From:	Christine Coughanowr
To:	Tasmanian Salmon Study Secretariat
Subject:	Submission from the Tasmanian Independent Science Council
Date:	Saturday, 20 June 2026 10:27:02 AM
Attachments:	TISC response to Independent Study Plan_Stakeholder Engagement Plan for the Tasmanian Salmon Industry 20 June 2026.pdf TISC PLAN B - 2026 Update 20 June.pdf CSIRO Storm Bay Model Extension - Potential Strategic Application to D"Entrecasteau Channel Marine Farms_JP v 20 June 2026.pdf Modular Land Based Salmon RAS Transition - Benchmark Reference Design Concept_JP.pdf Study Governance and Secretariat Arrangements.pdf

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Attached please our submission with associated attachments.

Can you please confirm receipt?

Thank you

Christine Coughanowr
TISC Co-chair

To: Dr. Wendy Craik AM and Dr. Russell Reichelt AO, Joint Study Leads

20 June 2026

INDEPENDENT STUDY OF THE TASMANIAN SALMON INDUSTRY

DRAFT STUDY PLAN V 2.0 MAY 2026 and STAKEHOLDER ENGAGEMENT PLAN

SUBMISSION FROM THE TASMANIAN INDEPENDENT SCIENCE COUNCIL

The Tasmanian Independent Science Council is dedicated to science-based policy reform to ensure the long-term health of Tasmania's environment. The Council is made up of scientists, economists and other professionals who provide independent, non-government advice, focusing on policy reforms of significant State and National interest. Our mission is to inform public debate and influence legislative reform to improve outcomes for terrestrial, freshwater and marine ecosystems.

The TISC welcomes this independent review of Tasmania's salmon industry, and we hope for a positive outcome.

We have participated in many previous salmon-related consultative processes over the past 5+ years – both individually and as an organisation. These have included the Legislative Council Enquiry (2020-21), the Salmon Industry Growth Plan (2021-22), the Finfish Environmental Standards, Biosecurity Standards and Operational Standards (2022/23), the EPA Technical Standards (video monitoring, 2025), and the independent BEMP reviews undertaken by the Scottish Association of Marine Science (2020-22). We have also reviewed dozens of EIAs, Environmental Licenses, BEMPS and other scientific reports related to salmon operations in Tasmania.

Collectively, we have spent well over 1000 hours on these efforts. We are extremely well informed about both the science and operational aspects of salmon aquaculture in Tasmania, and the natural values, processes and economics of Tasmania.

Unfortunately – to date – the majority of our inputs and efforts has been largely ignored, and we would be reluctant to invest substantial further time and resources without a clear, efficient review process leading to nature-positive outcomes, with a focus on, and incorporation of the precautionary principle.

We note with concern that implementation of the Tasmanian Government's own initiatives have in many cases been poor, ranging from inconsistent to absent, with key aspects of the 2023 Salmon Industry Growth Plan delayed or not yet commenced. For example, a review of the Implementation Plan (p 7) shows that transitional arrangements for flow-through fish farms have not commenced; none of the technical standards designed to support the Environmental Standards have been completed; and no annual Community Engagement Forums (p 8) have been held. In contrast, the Salmon Industry Working Group (p 8) has met on at least 13 occasions.

To avoid further unsatisfactory outcomes, we recommend that the Study Plan be substantially revised and simplified, with a focus on key issues relevant to Tasmania, and acknowledge and incorporate the key findings from previous enquiries and consultation processes, as well as more recent crises, such as the mass mortalities and subsequent heavy use of antibiotics.

We strongly recommend that the Independent Study carefully consider and incorporate the major findings of the Legislative Council review as a starting point. This was a comprehensive and even-handed process that considered the full range of views, and the majority of the findings are still very relevant.

We are concerned that the draft Study Plan, as written, is too complex to be completed in the time available, with 3 phases, 9 topics and 49 specific questions/issues to be addressed.

Instead, the Independent Study might more productively focus on 5 to 10 specific issues that have been major points of debate and conflict in Tasmania. These should include: reducing the impacts of nearshore operations; transition of flow-through hatcheries to RAS; mass mortalities and antibiotic use; identifying what constitutes a fair economic return to the community; and improvements to scientific and regulatory rigour and independence. These topics align closely with TISC's *'Plan B: An Alternative Vision for Aquaculture in Tasmania'* (p 4), and we have attached an updated version of this document for your consideration.

