

TŪ TE MANAWA MEASURING CULTURAL HEALTH

What is the Cultural Health Index?

The Cultural Health Index (CHI) is a tool that Māori can use to assess and manage waterways in their area. It is an index that allows iwi/hapū to assess the cultural and biological health of a stream or catchment of their choosing.

Once monitoring has been completed the data can be analysed so that changes at a site are identified and the site can be restored or enhanced if necessary. The CHI can also be used to monitor changes after restoration work has been carried out at a site.

How does it work?

The CHI is made up of three linked components. Each component is assessed separately and then all three are combined to provide a cultural health measure. Combining the three components – status of the site, mahinga kai values and stream health – gives a comprehensive assessment of the cultural health of the river site.

Component 1 – Site status

Site status is a statement of whether or not the site is an area of traditional significance to iwi/hapū. A traditional site is assigned an A, a non-traditional site a B.

A second measure making up the site status is an evaluation of whether iwi/hapū would return to the site in future. 1 return to the site, 0 if not.

Component 2 – Mahinga kai

The second component allows the mahinga kai values of a site to be evaluated and expressed. Examining mahinga kai values recognises that the mauri of a waterway can be tangibly represented by physical characteristics, indigenous plants and animals, productive capacity and whether mahinga kai is suitable for cultural use.

The mahinga kai measure is made up of four elements:

1. Identification of mahinga kai species present at the site. The productive capacity of a site includes the ability of the waterway to support mahinga kai species.
2. Comparison between the species present today and the traditional mahinga kai sourced from the site.
3. Assessment of access to the site. Mahinga kai implies that iwi/hapū have physical and legal access to the resources they want to gather.

4. Assessment of whether iwi/hapū would return to the site in the future as they did in the past.

The four mahinga kai elements are then combined to give a single mahinga kai measure between 1–5.

Component 3 – Cultural stream health

The cultural stream health measure is made up of an assessment of eight individual stream health indicators.

These indicators result from research carried out in four catchments across New Zealand where the CHI was developed. Of the tested indicators, eight were found to best describe how iwi/hapū assesses overall stream health.

Together, the eight indicators make for a robust cultural stream health measure.

The following descriptions of the indicators show how each indicator can impact on stream health.

1. Catchment land use – relates to the land use or land cover in the wider catchment that can be seen from the site being assessed. Heavily used land can impact on stream health.

2. Riparian vegetation – is the vegetation, indigenous or exotic, that is visible along the margins (100m either side) of the waterway. A lack of vegetation along the margins can impact on stream health.

3. Use of the riparian margin – is the extent the margins of a stream are being used. Heavy use of the margins can impact on stream health.

4. Riverbed condition/sediment – the state of the riverbed can be assessed by the amount of sediment that has built up. Sediment impacts on the habitat of invertebrates ('bugs on the bottom') – a critical source of food for many stream inhabitants.

5. Channel modification – refers to the river channel shape and whether that has been modified by work in the channel or other similar types of activities such as gravel abstraction. A modified stream channel can impact on stream health.

6. Flow and habitat variety – refers to how variable the rate of flow is in the river. It also examines what variety of flow-related habitats such as pools, runs and rapids are present. Little or no current and a lack of flow-related habitat variety can impact on stream health.

7. Water clarity – should water clarity be low the stream might be carrying sediment or some form of effluent that can impact on stream health.

8. Water quality – is the most important indicator of cultural stream health. Degraded water might be discoloured and carry films and scum, all of which impact on stream health.

Assessments of the eight indicators are combined for each site to give a single measure of cultural stream health between 1–5.

This measure provides a reliable appraisal of the cultural health of the stream, and the individual indicators provide detail about features which might be responsible for maintaining or downgrading stream health. This information can be very helpful in deciding the most effective management action to improve stream health.