



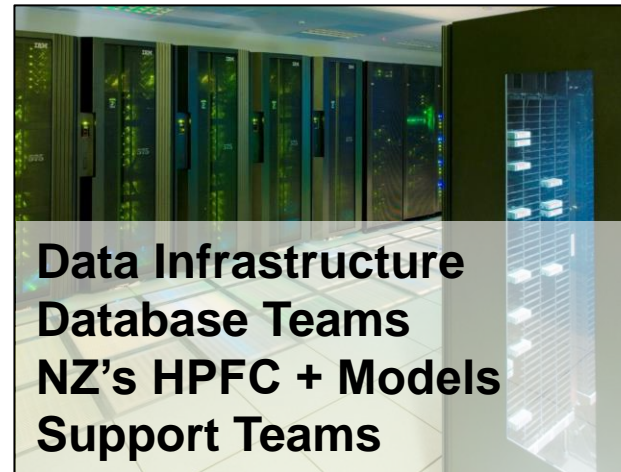
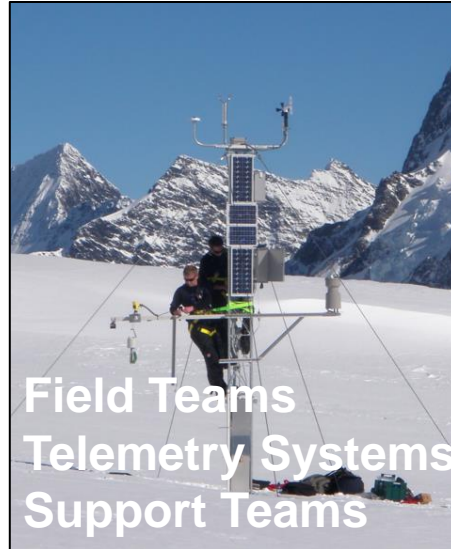
NIWA Data Services



Jochen Schmidt, Chief Scientist Environmental Information



The NIWA Data, Model & Product Infrastructure



Summary – Components of the Infrastructure

System components

- NIWA Station Network
- Other Data
- NIWA Data Infrastructure

- **High Resolution Models**
- **Product Mgmt & Delivery System**

- **Deployment: web services, widgets, GIS**
- **Professional Visualisation Software**

Supporting Infrastructure

- NIWA Field Teams
- NIWA Environmental Information Teams
- NIWA Database Teams

- **NIWA Science**
- **HPC Facility + Support Team**
- **24/7 Operational FC Team**

- **NIWA System Development Team**
- **Studio & Presenters Team**

NIWA Data (Climate, Rivers, Oceans)

- Historic analyses and statistics (flood, rain, sea level, ...)
- Real-time data and sensor control systems
- Forecast and Outlooks
- Climate Change and Land, Water, and Energy impacts

Past

Present

Future

NIWA Data as Open Standard Data Services

- NIWA Data Catalogues – Catalog Services
- NIWA Station Directory – Web Feature / Map Services
- NIWA Bio Data – Darwin Core and Web Feature / Map Services
- NIWA Water Quality Data - Web Feature / Map Services
- NIWA Ocean Data – Web Feature / Map Services
- NIWA Timeseries Data – Sensor Observation Services



