Argo Floats
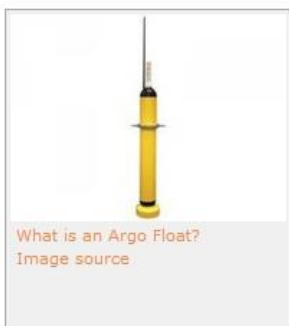## *tracking the pulse of world oceans*

Term 2 2014

The following 9 captioned images are from the LEARNZ *Argo Floats*

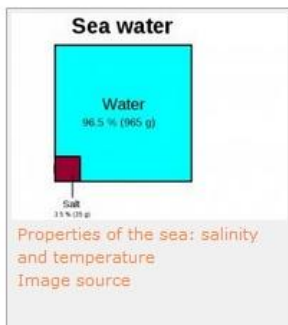Field Trip which will be based onboard the *RV Tangaroa*

Areas covered by the Background Pages

What is an Argo Float?
Image source

The Argo Float Programme.
Image source

The World's Oceans
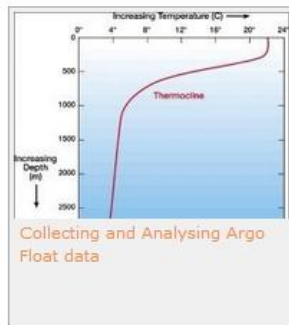Image source

- What is an Argo Float?
- The Argo Float Programme
- The World's Oceans

Properties of the Sea: currents, layers and pressure
Image source

Properties of the sea: salinity and temperature
Image source

Properties of the Sea: food chains and food webs
Image source

- Properties of the Sea: currents, layers and pressure
- Properties of the sea: salinity and temperature
- Properties of the Sea: food chains and food webs

Where in the World are we?
Image source

NIWA, NOAA and the RV Tangaroa
Image source

Collecting and Analysing Argo Float data

- Where in the World are we?
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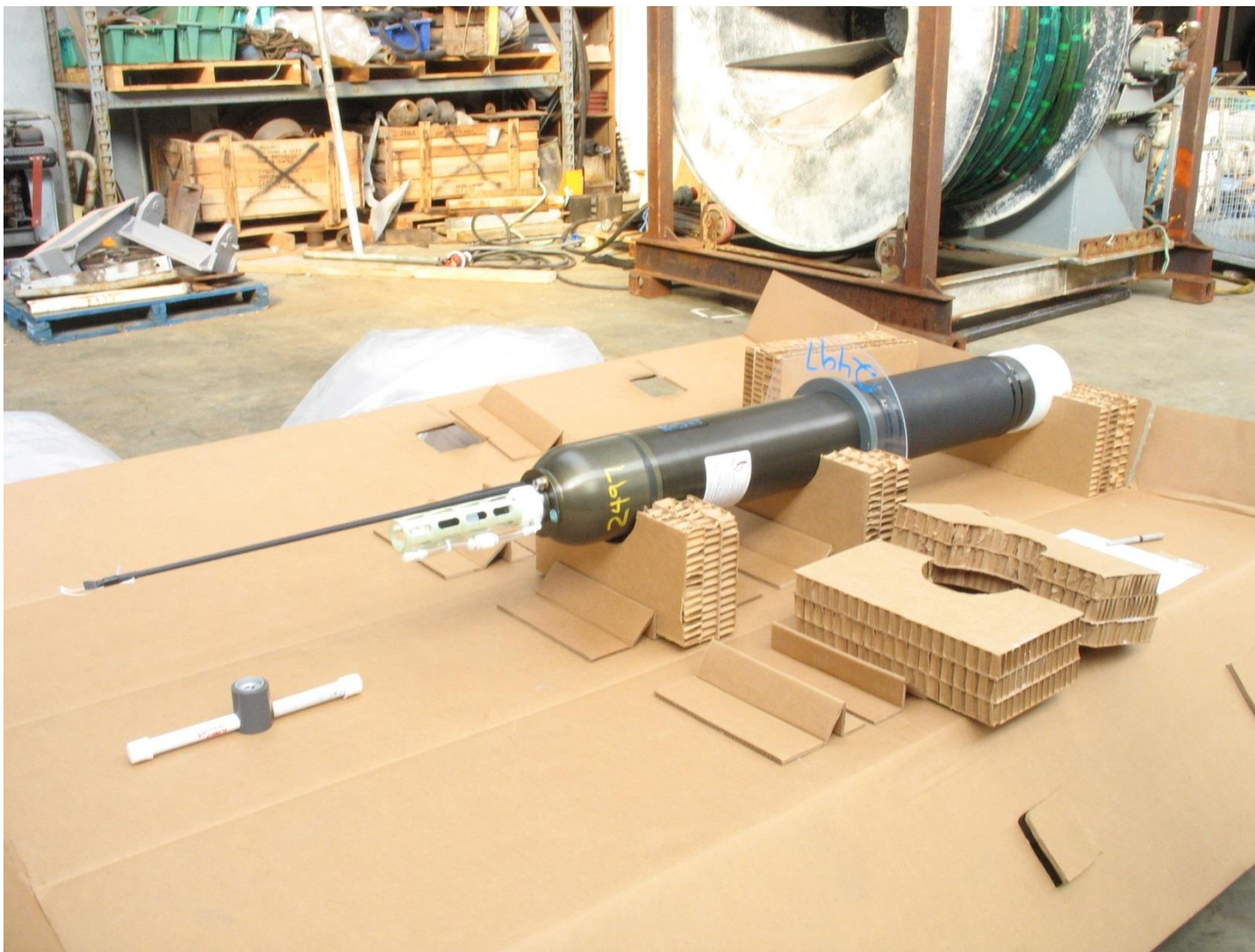
A regular argo float is a steel cylinder about 2m high. It contains a battery, a buoyancy device, measuring equipment and a satellite antenna. Image: M. Walkington, NIWA.