We would also suggest that several pilot projects could productively be undertaken as part of the Independent Study to investigate options/potential solutions to key issues. For example, recalibration/extension of the recent Storm Bay models to better understand/adjust farming operations in the Channel/Huon region and development/testing of design concepts for models for land-based RAS production systems would provide a useful contemporary understanding for the Study (see attached working briefs for further detail).

As regards the **Stakeholder Engagement Plan**, we consider ourselves to be members of the Scientific and Research community and would expect to be included in the consultation processes aligned with this stakeholder group.

It is critical that the Tasmanian Government provide further details as to who will be included on the Study's Expert Advisory Group, as this will be a key factor to demonstrate relevant expertise and independence.

Furthermore, the Plan needs some clarity about how the input from the various stakeholders will be assessed, weighed and integrated so that it accurately reflects the input provided.

Finally, it is highly concerning that the **Secretariat** for this Study will be hosted by the Department of Premier and Cabinet. This raises serious concerns about both the potential for, and perceptions of, conflicting interests that would reduce the independent nature of this study. To be truly independent, the Secretariat should be removed from DPAC and hosted where the potential for actual and/or perceived conflicts of interest are eliminated to the greatest extent possible. See Attachment for a further discussion of this important point.

To summarise our key points:

- The TISC has invested heavily in salmon-related research and previous reviews and we are very well informed
- Previous processes have not delivered satisfactory outcomes
- Government implementation has often been poor.
- The study should focus on practical Tasmanian issues, leading to nature-positive outcomes, and incorporating the precautionary principle
- TISC's Plan B provides a coherent alternative pathway.
- The study should examine potential solutions, not merely describe problems.
- The TISC should be included as members of the Science and Research community
- The Study findings will not be accepted as credible by the Tasmanian community unless independence and balanced stakeholder engagement can be demonstrably achieved.
- Alternative options for Secretariat support should be strongly considered

As previously offered, we remain available to meet with you to discuss the matters raised in this submission and previous correspondence.

Sincerely, on behalf of the Tasmanian Independent Science Council





Christine Coughanowr and Graeme Wells

Co-chairs, on behalf of the Tasmanian Independent Science Council

Attachments:

- Plan B: An Alternative Vision for Salmon Aquaculture in Tasmania
- Pilot project briefs: Land-based RAS transition; Channel-Huon model extension/calibration
- Study Governance and Secretariat Arrangements

PLAN B: AN ALTERNATIVE VISION

FOR SALMON AQUACULTURE IN TASMANIA

Tasmanian Independent Science Council

GROWING PAINS

Salmon farming in Tasmania has grown up. Once a small, niche business owned by Tasmanians, production has more than doubled in the past decade and is now valued at over one billion dollars/year. The three original companies have been acquired by multinational corporations that no longer release public annual reports and pay little to no company taxes.

The increased scale of production has entailed new technologies. Tasmania now boasts some of the largest salmon cages in the world, giant well boats to bathe and transfer fish, centralised automated feeding systems and robotic net cleaners. These efficiencies have not resulted in a proportional increase in jobs, particularly in regional areas.

This rapid growth has also been accompanied by increasing environmental and social impacts, including water pollution, algal blooms, marine debris, and unacceptable levels of noise and light. Tasmanians are increasingly concerned about the scale and pace of expansion, and many are demanding a reduction in nearshore farming operations. Further expansion without robust scientific and regulatory frameworks is clearly a risky proposition.

Finally, the longer-term viability of farming salmon in a region with rapidly warming coastal waters needs careful consideration. Tasmania is experiencing severe salmon mortalities associated with disease, low oxygen and jellyfish, all of which will be worsened by climate change. This is not unique to Tasmania, and huge investments are being made globally in land-based and offshore technologies to transition to more sustainable models. Tasmania needs a clear plan and incentives to make a similar transition, or we are likely to be left behind.

WHY PLAN B?

In April 2022, the Tasmanian Government commenced a process to develop a 10-year salmon plan. Key stakeholders, including the Tasmanian Independent Science Council (TISC), were invited to participate in a 'consultative and collaborative' process to provide input to this plan. The TISC participated in all aspects of this consultation process, but our input—along with that of many other organisation and individuals—was largely ignored. Rather than criticising a flawed process and deeply unpopular outcome, we decided to take a more positive approach in hopes that this alternative Plan B could provide the basis for a more constructive outcome.