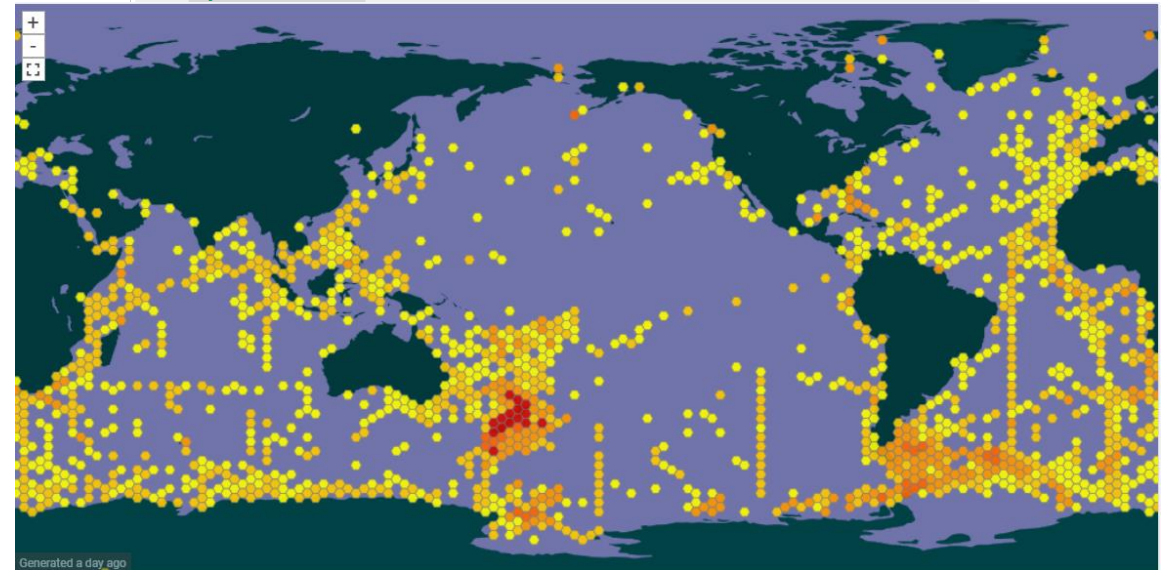
**Go the
ALL BLACKS**

NIWA Marine and Freshwater Biological Observations



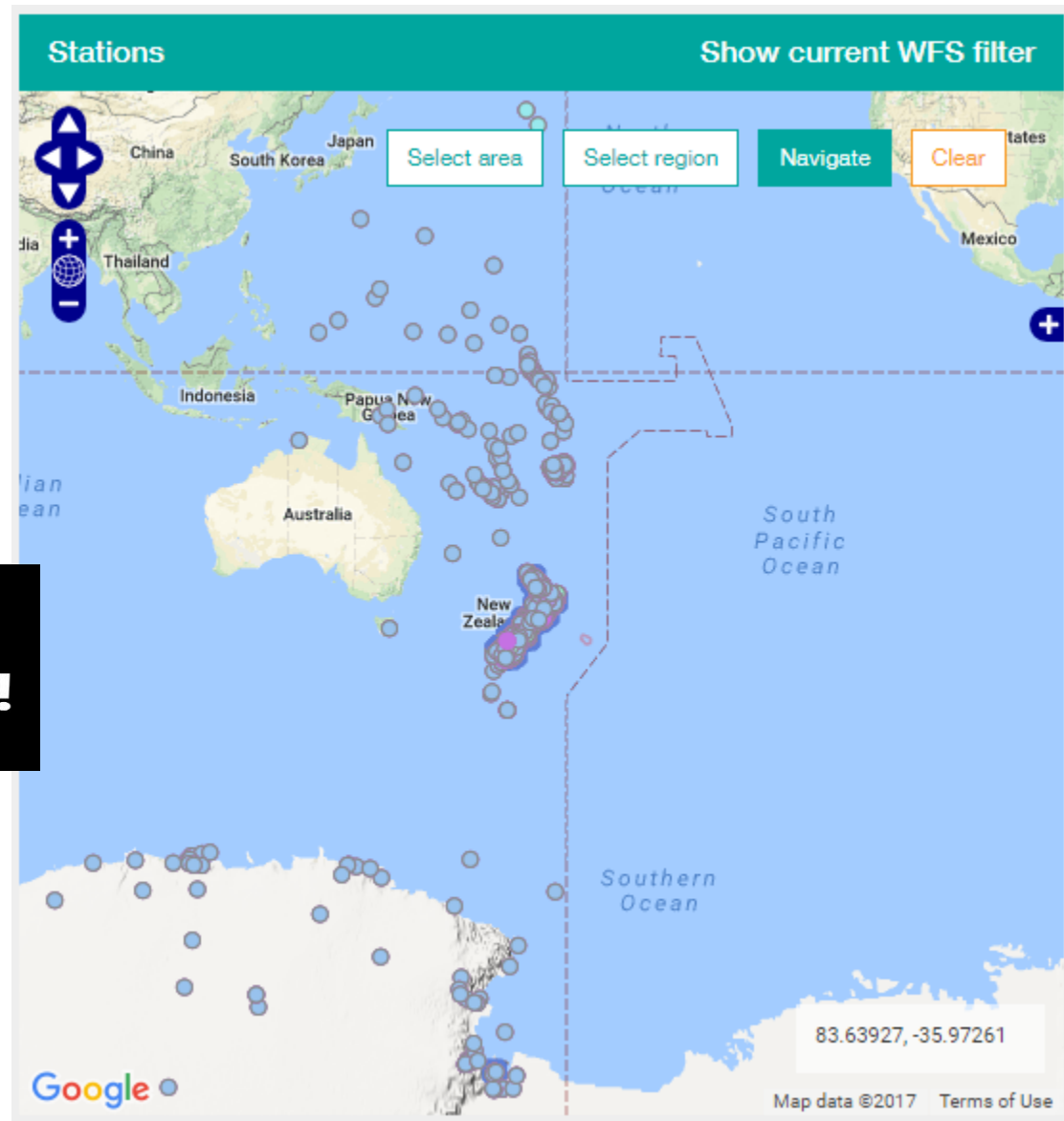
Hosted resources available through this IPT