The Argo Float programme started in the year 2000 and involves scientists from 45 countries. The purpose of the programme is to collect data about the oceans and help us learn more about climate and weather. The name 'argo' comes from a story in Greek mythology.

Ocean currents are caused by tides, winds and changes in water temperature and salinity. Argo Floats help us learn how ocean currents work. Image: LEARNZ
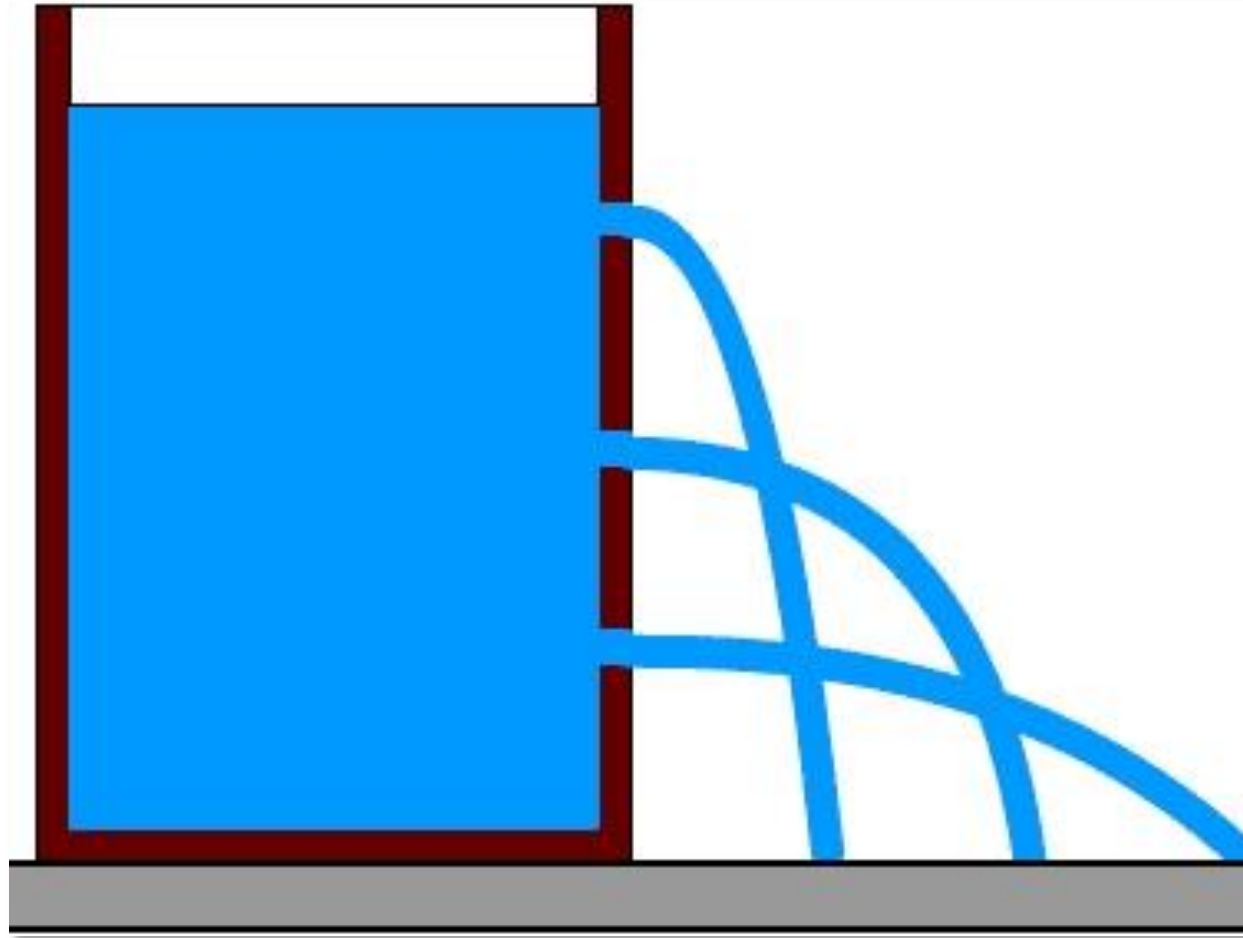
The ocean is made up of layers. The deeper layers have very high pressure. An Argo Float is able to move up and down in the ocean, by changing its volume.

