Manaaki Taha Moana (MTM) is a research programme to restore and enhance coastal ecosystems and their services of importance to iwi/hapū, through a better knowledge of these ecosystems and the degradation processes that affect them.

We utilise Western Science and Mātauranga Māori and participatory modelling tools and processes to assist iwi/hapū to evaluate and define preferred options for enhancing/restoring coastal ecosystems. This evaluation of options is assisted by innovative IT and decision support tools (e.g. digital libraries, simulation modelling, interactive mapping, 3D depiction, real-time monitoring).

Action plans are being produced for improving coastal ecosystems in each of the case study regions.

The research team works closely with iwi/hapū in the case study regions to develop tools and approaches to facilitate the uptake of this knowledge and its practical implementation.

Mechanisms will also be put in place to facilitate uptake amongst other iwi throughout NZ.
Lack of access to information limits the ability to effectively engage in decision-making. ‘Digital Libraries’ were created to house published information, data, maps, photographs, reports and articles of relevance to the Tauranga Moana and the Horowhenua case studies.

This information system has been updated throughout the MTM programme and thus provides online access to researchers, and local Māori alike to directly relevant information, much of which was previously difficult to locate. This greatly reduces the effort that was previously required to identify and then source information.

Waka Digital initially built the MTM Digital Library using Greenstone - an open source suite of software used for building and distributing digital library collections. Greenstone was produced by the New Zealand Digital Library Project at the University of Waikato and developed and distributed in cooperation with UNESCO. It is an open-source, multilingual software platform issued under the terms of a General Public License.

Greenstone was chosen as a good fit for Manaaki Taha Moana as its aim was to empower users, to build their own digital libraries, using contemporary standards.

Greenstone was also chosen as it runs on all versions of Windows, Unix/Linux and Apple (OSX) operating systems, requires little installation and was able to be deployed from a cloud server where it interoperates with standard web-server software (e.g. Apache).

“Plug-ins” are used to ingest externally-prepared metadata in different forms and plug-ins exist for: XMLMARC, CDS/ISIS, ProCite, BibTex, Refer, OAI, DSpace, METS. Plug-ins were also utilised for the Digital library also used to ingest documents. For textual documents, there are plug-ins for: PDF, PostScript, Word, RTF, HTML, Plain text, Latex, ZIP archives, Excel, PPT, Email (various formats), source code. For multimedia documents, there are plug-ins for: Images (any format, including GIF, JIF, JPEG, TIFF), MP3 audio, Ogg Vorbis audio, and a generic plug-in that can be configured for audio formats, MPEG, MIDI, etc.

Waka Digital further developed the digital library software by writing a Joomla plug-in which allows the ability to easily replicate and share such a tool on websites to as many iwi and hapū that require it. Users are able to view the projects various endnote bibliographies on a website. More information can be found on the Manaaki Taha Moana website www.mtm.ac.nz.