Logo	Name	Organisation	Type	Subtype	Records	Last modified	Last publication	Next publication
	The Azooxanthellate Scleractinia (Coelenterata, Anthozoa) of Australia	Southwestern Pacific Ocean Biogeographic Information System (OBIS) Node	Occurrence	Specimen	931	2017-03-28	2016-06-13	--
	The ceratoid anglerfishes (Lophiiformes: Ceratioidei) of New Zealand	Southwestern Pacific Ocean Biogeographic Information System (OBIS) Node	Occurrence	Specimen	172	2017-02-14	2016-06-20	--
	The cnidarians collection (IK) of the Muséum national d'Histoire naturelle (MNHN - Paris) in the southwest Pacific region	Not registered	Occurrence	Specimen	15,852	2017-03-29	2017-03-29	--
	The crustaceans collection (IU) of the Muséum national d'Histoire naturelle (MNHN - Paris) in the southwest Pacific region	Not registered	Occurrence	Specimen	31,562	2017-04-11	2017-04-11	--
	The echinoderm collection (IE) of the Muséum national d'Histoire naturelle (MNHN - Paris) in the southwest Pacific region	Not registered	Occurrence	Specimen	14,666	2017-03-30	2017-03-30	--



NIWA Sensor and Discrete Observations

**GO THE
BLACK CAPS!**



The New Zealand Ocean Data Network uses OGC standards to publish metadata and data at <http://NZODN.NZ>