Image: http://www.school-for-champions.com/

Antarctic sea ice is made up of mostly fresh water, because salty water is squeezed out when sea ice freezes. The salty water is heavier than sea water and sinks. Sea water from the surface moves in to replace the sinking salty water. The sinking salty seawater is the start of an undersea ocean current.
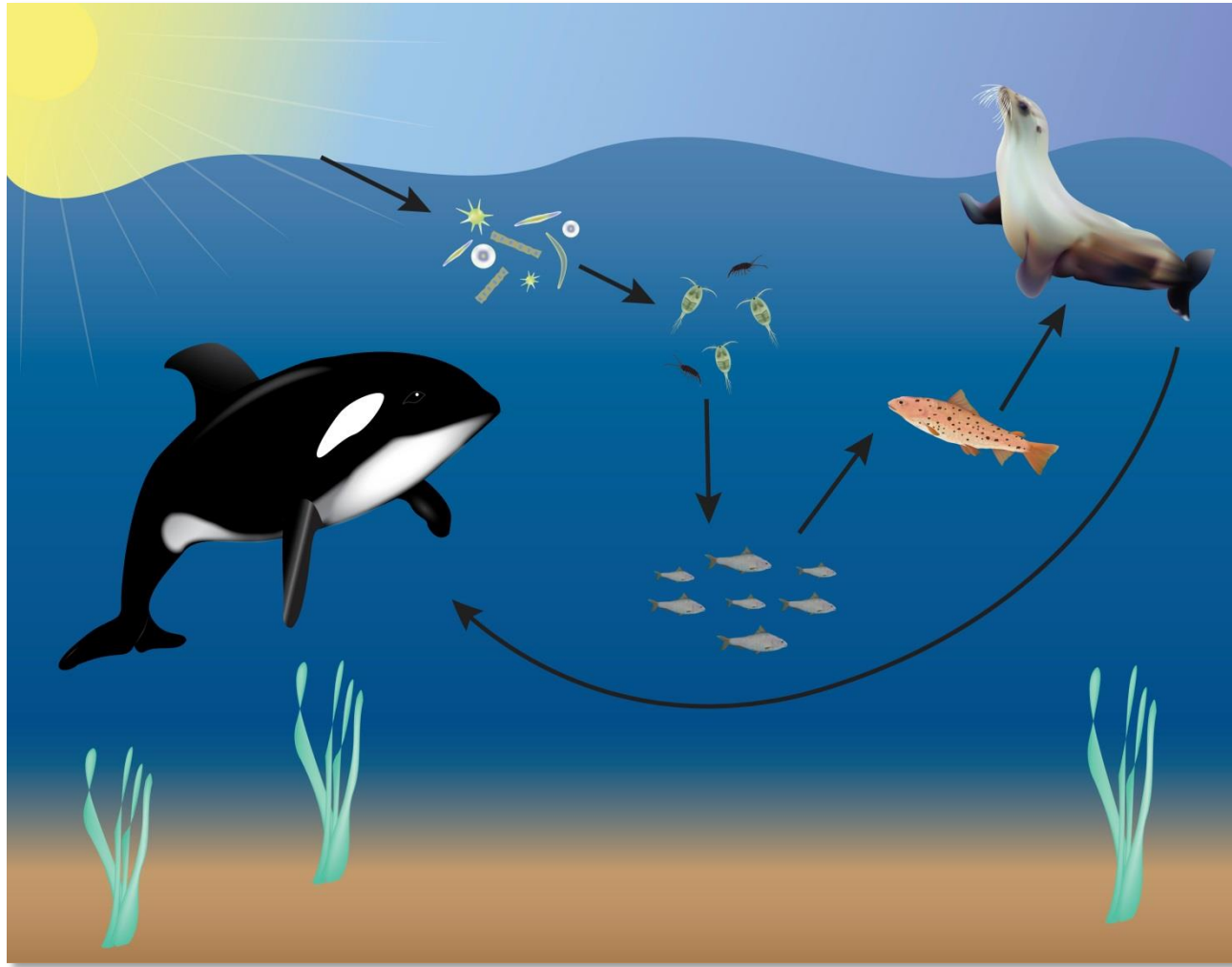
