**Background**

1. **East Coast LAB (Life at the Boundary) project**

Off the East Coast of New Zealand’s North Island lies the Hikurangi plate boundary.  Living on this boundary where the earth is constantly changing means communities can be affected by a number of natural hazards such as earthquakes and tsunami.

East Coast LAB (life at the Boundary) aims to improve the resilience of communities on the East Coast of the North Island to natural hazards associated with the Hikurgani plate boundary & living life on the coast. These hazards pose a significant to risk to the four regions the project covers – Gisborne, Hawke’s Bay, Manawatu/Wanganui and Wellington.

The Hikurangi plate boundary is New Zealand’s least understood, but potentially its largest, source of hazard. This plate boundary has the potentially to produce large earthquakes and tsunami, as demonstrated by the 2011 Magnitude 9.0 earthquake offshore of northern Japan.

The US National Science Foundation has selected the Hikurangi plate boundary as one of three places in the world where a large amount of research effort and money will be spent on understanding subduction plate boundary phenomena over the next decade.

The project will leverage off this research as well as national research being carried out by GNS Science, NIWA and an array of Universities occurring on the East Coast of New Zealand over the next few years. Science investment for both national and internal research totals around $30-40m.

This research will to assist the international Earth science community find answers to the many outstanding questions about why subduction zones behave the way they do. East Coast LAB (Life at the Boundary) will be provide opportunities to learn more about this research over the next five years. Communities can visit the virtual LAB [www.eastcoastlab.org.nz](http://www.eastcoastlab.org.nz) or visit the LAB at the National Aquarium to learn more about natural hazards and discover what scientists are trying to uncover

This project wants to encourage communities to become engage and participate in this science so that they understand the risks associated with living life at the boundary. The ultimate goal is to make East Coast communities more aware of the risks, how to prepare and respond to hazard events such as earthquakes or tsunami and in the event of a natural hazard continue to thrive.

The 22 September is the official launch of the East Coast LAB, a multi-agency project which includes:

* GNS Science
* National Institute of Water & Atmospheric Research (NIWA)
* Natural Hazards Research Platform
* University of Auckland
* Massey University
* QuakeCoRE
* Ministry of Civil Defence & Emergency Management
* Earthquake Commission (EQC)
* Gisborne District Council
* Hawke’s Bay Regional Council
* Hawke’s Bay Civil Defence Emergency Management Group
* Napier City Council
* National Aquarium of New Zealand
* Manawatu-Wanganui Civil Defence Emergency Management Group
* Greater Wellington Regional Council

**Research projects underway or about to get underway**

Last week it was announced by Science and Innovation Minister Steven Joyce that $6.5 million is being invested in scientific research to learn more about Hikurangi subduction earthquakes and slip behaviour at the plate boundary off the East Coast of New Zealand’s North Island. The research will be carried out by a multidisciplinary team of leading New Zealand and international geoscientists

1. **The virtual LAB online – www.eastcoastlab.org.nz**

A website where East Coast communities discover more about earthquake, tsunami and volcanic eruptions & how they affect us, explore the science that is happening right now and take part in natural hazard science.

1. **The LAB at the National Aquarium of New Zealand**

The LAB, a natural hazards learning space at the National Aquarium is the focal point of the project, aptly situated at the heart of the East Coast. Here, visitors can come and learn more about earthquake, tsunami and volcanic eruptions & how they affect us.

Visitors to the Aquarium will be able to enter the LAB and discover how tsunami are created by watching a wave tank demonstration, see the latest earthquakes that have hit New Zealand, time themselves practicing a “Drop, Cover, Hold” drill and take part in some of the science projects going on.

1. **Life at the Boundary education programme**

School students can visit the LAB as part of the Life at the Boundary education programme to:

* Learn all about the earth’s structure, earthquake, tsunami and volcanic eruptions and being prepared
* Become a scientists themselves and create their very own tsunami and volcanic eruption
* See how quickly they can “Drop Cover Hold” with their time entered into the Drop Cover Hold Records book!