New Zealand Ocean Data Network



NEW ZEALAND OCEAN DATA NETWORK

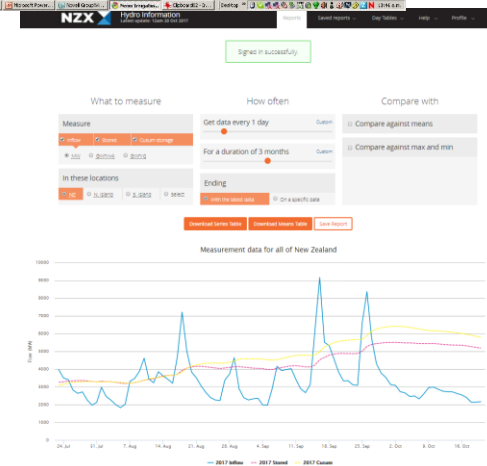
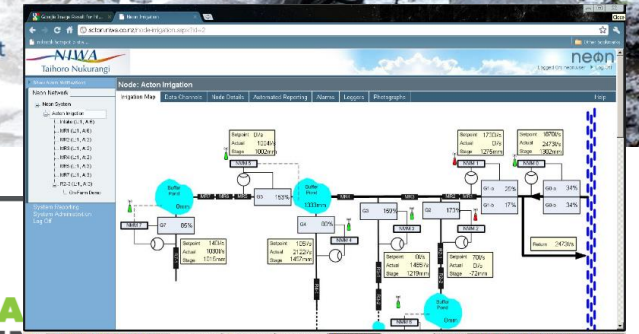
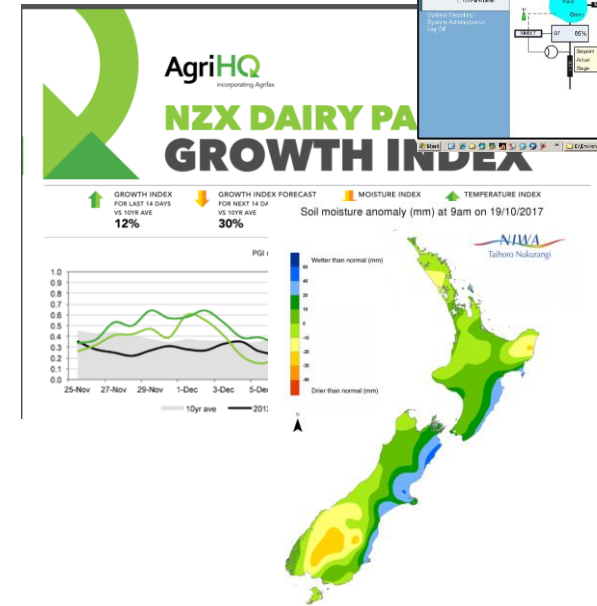
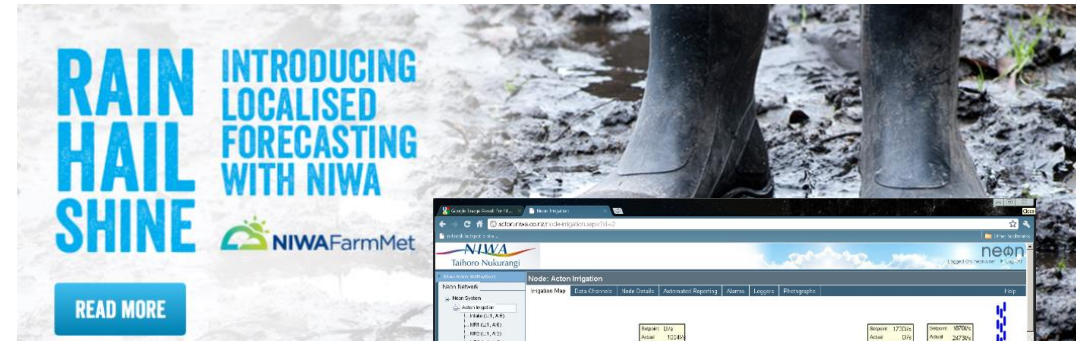
"New Zealand's marine and climate science data"

Search Ocean Data



Applications

- Climate Outlooks
- Lake Water Quality
- Fire Weather Indices
- Irrigation Decision Support
- Irrigation Scheme Control
- Pasture Growth Forecasts
- Hydro Energy Status
- ...