Life in the ocean depends on plants called phytoplankton that make food with energy from the sun. Fish that feed on these plants are called herbivores. Animals that feed on herbivores are called carnivores. A diagram that shows energy moving between organisms is called a food chain. Many food chains together are called a food web, like the one above.   Image: http://www.education.com/
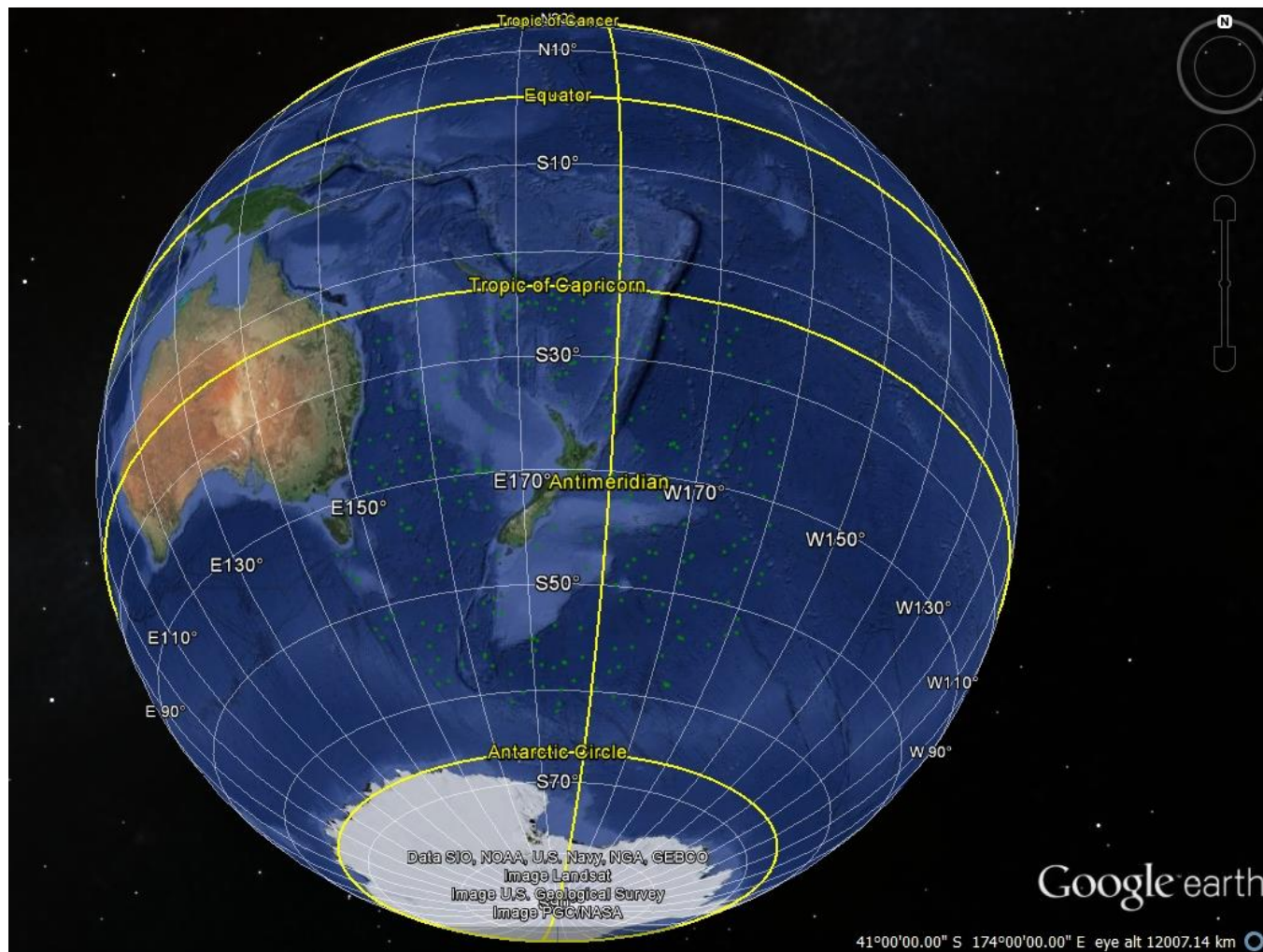
