State of the Environment **Report Card 2016**

What's happening with soil erosion and sediment?

How much sediment do we lose from our hills each year?

HBRC uses a model called SedNet to estimate the sediment loss from hill country. It takes into account the slope of the land, the land cover, soil type and geology and works out how much sediment could be generated from different combinations of these.

Erosion from river banks is calculated by looking at cross sections of rivers, river flows and whether the river banks have plant growth on them or not.

The model can also show us:

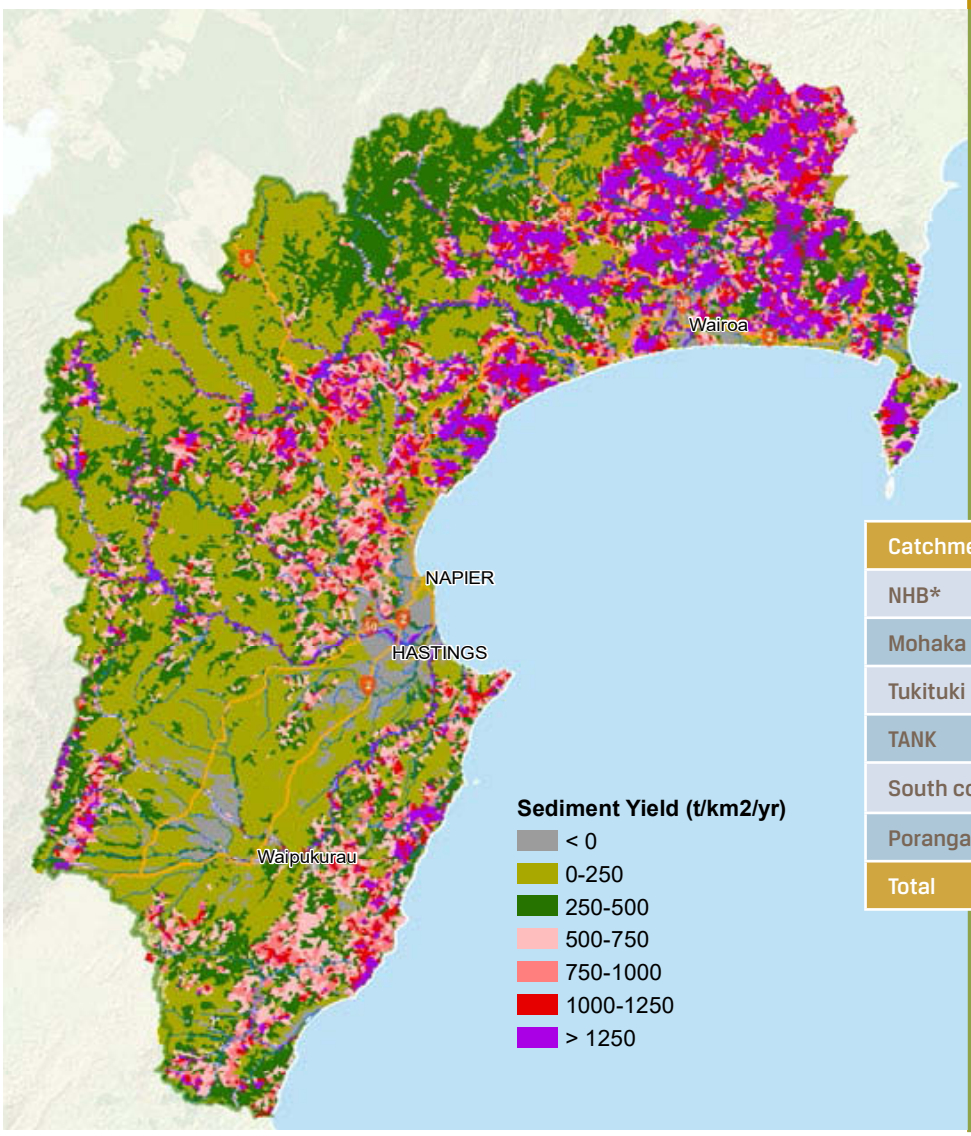
- Where sediment/comes from in the landscape
- What type of erosion is causing the sediment i.e. landslides, riverbank erosion etc.
- How much we can reduce the sediment by improving things such as planting trees on vulnerable hill slopes or fencing and planting riverbanks.

QUICK FACTS

An estimated 7.6 million tonnes of sediment leaves the region every year

Over 5 million tonnes of sediment comes from hill country

An estimated 1.1 million tonnes of sediment is eroded from river banks



This table shows what the model predicts will be lost every year under current conditions, without additional plantings and changes in the environment.

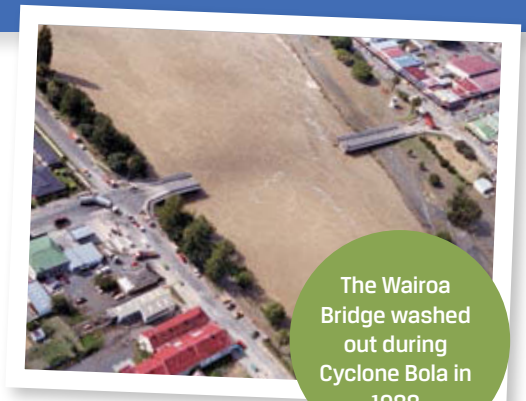
Catchment	Tonnes per Year	Area (ha)
NHB*	4,048,646	548,780
Mohaka	904,474	244,210
Tukituki	761,419	250,708
TANK	1,155,013	350,976
South coast	310,294	47,607
Porangahau	416,497	87,684
Total	7,596,343	1,529,965

*Northern Hawke's Bay (NHB) including approximately 100,000 ha of the southern Gisborne region.

State of the Environment **Report Card 2016**

About erosion and slips

Hawke's Bay is regularly affected by intense storms, and predictions are that these will increase with climate change. As well as the damage done to property, storms often cause slips on our thin soil.



The Wairoa Bridge washed out during Cyclone Bola in 1988

Slips remove all topsoil and much subsoil leaving a very poor surface for pasture growth, and limiting productive use. The biggest challenge is replanting this lower fertility soil to return to economic production. A mix of hardy pasture species, fertiliser, soil conservation planting and careful management are needed.

HBRC's Land Management Advisors can help with information on soil conservation planting and slip recovery. Contact us on 06 835 9200 or 0800 838 108.

HAWKE'S BAY SOILS

Across Hawke's Bay, many different types of soils have evolved. A knowledge of these soils is critical to understanding the growing environment for your trees, crops and pasture.

State of the Environment **Case Study**

Planting up a storm

HBRC's modelling work helps our land management team target areas that are most vulnerable to erosion.

One thing we know is riparian planting helps prevent erosion on the edges of streams and river.

Each year HBRC offers thousands of plants at wholesale prices through its riparian planting scheme. The aim is to encourage farmers to retire and/or plant stream margins with native plants that would have naturally grown there in the past. HBRC's Open Spaces team uses several thousand each year for community plantings throughout the region during the winter months.

Find out more

The purpose of HBRC's State of the Environment report is to:

- Report on issues that affect our shared environment
- Help councils and communities set priorities for environment management
- Monitor the effectiveness of how we manage the environment
- Provide information people can use in their decision-making

This report card is part of a series prepared by Hawke's Bay Regional Council. It outlines the high-level results from HBRC's monitoring programme.

For more details, including full technical reports and up to the minute monitoring results **visit: www.lawa.org.nz**

HAWKE'S BAY REGIONAL COUNCIL

www.hbrc.govt.nz