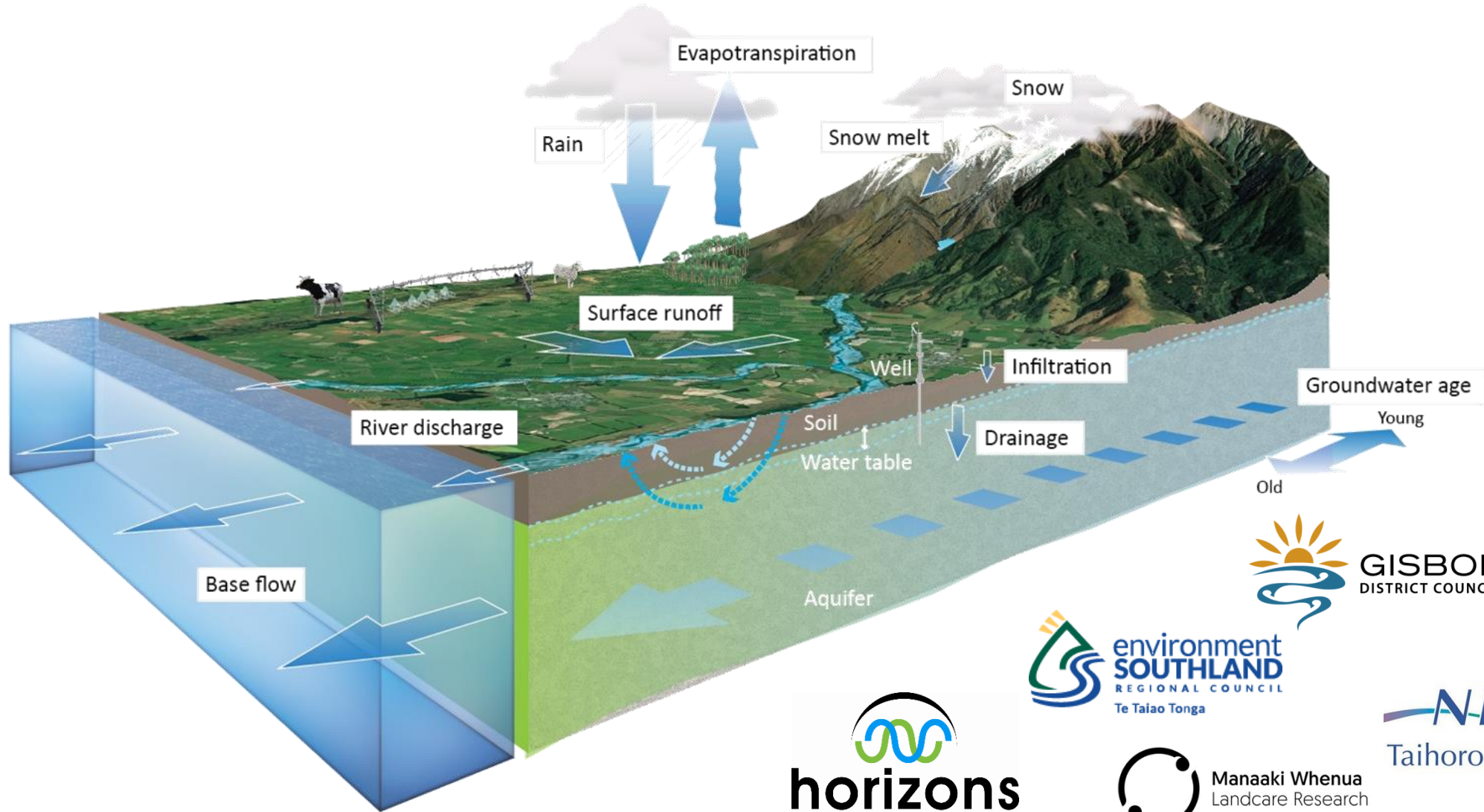




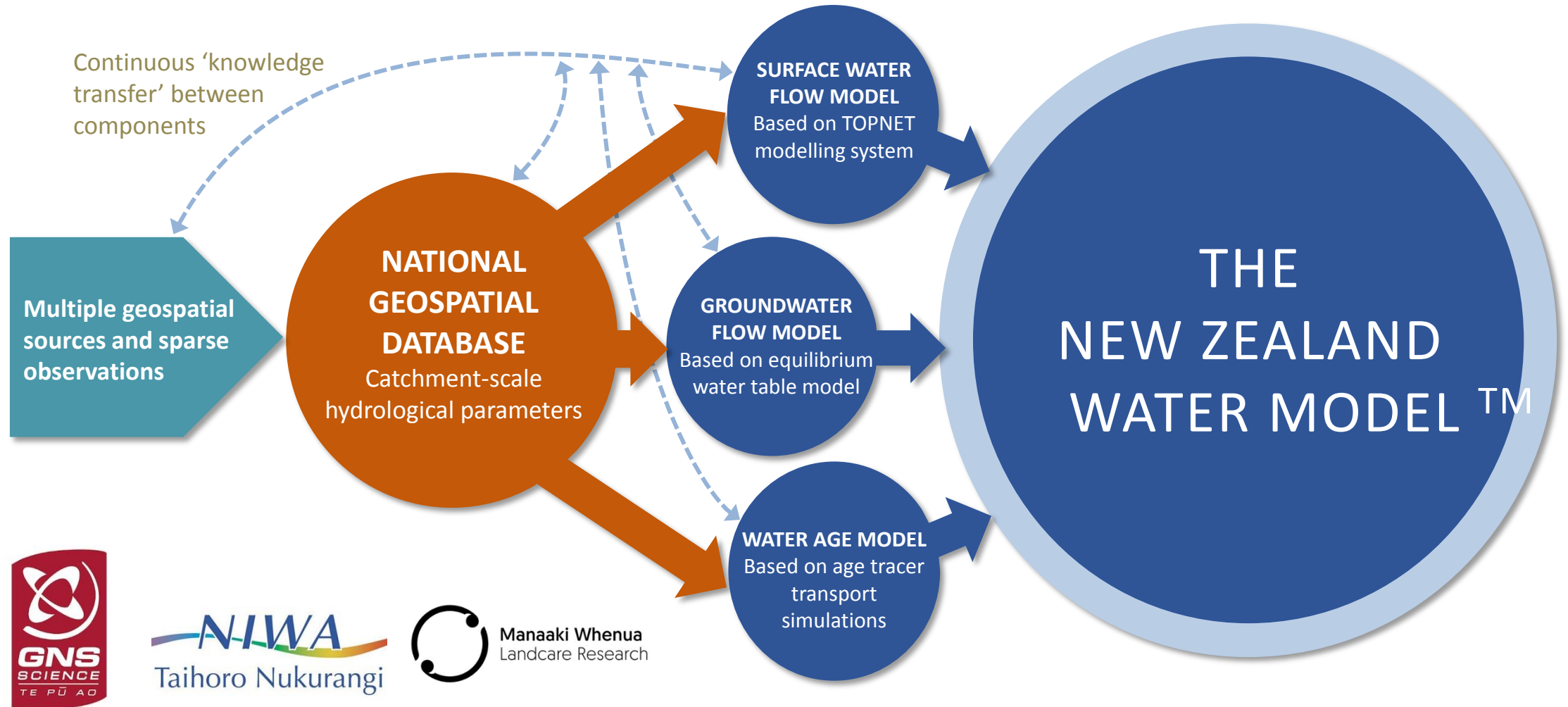
THE NEW ZEALAND WATER MODEL™



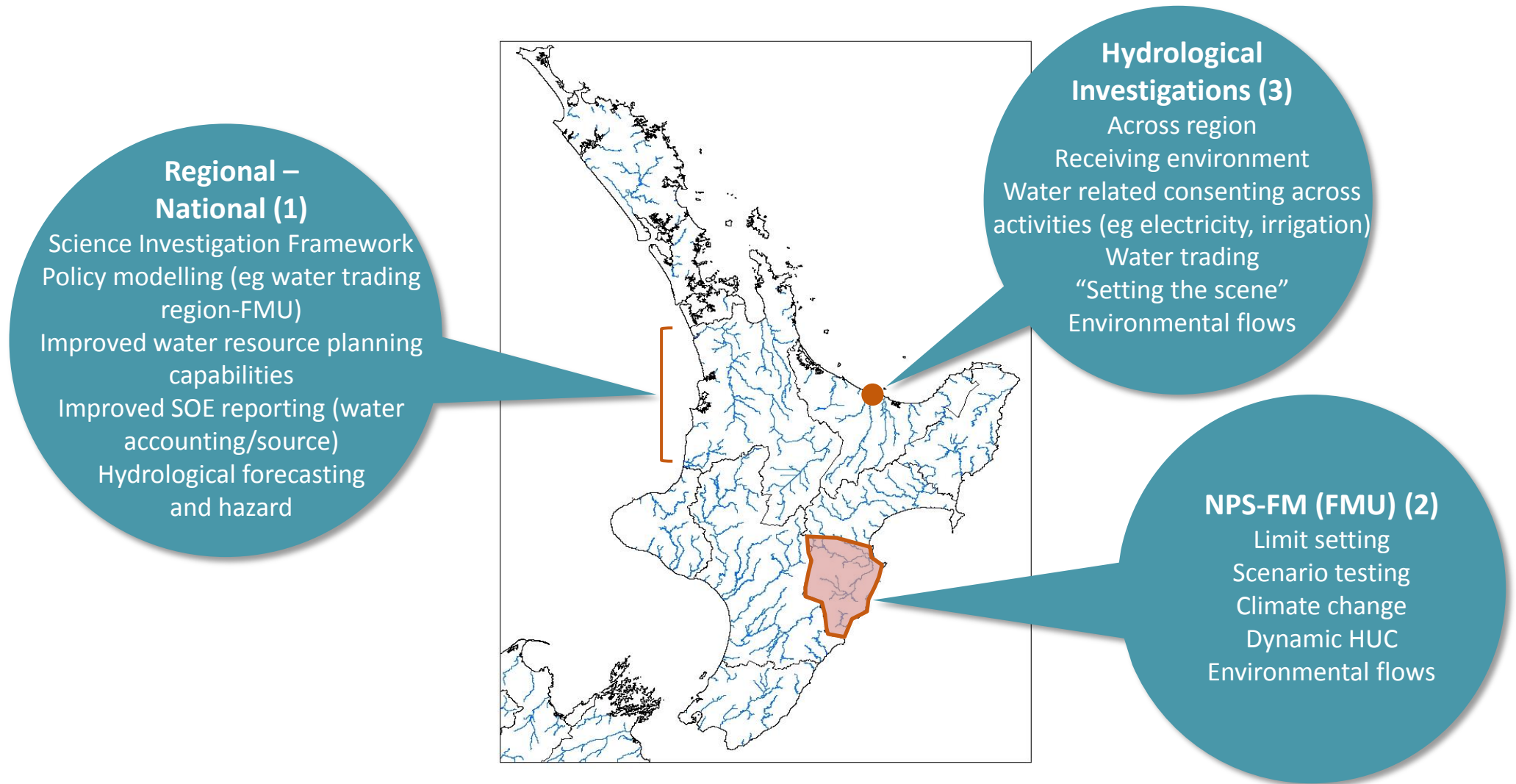
THE NEW ZEALAND WATER MODEL™ – SETTING



THE NEW ZEALAND WATER MODEL™ – MAJOR COMPONENTS



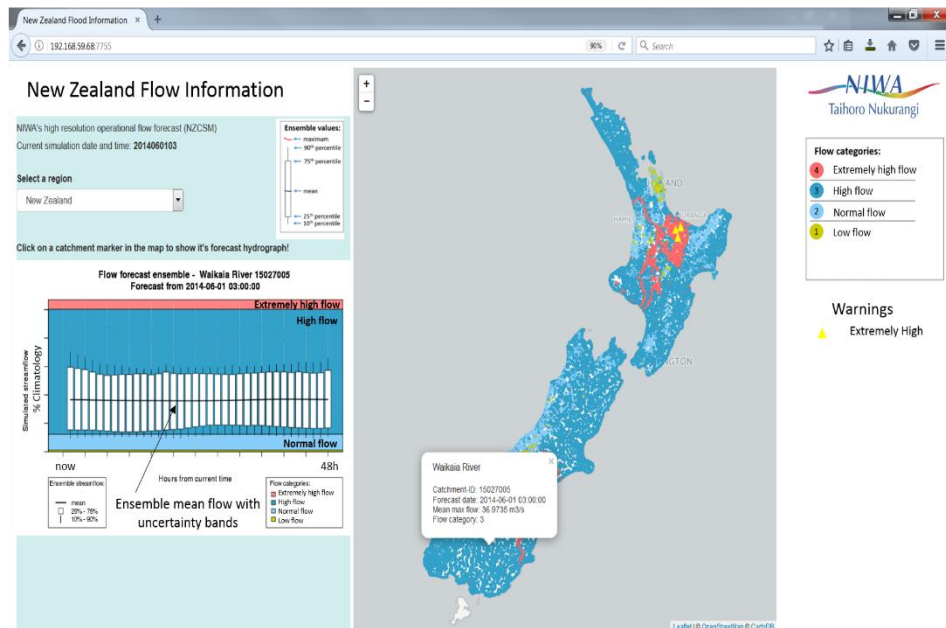
THE NEW ZEALAND WATER MODEL™ – MAJOR APPLICATIONS



Building a New Zealand Flow Forecasting System



A New Zealand Flow Forecasting Delivery System



- **Flow forecasting system for New Zealand?**
 - Local, regional council forecast models
 - Current observed flow (e.g. LAWA)
 - National hydrological model (NIWA with GNS-Landcare)

- **What would provide value? Who are the users?**
General public, recreational users, emergency services...?

- **Delivery mechanism for national flow forecast?**

- Mobile app?
- Website?
- Videos?



Questions?

What the h... is



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