Imaginary lines around planet Earth are called latitude and longitude and help us locate positions on the Earth's surface. Satellites can tell us accurately what the latitude and longitude are at any location. Image: Google Earth
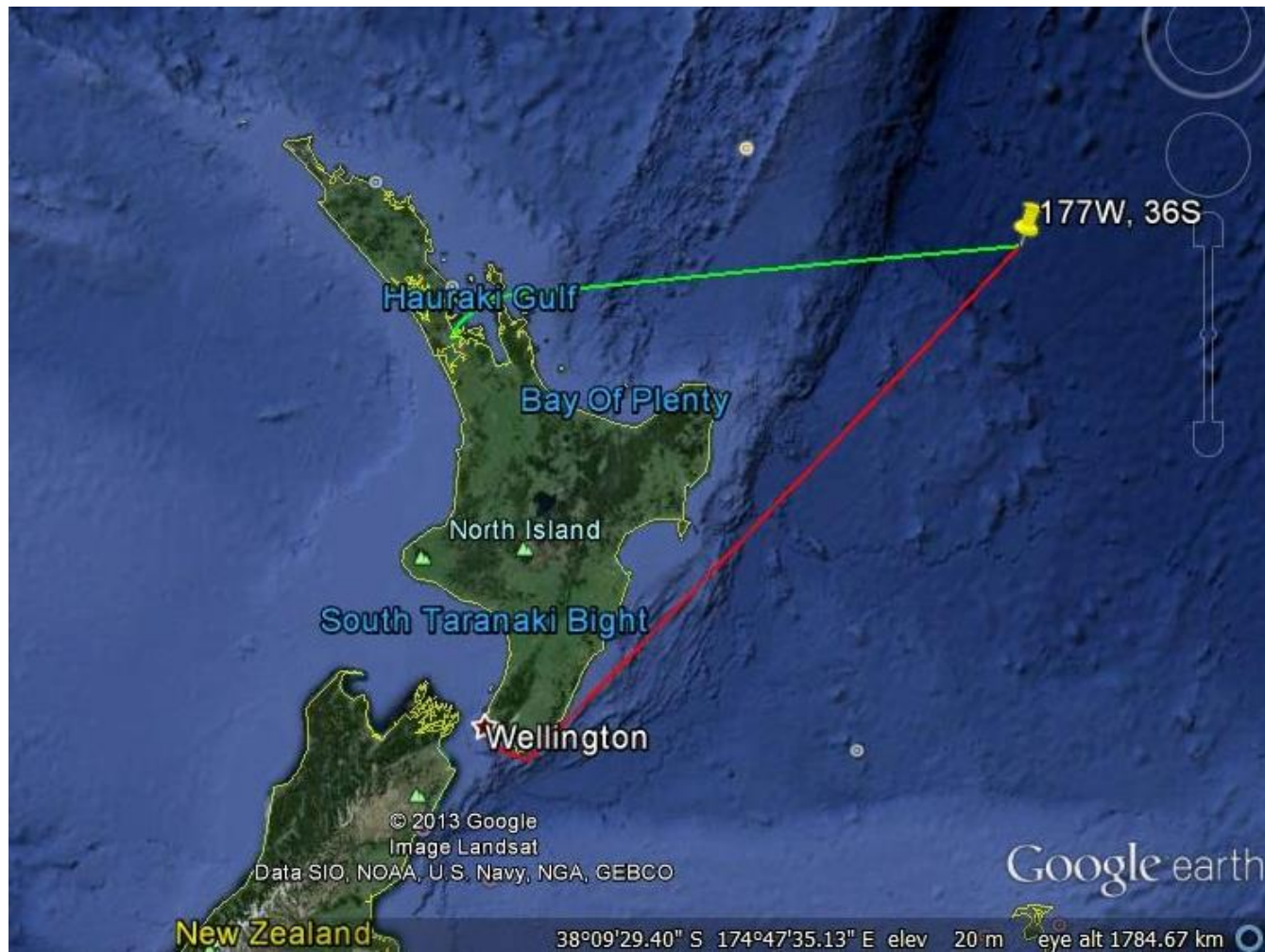
NIWA and NOAA are research organisations working together on this voyage on board the *RV Tangaroa.