

## **New research to enhance water quality in New Zealand**

Motu Economic and Public Policy Research has received a \$1 million grant over two years from the Foundation of Research, Science and Technology (FRST) to provide solid integrated research to develop innovative approaches to manage water quality in New Zealand lakes and rivers.

Motu is a non-profit economic and public policy research institute that aims to promote well-informed and reasoned debate on public policy issues.

The quality of water in New Zealand's lakes and rivers is adversely affected by sewerage and byproducts from dairy and sheep farming. They cause unsustainable levels of nutrients such as Nitrogen and Phosphorus to enter our lakes. This increases the frequency of algal blooms in water systems, which affects fish, plant and animal populations, as well as limiting recreational use.

Motu's Director, Dr Suzi Kerr, acknowledges the importance of the dairy industry in New Zealand. "Dairying makes up 20% of New Zealand's exports and is a significant contributor to our recent economic growth.

"But it and other intensive land uses are threatening the quality of our lakes and rivers which are critical to the success of our tourism industry, which makes up about 18% of exports, as well as our clean green image, which is important for all exports including dairy.

"If we manage water quality badly, at least one of these sectors will be severely constrained and a key aspect of New Zealanders' quality of life will be compromised."

Motu, with experienced locals in Rotorua and technical input from NIWA, is already working to clearly define local goals for the long-term management of Lake Rotorua and design a prototype nutrient-trading programme that, if implemented, would achieve these water quality goals for Lake Rotorua at the lowest possible cost.

"A nutrient-trading programme is a promising potential policy option for preventing water quality decline in New Zealand" says Dr Kerr.

This preliminary work is being funded by Environment Bay of Plenty, the Ministry for the Environment and the Ministry of Agriculture and Forestry. Motu, together with its research partners in NIWA, GNS-Science, Victoria and Waikato Universities, Ohio State University and the Consensus Building Institute in Cambridge, Massachusetts will use the funding supplied by FRST to build on this research so that their findings could be applied to other lakes and rivers in New Zealand.

Motu and FRST hope that this research will lead to the development of policies that will guarantee environmental sustainability and at the same time ensure that the agricultural sector remains productive and competitive.