**Workshop reporting**

**1st Australia and New Zealand Water Quality Modelling Symposium**

7-10 April 2024, Queenstown, NZ.

**Workshop Topic** 1.2 Linking modelling with indigenous communities and knowledge systems.

**Vision** *What does success look like? What are the outcomes?*

Research has an ethical imperative to engage with traditional owners given that land and water naturally brings in traditional owner interests.

Governance processes are critical in achieving effective and efficient engagement. These need include indigenous co-governance.

Long-term relationships are essential and require investment. This would include research institutions developing groups that a) have the right capability and b) can act as a central channel for efficiency and long-term relationship holding.

Recognition, Renumeration and Attribution is critical to trust and maintaining relationships.

Successful linkage of modelling with indigenous communities and knowledge system requires:

* Co-governance which is structured to be empowering and engaging
* Representation of relevant and insightful partners
* Knowledge which is protected, respected and understood
* A commitment to partnership and future growth

Notes:

Co-governance. What does this mean. Aims – representation from institution, community, etc. Will be divergent views and may not align with research team objectives. So need time to develop mutually valuable directions. This where long-term relationships are essential. Community expertise can’t be coopted into team. Don’t waste time talking past each other. Need to spend time to develop conceptual model etc up front. A challenge at present is that many funding approaches don’t respect this. How do we practically ingrain this in long-term institutional behaviour.

Indigenous groups to feel properly represented in setting science agenda – empowered to make decisions

Treaty vs not in NZ vs Aust

Co-governance

COAG closing the gap – mainly health.

**No onus in Australia**

Even in NZ – lack of process for co-design etc. Public funding requires input – VM – sometimes research groups don’t have links and this causes issues.

**Ethical basis – need to ensure things are right even without legislative requirement.**

**Land and Water – naturally there is a strong indigenous interest**

**Indigenous lead** – not just consulting or co-design. It is about governance

When and how to involve? How do we know?

NZ trying to flip things around – Maori driven – 2 way conversation but focussed on indigenous needs.

Science fair idea??

Science comms programs from CRIs/Unis – but science is defined by pakeha. Indigenous science handed down etc. A mismatch…..

Success. How do we get it. Governance is critical. Partnerships and co-delivery. Needs to be resource investment into communities – often missing.

Treaty settlements. Iwi resource management documents. Documents are sitting on shelves but many will be on local websites. Teams have come and gone. Institutions resulting from various institutions created as part of this. NZ haven’t recognised the value of these. National science challenges don’t properly recognise the value.

Who leads, who has resource control, etc. Agreeing on principle of co-governance is critical. Self determination principle. How do you get resourcing independent.

WWW – many reports are on internet for Iwi giving an idea of **Good governance is central. It is about process not the modelling itself.**

Priorities but not read.

Community moves at the speed of trust

Where does private sector investment in this. Many commercial interests (developers etc) are big model investors – how to bring that in? Not by regulation. Social license to operate.

Long process of building……

Scale question – regional level modelling vs individual properties.

Use of representative bodies and central points of contact useful. Long term relationships – **institutions need to invest in the longer-term staff to build these**. Need to work out how to invest in the right partnerships. Often overlooked

**\*\* MODSIM – could we run a session of indigenous lead modelling studies? Session or keynote.**

**Leave door open. Part build. Engage.** Some of this can be

**Scope and Issues** *Discuss and capture the boundaries and known barriers*

* Resourcing
* Institutional commitment
* Capacity and capability limits exist
* There is only partial legislative backing which varies between jurisdictions.
* How to deal with retrospective projects
  + Approach
  + Openness
  + Time of healing
* Need to get line items for reimbursement, scholarship for capability development (community researcher etc), into budgets – this is something that is under
* Lack of knowledge of existing knowledge resources such as resource management documents from Iwi

**Short, medium and long term goals** *Can we identify logical steps to make progress? Note some of these are outside MSSANZ ability to deliver.*

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| --- | --- | --- | --- |
|  | Short (1-3) | Medium (4-10) | Long (10+) |
| Co-governance | Guidance:   * What does co-governance look like? What makes modelling useful for indigenous communities? * Principles needed to link indigenous communities with knowledge systems | Guidance:   * Accreditation. Could this be a way of encouraging the right action? |  |
| Representation | * Key contacts within and external to organisation * Spatial understanding of where indigenous boundaries are | * Established institutional commitment * Empowered panels providing independent reviews of models * Oversight groups established for research programs | * Recognition of indigenous rights / corporations |
| Knowledge | * Cultural capability training workshop. * Data sovereignty workshop | * Fit for purpose – identify what fit for purpose for indigenous communities is | * Utility – models developed which are fit for purpose and are relevant to indigenous communities * Knowledge protected, respected and understood and is managed appropriately |
| Partnership | * Community of practice – people to talk to * Education/interaction with practitioners | * Incentives – MSSANZ Indigenous partnership award * Two-way learning established | * Growth – reflections and future growth for partnerships |
| Capability development | * Established indigenous access programs to tertiary (incl supports) * Building indigenous appreciation/awareness into tertiary courses | * Scholarships for indigenous modellers | * Thriving partnerships with shared understanding within both indigenous and non-indigenous practitioners |

**Prioritisation of goals** *Do we need to prioritise goals?*

**Identify key actions to achieve the priority goals**

1. Approach David Post for MSSANZ view (Andrew Western)
2. Form a group to finalise a positioning statement and list of guidance resources and case studies (include a statement on how it was developed).
3. Approach MSSANZ to consider cultural engagement capability development using MODSIM as a vehicle. Data sovereignty workshop. Workshops, sessions, plenary at MODSIM 2025. MSSANZ to think about how to make MODSIM culturally sound while addressing this issue (Cass had ideas).
4. MSSANZ indigenous engagement award – individual or team who have done this well (AW).
5. Develop community of practice (to emerge over time – maybe this is just MSSANZ with sessions etc)

Could link up with NZ Freshwater Science Society to learn how they built Indigenous values into their society and conferences. Maybe others societies.

Sources of information for guidelines:

* Rauika Mangai are some existing guidelines. See also CRI web sites
* CORE Nga Pae O Te Maramatanga
* AIATSIS institute (from Cass Sedron Price). Also Aust research code of ethics. <https://aiatsis.gov.au/>
* Tanira has templates etc could be attached.
* Cass also from CSIRO perspective.
* Also university ethics processes – this is controlled by ethics
* CSIRO Researcher toolkit

**Prioritisation of actions** *Can we prioritise actions?*

This really starts with the MSSANZ view on how to progress. The organisations that we work for are making progress in better at involving and working with indigenous scientists and knowledge. Therefore, the key question is what is MSSANZ role – as a professional society – in this space? Hence, the feeling in the workshop was that the details of actions sits with the individual research organisation that we all work for and that MSSANZ role is to ensure that its events are a culturally open and welcoming to addressing indigenous needs.

**Implementation plan** *Responsibilities, funding, timeline, how organising (what, who, when)*

Really sits with MSSANZ leadership rather than the workshop participants.