

Resource for Teachers

The Rena Disaster



17 October 2011 Image credit: Maritime New Zealand

NGĀ HUINGA KUPU / VOCABULARY

Imports: bring (goods or services) into a country from overseas for sale

Exports: send (goods or services) to another country for sale

Freight: goods transported in bulk by truck, train, ship, or aircraft

Cargo: goods carried on a ship, aircraft, or motor vehicle

Navigation: the process or activity of accurately ascertaining one's position and planning and following a route

Maritime: connected with the sea, especially in relation to seaborne trade or naval matters.

Commodity: a raw material or primary agricultural product that can be bought and sold, such as copper or coffee

NGĀ KUPU MĀORI

Moana: Ocean

Kaipuke: Ship

Kororā: Penguin

Manu: Bird
Toroa: Albatross
Tohorā: Whale
Karoro: Seagull
Aihe: Dolphin
Hinū: Oil
Te Taiao: Environment
Mauri: Life force
Tangaroa: Atua (God) of the Sea

NGĀ KŌRERO / ORAL LANGUAGE PRE DISCUSSION

What do you know about the Rena disaster?

Do you know of any other oil spills that have occurred around the world?

What would you like to know about the Rena disaster?

NGĀ MŌHIOHIO / INFORMATION

What happened? On Wednesday, 5 October 2011, at 2:20 AM while sailing from Napier to Tauranga, the *Rena* ran aground on Ōtāiti (Astrolabe Reef) near Mōtītī Island in the Bay of Plenty.

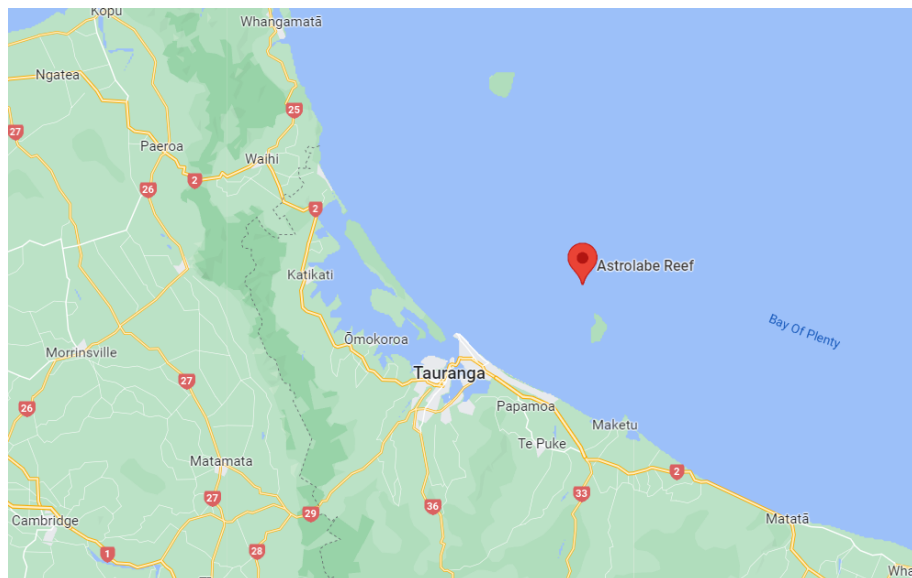
Due to navigation errors the *Rena* ran aground, resulting in an oil spill. The Captain was in a hurry to get to Tauranga by 3am to be at the Pilot Station, and the crew had not complied with "basic navigation practices" before the ship ran aground, cutting corners and sailing hazardously.

On 11 October the spill was declared New Zealand's worst ever maritime environmental disaster by Environment Minister Nick Smith.



13 October 2011 Image credit: Maritime New Zealand

Where did it happen? On the Astrolabe reef near Mōtītī Island



Why did it happen? The Captain and head navigator were in a hurry, under pressure and made many navigational and system errors. They decided to take a short cut without checking the route thoroughly first and hit the Astrolabe reef.

Which animals were affected by the Rena disaster?

Little blue penguins, shags, petrels, albatrosses and plovers, whales, dolphins, fish and seals were some of the animals affected. 2410 dead birds were collected of which 1448 were oiled.

What was the ship carrying? The ship was carrying 1,368 containers, eight of which contained hazardous materials, as well as 1,700 tonnes of heavy fuel oil and 200 tonnes of marine diesel.

What are the main commodities / exports at the Port of Tauranga?

Tauranga is New Zealand's largest export port. Forestry, kiwifruit and dairy exports account for just over 80% of exports. Much of this cargo is destined for customers in Japan, China, South Korea, South East Asia, Australia and the Pacific Islands.

Imports are also an important and expanding sector of the Port's business. These include petroleum, fertiliser, coal, dry and liquid bulk, palm kernel and a range of other products.

What happened to the captain of the Rena? Jailed in NZ for 3 months, then extradited to the Philippines to serve the rest of his sentence

What other environmental impacts were there from the Rena disaster?

OIL

Spilled oil can harm the environment in several ways, including:

- the physical damages that directly impact wildlife and their habitats (such as coating birds or mammals with a layer of oil)
- the toxicity of the oil itself, which can poison exposed organisms.

Over the following 6 months after the Rena hit the Astrolabe reef, 360 tonnes of heavy fuel oil poured into the sea from the *Rena*. Some of the oil dispersed or sank to the seabed, and some made its way to the shore. A thick, black tar-like substance covered a number of beaches and coastlines. Beaches were closed. Volunteers for the clean-up were warned that contact with spilled oil could lead to vomiting, nausea and rashes, and local residents were urged to close their windows to limit fumes.