* During the voyage 'regular' and 'deep' Argo Floats will be deployed.
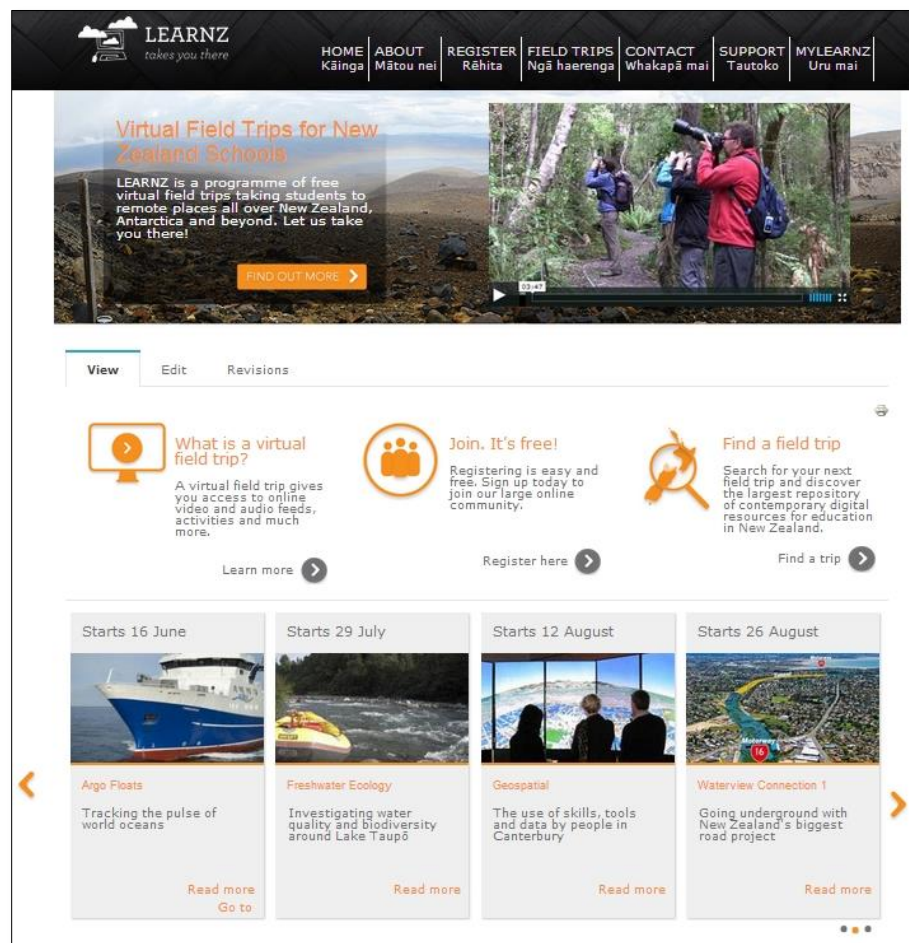
Image: Google Earth and Niwa.
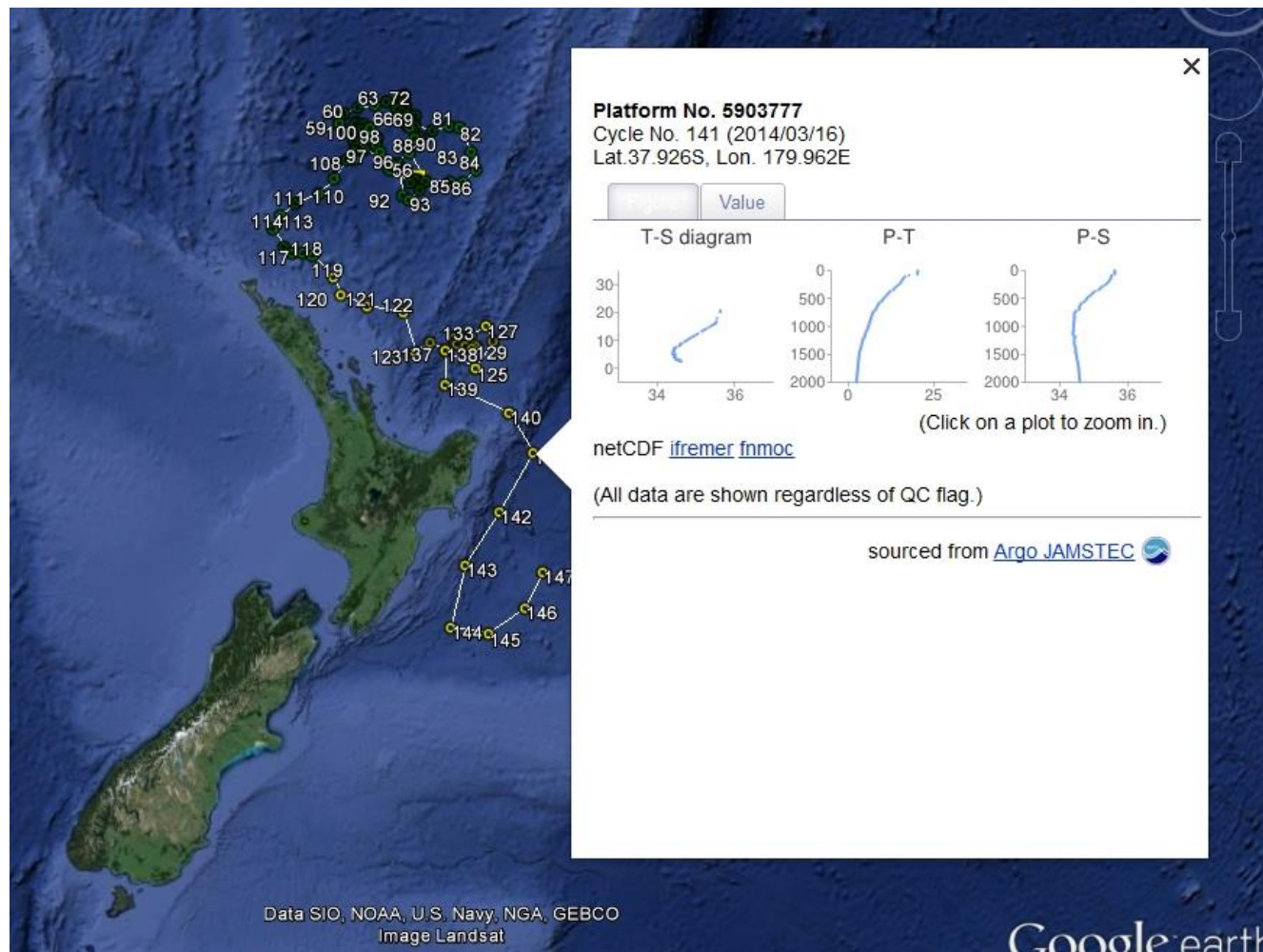
Using Google Earth you can follow the path of any Argo Float, analyse the data it uploads, and learn about what is happening in the oceans. Image: Google Earth and Argo programme.

Enrol your class in the *Argo Floats* field trip

- **Videos**
  5-6 videos each day

- **Diaries**
  Each day describing the action

- **Audioconferences**
  Twice a day students can ask questions of experts in the field

- **Images**
  Hundreds of images can be viewed and downloaded

- **Ambassadors**
  Send a class member (soft toy) to experience the live trip

Visit the website to find out more

Or call the teacher free phone 0800 22 55 53