In 2026, the Tasmanian government commissioned an independent study of the salmon industry to be undertaken over a 12-month period. In response, we offer this updated version of Plan B as a useful template for a more sustainable way forward.

WHY A TEMPORARY PAUSE IN FURTHER GROWTH IS NEEDED

The TISC strongly recommends a pause on further growth, specifically on the tonnage produced. This is necessary to ensure that both existing and future production is sustainable, does not damage the environment and is supported by the community. This pause is also needed to ensure that the scientific understanding, regulatory controls, and incentives are in place to manage future growth, limit biosecurity risks and support long-term employment and revenues to the state.

ABOUT THE TASMANIAN INDEPENDENT SCIENCE COUNCIL

The Tasmanian Independent Science Council is dedicated to science-based policy reform to ensure the long-term health of Tasmania's environment. The Council is made up of scientists, economists and other professionals who provide independent, non-government advice, focusing on policy reforms of significant State and National interest. Our mission is to inform public debate and influence legislative reform to improve outcomes for terrestrial, freshwater and marine ecosystems.

VISION

A profitable salmon industry that coexists with healthy marine and freshwater environments, provides good economic value to the Tasmanian people, and does not detract from the use and enjoyment of our shared waterways.

We envisage a more vibrant, more innovative, more sustainable salmon industry that will deliver the following five wins for Tasmania. The transition out of shallow coastal waterways onto land and/or further offshore is already happening globally, and Tasmania is in a position to deliver a genuinely sustainable, high value product through clever policy, incentives and targeted investment.

WIN #1 SECURE JOBS IN REGIONAL AREAS AND A FAIR ECONOMIC RETURN

Further increases in the volume and scale of production are not guaranteed to preserve jobs in regional communities and may in fact result in a decline due to further automation, giant well boats, more centralised operations and seasonal worker schemes. A network of distributed, land-based RAS facilities may offer better opportunities for secure, regionally based jobs. Genuinely offshore production could also support regional jobs, particularly if processing occurs in Tasmania.

Regional communities - and Tasmania as a whole – would be far better off with a system similar to the Norwegian model, whereby substantial taxes and fees are levied, and funds are distributed between the state and the regions. Alternatively, additional lease and/or production-based charges could be introduced to support a wide variety of social, economic and environmental initiatives in regional areas.

WIN #2 A CLEAN AND HEALTHY ENVIRONMENT

Tasmania's global brand depends on a clean and healthy environment, and our population expects the same. This is not negotiable. The continued pollution of shallow, nearshore waterways by open pen salmon farming cannot continue, nor should further expansion into nearshore waters be permitted. Clear policy, strong regulations, comprehensive monitoring and transparent reporting are needed to reverse and prevent environmental harm. Additional funding will be required for this and should be distributed through an independent mechanism to prevent real or perceived bias.

WIN #3 LONG-TERM SUSTAINABLE GROWTH FOR AQUACULTURE

A global shift is currently underway towards land-based and offshore salmon aquaculture, driven by climate change, increasing disease and mortalities, evolving technologies and consumer demand for high quality, ethical products. Tasmania cannot hope to compete with industrial-scale nearshore production without serious damage to our brand and environment. By combining our natural advantages (cool climate, abundant freshwater, green energy), skilled workforce and end-to-end production systems Tasmania has the potential to become a world leader in higher value, more sustainable aquaculture. An open-minded and creative strategy is needed to achieve this goal.

WIN #4 WORLD CLASS SCIENCE AND INNOVATION

Tasmania is already a global hub for marine science, including aquaculture research and development, and is well placed to develop and export innovative technologies. The CSIRO, IMAS and Blue Economy CRC play important roles here and should be encouraged to contribute to the transition described above. For example, scalable Integrated Multi-trophic Aquaculture systems associated with land-based salmon production could produce a range of seafood and seaweed products as part of the wastewater treatment process. Additional resources are needed to support these initiatives, along with a funding model that will ensure scientific independence.

WIN #5 A SOCIAL LICENSE TO OPERATE

A commitment to the above four wins will go a long way towards achieving social license, which can only be built on trust. Trust is in currently in short supply and will require genuine transparency, respect and a meaningful response to address community concerns as they are raised.

PLAN B: AN ALTERNATIVE VISION FOR AQUACULTURE IN TASMANIA

KEY STRATEGIES & ACTIONS

1. **Implement a pause on further growth of tonnage/biomass** (not leased area) until existing operations have been fully reviewed and adjusted to ensure sustainable production that does not damage the Tasmanian marine and/or freshwater environments, limits biosecurity risks and supports long-term employment and revenues to the state. We suggest that a period of 2 to 3 years may be needed for this review.