Heavy fuel oil contains polycyclic aromatic hydrocarbons (PAHs) and heavy metals. PAHs and heavy metals are known to be cancer-causing and can cause sickness and defects in organisms. Benthic organisms can ingest small droplets of oil falling to the seabed.

Heavy metals and PAHs then enter the food chain, causing a build-up of these contaminants in organisms higher up in the food web, such as fish and birds.

CONTAINERS AND DEBRIS

Within the first week of the disaster, 88 of the 1,368 containers from the ship had fallen into the ocean. As the ship broke up over the next 3 months, more containers fell into the sea. Transponders transmitting the location of containers were attached to some but not all, because they could not be accessed before they fell overboard. Some containers were never recovered – including some containing dangerous goods such as cryolite. Cryolite is a mineral that can be used as a pesticide or insecticide. Research is being carried out to determine the effects of cryolite on marine life.

Many containers broke up, spilling their contents, which washed up on beaches as far away as Whangapoua Harbour on the Coromandel Peninsula. Debris was even found at Medlands Beach on the far side of Great Barrier Island. These items included bags of milk powder sachets, timber, packets of noodles, paper, rope and plastics – including small plastic beads.

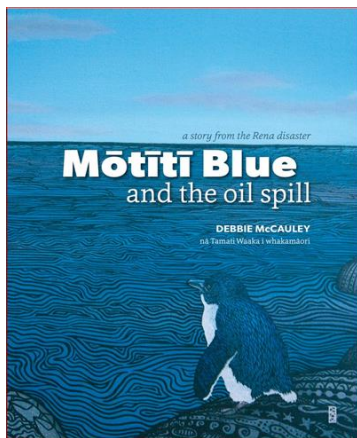
Debris from the *Rena* posed a significant risk to shipping. It also polluted beaches and posed a threat to marine life – either from entanglement or by ingesting it as food.

MAHI / DO

- Take part in a beach clean up
- Do a clean up in your local area- a river, estuary, beach or lake
- Learn about cleaning oil
<https://www.sciencelearn.org.nz/resources/1177-cleaning-up-oil-in-water>
- Join /support the Western Bay of Plenty Wildlife Trust
<https://www.westernbaywildlife.nz/>
- Learn about and reflect on your use of plastic products (remember plastic is made from oil) and reduce, reuse, recycle!

NGĀ RAUEMI / LINKS + RESOURCES

NGĀ PUKAPUKA PIKITIA / PICTURE BOOKS



Mōtiti Blue and the Oil Spill by Debbie McCauley

NGĀ HAUTAKA KURA / SCHOOL JOURNALS



<https://instructionalseries.tki.org.nz/Instructional-Series/School-Journal/School-Journal-Level-3-November-2019/Fantastic-Penguins>



<https://instructionalseries.tki.org.nz/Instructional-Series/School-Journal/School-Journal-Level-2-August-2012/What-a-Disaster>



<https://instructionalseries.tki.org.nz/Instructional-Series/Connected/Connected-2013-level-4-Are-You-Sure/After-the-Spill>

NGĀ PAE TUKUTUKU / WEBSITES

- Pollution from the Rena

<https://www.sciencelearn.org.nz/resources/1138-pollution-from-rena>

- Rena bird recovery

<https://www.sciencelearn.org.nz/resources/1135-rena-bird-recovery>

- Responding to Oil Spills

<https://www.maritimenz.govt.nz/public/environment/responding-to-spills/gallery.asp>

- Black Tide- The Rena Accident

<https://www.nzgeo.com/stories/black-tide-the-rena-accident-and-its-implications/>

- ‘Oil off a duck’s back’ RNZ story

<https://www.rnz.co.nz/national/programmes/ourchangingworld/audio/201771630/oil-off-a-duck's-back>

- Oil impact on our environment

<https://www.maritimenz.govt.nz/public/environment/oil-impact.asp>

- Rena captain and officer sent to jail

<https://www.stuff.co.nz/national/crime/6984980/Rena-captain-and-officer-sent-to-jail>

- Ōtāiti/Astrolabe Reef

<http://www.astrolabereef.co.nz/>

YOUTUBE

The Rena 10 years on 1News

<https://www.youtube.com/watch?v=kBpwxqJRI58>

Penguin rescue at Rena oil spill, New Zealand - WWF staff with Maritime New Zealand team

<https://www.youtube.com/watch?v=s-urbi21jG8>

Little penguins recuperating from the Rena oil spill

<https://www.youtube.com/watch?v=jhEN69BbBzU>

Penguins being released back into the wild

<https://www.youtube.com/watch?v=UeTbHEwlHbQ>

Other things you could learn about related to the Rena- what sparks your interest?

- **How do they clean oil from the ocean?**
- **Penguins** and other marine animals
- **Oil Spills** eg: Exxon Valdez

Because Rena was a cargo ship rather than an oil tanker, any spill would be small in comparison to disasters like the 1989 Exxon Valdez disaster, which dumped an estimated 262,000 barrels of oil in Alaska's Prince William Sound.

- **Ship wrecks** eg: Research the Taioma shipwreck off the coast of Mount Maunganui
- **The Port of Tauranga** and other ports around the world / the movement of freight around the world
- **Careers** in veterinary , department of conservation, wildlife care...