

Science Challenge in 2010 identified the following ten priority areas for research (MoBIE, 2013):

- Ageing well;
- A better start – improving the potential of young New Zealanders to have a healthy and successful life;
- Healthier lives;
- High value nutrition;
- New Zealand’s biological heritage: biodiversity, biosecurity, etc.;
- Our land and water – research to enhance primary sector production and productivity while maintaining and improving the quality of land and water quality for future generations;
- Life in a changing ocean – understanding how to exploit our marine resources within environmental and biological constraints;
- The deep south – understanding the role of the Antarctic and the Southern Ocean in determining our climate and our future environment;
- Science for technological innovation; and
- Resilience to nature’s challenges – research into enhancing our resilience to natural disasters.

Box 27.1: New Zealand: using science diplomacy to make a small voice heard

Science diplomacy is often viewed as the domain of great powers and associated with megascience projects like the International Space Station. Beneath these high-visibility projects, however, science plays a key role in more discreet and mundane ways in the functioning of the international system.

Under the leadership of Sir Peter Gluckman, Chief Science Advisor to the Prime Minister, New Zealand has been quietly building a number of networks since 2009 that combine science and diplomacy to advance the interests and presence of smaller powers in the international arena. In an era where international economic governance is increasingly seen as the purview of groupings of populous countries like the G8 or the G20, New Zealand’s approach acts as a ‘canary in the mine’ for larger countries, says Prof. Gluckman, alerting them to the particularities of smaller powers which have not always been reflected in the traditional rules-based international architecture.

Science for diplomacy

New Zealand has formed an informal ‘coalition of the willing’ with other advanced economies of less than 10 million inhabitants. This is a select group: the International Monetary Fund includes just three countries outside Europe in this category: Israel, New Zealand and Singapore. With the

addition of the smaller European powers of Denmark, Finland and Ireland, the ‘coalition of the willing’ currently counts six members.

New Zealand hosts and funds the secretariat of its Small Advanced Economies Initiative. The coalition shares data, analysis, discourse and projects in three areas: public science and higher education; innovation; and economics. A fourth area of co-operation involves ‘conversations’ between members on how to strengthen national branding and the voice of smaller nations within a broader diplomatic agenda.

Diplomacy for science

As the world’s highest emitter of methane per capita, owing to its large population of livestock, New Zealand is particularly keen to promote a science-based international dialogue at the nexus between food security and greenhouse gas emissions from agriculture – agriculture accounting for about 20% of global emissions.

At the climate summit in Copenhagen (Denmark) in 2009, New Zealand proposed creating a Global Research Alliance to Reduce Agricultural Greenhouse Gases. One motivation was also the ‘existential concern regarding future market resistance to our farm products’. This alliance currently has 45 members. It is unique in that it is led by scientists, rather than government administrators, in recognition of the fact that countries prefer to spend

their research funds within their own border. In Prof. Gluckman’s own words, ‘here, the diplomatic interests of New Zealand demanded that science be done but, for that science to be done, the diplomats had to create the vehicle then get out of the way.’

Science as aid

In its aid policy, New Zealand makes a special effort to take into account the interests of smaller countries; it focuses on issues such as energy and food security or non-communicable diseases, where the small size of countries is a particular handicap. For instance, New Zealand’s priority aid activities in Africa, such as solar-powered electric fence technology, heat-resistant livestock and enhanced forage plant species, all rely on science and its local adaptation.

‘I have tried to show how a small country can use science within the diplomatic sphere to protect and advance its interests’, says Prof. Gluckman. That argument seems to have borne fruit. New Zealand gained enough support for it to be elected to a non-permanent seat on the United Nations Security Council for the 2015–2016 term.

Source: Based on a lecture given by Prof. Gluckman in June 2015, as part of a summer course on science diplomacy at the World Academy of Sciences.

Read the full speech: www.pmcsa.org.nz/wp-content/uploads/Speech_Science-Diplomacy_Trieste-June-2015-final.pdf