



Hoea te Waka, piki te mātau

ENVIRONMENTAL HEALTH

How can you tell if kaimoana is safe to eat? Develop your observation skills and look for evidence of a healthy (or unhealthy) environment.

In this module you will measure parameters of water quality and carry out surveys of marine communities to learn more about your marine environment.

This module includes:

- Wai tai me te wai Māori - water health survey

Te Wai Tai me te Wai Māori - Water Health Survey - background reading

Ka ora te wai tai

Healthy waters of the sea

Ka ora te wai Māori

Healthy fresh waters

Ka ora ngā rauropi

So will be all living things

This survey was developed from the Cultural Health Index (Ministry of the Environment, Publication reference number: ME 711, 2006). It involves making a series of analyses based on mātauranga Māori to indicate the health of our watery environments.

Photocopy the survey for your class to complete. Within their groups get the students to swap their questionnaires so that the questionnaire can be analysed by a second party.

For more information on the Cultural Health Index see <http://www.mfe.govt.nz/publications/cultural-health-index-streams-and-waterways-feb06>



Te Wai Tai me te Wai Māori - Water health survey

Location:

Date:

1) Ko wai koe? Tō ingoa/Name:

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I am: (please tick)

- Primary school level
- Secondary school level
- Community member
- Other

Do you have any links to this area?

- I live here
- Whakapapa
- No link
- I visit often
- Other

How many times have you visited the area?

- This is the first time
- 1-5
- 5-10
- Heaps!

From your first look at this area, would you eat any of the kaimoana?

Yes

Why?

No

Why?

2) Site Characteristics

What is the shore like in the area you are surveying?

- Sand or mud (circle)
– sandy beach, mudflat, estuary (near a river)
- Rocky shore (circle)
– boulders, stones, bedrock
- Other

If muddy, what is the colour like?

- Normal
- Black
- Muddy
- Other

What about when you dig whole with your foot, does the colour change?

- Yes
- No

What does it smell like?

- Normal
- Stinky
Describe

What does the water look like?

- Clear as crystal
- Slightly murky
- Very murky

3) Life within and around

Within 500m of your survey site, are there any of the following?

- Large rivers
- Streams
- Drains
- Farm land
- Industrial areas
- Houses
- Drains
- Cities
- Towns
- Forestry

Can you see any animals within 500m of your survey site?

- Shelled animals, eg snails, cockles
- Crabs
- Sea Birds
- Barnacles
- Fish
- Other

Is any animal or plant more noticeable in the survey area?

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What kind of plants are within 500m of your sampling area?

- Sea grass
- Seaweed
- Salt marsh plants
- Sand dune plants
- Bushes
- Trees
- No plants (developed area)

4) Is there anything else that you find interesting about this area?

(Eg any rubbish, heaps of cockle shells, lots of algae, dead animals, it looks cleaner than where I am from.)

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When you have completed your survey, hand it to someone else to look at and ask them to answer these questions:

a) Are you able to rate the health of this environment?

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b) What does this survey tell you?

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c) How often do you think such a survey should be done?

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d) What other information or measurements would be helpful to assess the health of the area?

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e) What is the value of looking closely at the area?

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