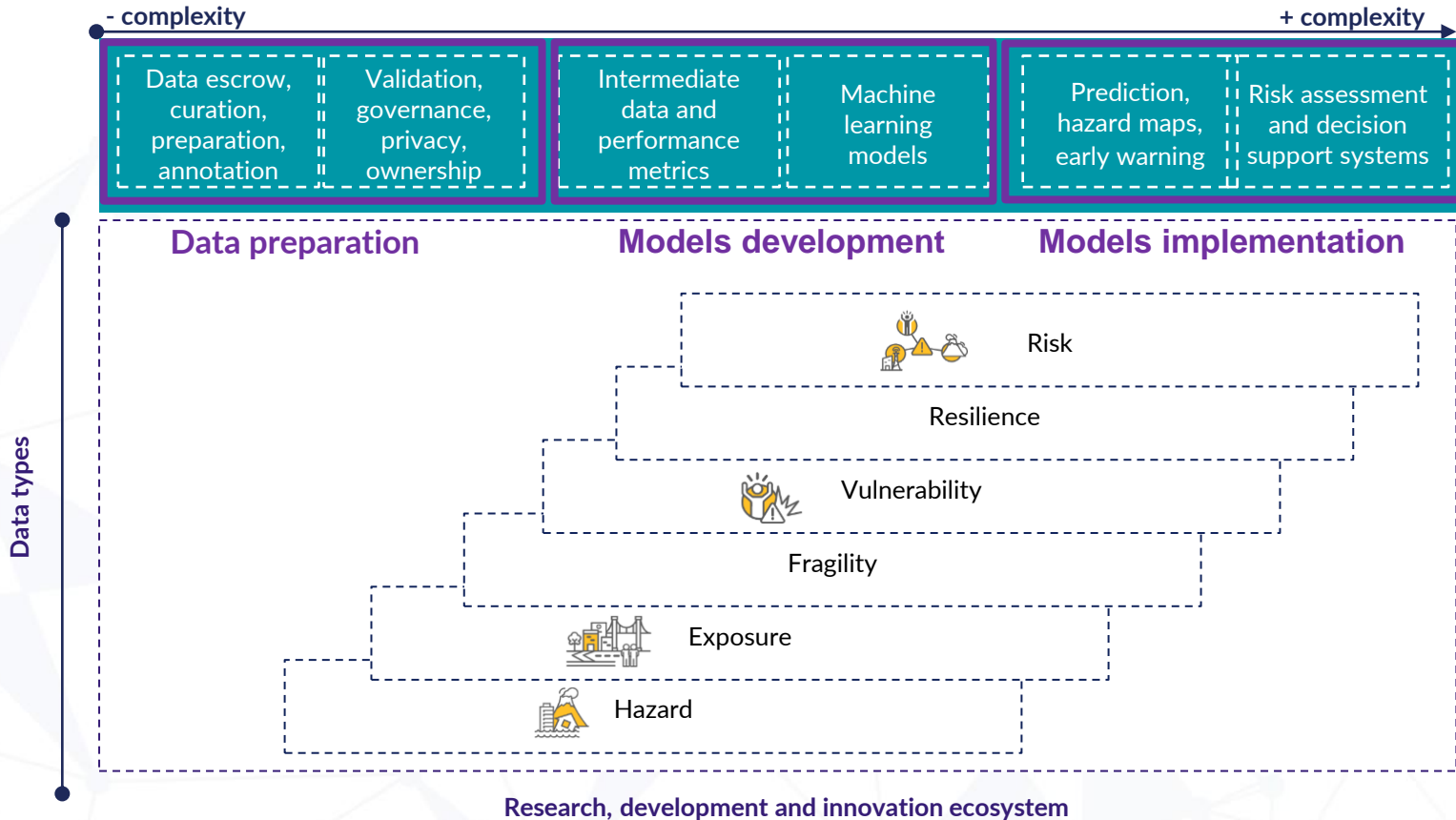
Masonry buildings fragility curves



COSMOS network uncorrected acceleration records



Quasi-real-time sea level measurements



Other collaborative projects at a glance

APRENDE RESILIENCIA (Learn Resilience)

Online platform with free and open access that offers to educators throughout the school cycle (preschool to high school) a wide range of educational materials based on the national curriculum, focusing on encourage the knowledge about disasters derived from natural extreme events, such as earthquakes, wildfires, volcanic eruptions, as well as drought and other consequences of climate change, in children and teenagers.



aprenderesiliencia.cl

iGOPP 2020

The Index of Governance and Public Policy in Disaster Risk Management (iGOPP) was designed by the IDB to evaluate and make recommendations to countries about disaster risk management governance. This monitoring and evaluation tool was applied in Chile by the IDB together with Itrend. It contributes to strengthening the capacities of the States to promote the creation of economic and social value with a resilience approach, based on scientific and technological knowledge, applied research and dialogue with experts.



[Informes iGOPP](#)

PUBLIC INFRASTRUCTURE RISK AND EXPOSURE MODEL

Created to provide tools to the State of Chile to determine the relevance of contracting specific insurance, to cover the costs of repairing critical public infrastructure affected by disasters, derived from low recurrence natural extreme events. Itrend together with Chilean Insurers Association, developed this public infrastructure exposure model, to evaluate seismic risk.



Itrend.cl/proyectos-itrend/





Itrend

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