2. **Reduce biomass levels in nearshore operations and retire unsuitable leases**, particularly those in areas with limited flushing, elevated water temperatures, high ecological values and/or significant public amenity (e.g. Long Bay, Macquarie Harbour, Okehampton Bay, and areas of the Channel/Huon).
   - Review/audit all existing leases and assess their suitability based on impacts to environmental and community values.
   - Would these meet sustainability criteria as set out in marine spatial planning tools, and taking into account future climate change predictions? If not, the leases should not be renewed.
   - In accordance with the Precautionary Principle, remove or substantially reduce biomass levels (or nitrogen caps) in nearshore operations, starting with those determined to be at higher risk.

3. **Investigate and plan for future land-based / off-shore production and develop incentives to transition away from nearshore operations**
   - Undertake a detailed and fully independent review of both land-based and off-shore production options
   - Identify suitable locations for land-based and off-shore operations, in consultation with the community
   - Investigate and offer incentives to transition to cleaner production methods, e.g. lower lease rates for land-based RAS facilities or genuinely offshore operations; subsidised renewable energy.
   - Set clear, public timelines for implementation.

4. **Support genuinely independent, world-leading science** as a basis for planning and management. This will require an **independent funding mechanism** to avoid real or perceived bias and should be fully funded by the aquaculture industry. Key research and monitoring priorities include:
   - Multi-sector marine spatial planning and climate change risk and response assessments;
   - Comprehensive baseline and follow-up surveys as a pre-requisite for new leases and for all lease renewals; regular reviews and updates of carrying capacity modelling and Broadscale Environmental Monitoring Program (BEMP) designs; risk assessment and mitigation strategies for protected species;
   - Biosecurity and disease management, including health and safety risks to humans and native species;
   - Undertake a series of pilot studies to explore alternative management tools, such as predictive model scenarios for a staged removal of high-risk leases from nearshore regions, or modelling to delineated dissolved oxygen survivability zones for the Maugean skate (see Annex A for examples).

5. **Ensure independent and rigorous regulation, management and enforcement**
   - Modify current policy and practices to limit political and industry influence on the EPA;
   - Restructure the Marine Farm Review Development Panel (MFRDP) to its previous role as a decision-making body, not as an advisory body to the Minister. Broaden the membership to include conservation and Indigenous representation as well as members from affected communities
   - Implement a ten-yearly review of Marine Farm Development Plans, in consultation with the community.
   - Undertake legislative reviews, including of the *Marine Farming Act 1995* and *Living Marine Resources Act*
   - Revise the Environmental, Operational and Biosecurity Standards for Finfish Aquaculture such that they meet international best practice. Complete the associated technical standards as agreed by the EPA.
   - Fully regulate, monitor and report on associated operations, including well boats and their discharges, desalination plants, net cleaning facilities, and fish waste composting and reuse facilities.
   - Review and reduce the current term (30 years) and renewal arrangements (15 years prior) for leases and require transparency of ownership.

6. **Implement full transparency and regular reporting**
   - Expand the salmon portal to include up-to-date information on biomass, pollution loads, water quality, salmon escapes, disease & mortalities, use of antibiotics and other therapeutants, seal and bird mortalities, etc. 'Compliant' is not a meaningful indicator, nor is 'Y/N' for seal deaths and other criteria
   - Prepare and publish annual reports on the salmon industry at the state and marine farming region levels. This should include information on both marine and freshwater operations, employment and a summary of monitoring and environmental impacts.

7. **Undertake genuine community engagement, including regular workshops to discuss and resolve concerns**
   - The annual environmental reports above should be presented to the public at workshops, along with monitoring results, operational context and future plans. Questions and concerns raised require clear answers and meaningful solutions. In some regions, biannual or quarterly meetings may be warranted.
   - Representatives from the community and NGOs should be included on planning, review and decision-making committees, such as the MFRDP and EPA Board

8. **Ensure a fair economic return to Tasmania**

   Growth in the industry must be accompanied by clearly substantiated growth in jobs, along with growth in revenues to Tasmania.
   - Conduct an independent expert review of the costs and benefits of the Tasmanian salmon industry and how this can be optimised for the benefit of the state and affected local communities. This should include improved financial transparency, calculation of adequate fees to ensure full cost recovery of management, research, monitoring and training; options to increase revenues (e.g. auction of production quota/leases, payment of royalties or Gross Product Value fees), payment of Council rates as well as rehabilitation bonds.
   - Investigate what is considered to be a 'fair return to the community' overseas, and how this is achieved. As part of this, consult with the Tasmanian community, and include their views on a fair return.
   - Increase fees and rents to cover full costs of salmon-related management, including monitoring and scientific studies, reporting, training and the use of public infrastructure. Fees should also include a fair return to the Tasmanian community.

9. **Increase job security for Tasmanians**
   - Undertake an independent accounting of direct and indirect jobs and where these are located
   - Assess job loss implications of continued automation, interstate processing and seasonal worker schemes, and develop ways to increase and protect Tasmanian jobs, particularly in rural and remote areas, such that potential job losses will be offset with alternative jobs for resident populations at good pay

10. **Improve monitoring and management of freshwater operations**
    - Quantify current and future freshwater requirements for smolt production and the bathing of caged fish. Can this volume be provided without adverse impacts on community water supplies or the environment?
    - The acceptable standard for freshwater hatcheries and smolt production facilities should be Recirculating Aquaculture Systems (RAS), and clear design criteria should be established to define this. Large-scale flow-through hatcheries should no longer be permitted in Tasmania. Several modern RAS facilities have already been constructed in Tasmania, and these technologies are well-established.
    - Implement a clear policy and sunset clause to convert existing flow-through operations to RAS within no more than 3 years. Review/audit current hatchery operations, including impacts to environment and amenity. Prioritise high risk/ poorly performing operations for urgent conversion or closure.
    - Flow-through hatcheries that discharge contaminated water should no longer benefit from trivial non-consumptive water use fees (approximately $470/year, regardless of the volume used). Link water license fees to discharge quality, with higher fees applied to poorer quality discharges;
    - Improve monitoring of hatchery effluent and downstream river condition. This should include risks associated with blue green algal blooms and toxins on drinking water supplies and recreational activities.

Modular Land-Based Salmon Transition - Benchmark Reference Design Concept

The Tasmanian Government is currently considering the long-term future of salmon production in the D'Entrecasteaux Channel. A key challenge is determining whether viable alternatives exist should environmental constraints, regulatory requirements or community expectations necessitate a progressive reduction in marine farming intensity over time.

This proposal would develop an independently prepared **Benchmark Reference Design** for a modular land-based Atlantic salmon grow-out facility capable of scaling to approximately 15,000 tonnes HOG per annum. The purpose is not to prescribe a preferred industry solution, nor to exclude superior alternatives developed by industry. Rather, it is intended to establish a transparent and independently assessed benchmark against which alternative technologies, business models and transition pathways can be evaluated and compared.

The study would utilise PR Aqua's internationally recognised modular Recirculating Aquaculture System (RAS) methodology as a reference model. Unlike many bespoke land-based salmon projects, the modular approach is based on standardised, repeatable production units that can be progressively replicated as demand and confidence increase. The approach integrates engineering design with a production "bioplan", ensuring that stocking densities, growth rates, harvest schedules, water quality requirements and infrastructure capacity remain aligned throughout the expansion process.

PR Aqua would be responsible for the RAS process design, modular scaling strategy, production bioplan and operational philosophy. A Tasmanian engineering consultant would provide local site assessment, civil infrastructure, balance-of-plant design and cost estimation. The resulting benchmark design would include concept layouts, production modelling, capital and operating cost estimates, risk assessments, infrastructure requirements, funding considerations and a staged implementation pathway linked to marine lease renewal cycles.

The principal value of the study is that it would provide Government with an independent evidence base rather than relying solely on industry or advocacy claims regarding the feasibility of land-based production. It would establish realistic capital requirements, operating costs, production economics, risk profiles and likely government support requirements while identifying key regulatory and infrastructure constraints.

Importantly, the Benchmark Reference Design could be undertaken in parallel with a D'Entrecasteaux Channel biogeochemical–hydrodynamic modelling program. Together, the two studies would address both sides of the transition question. The environmental modelling would assess the long-term sustainability and carrying capacity of current production systems, while the benchmark design would determine whether a commercially viable land-based alternative could be progressively implemented over a ten-year timeframe.

Combined, these studies would provide Government, industry and the community with a robust, transparent basis for evaluating future production pathways. In effect, they would convert a highly contested policy debate into a practical engineering, biological, environmental and economic assessment capable of informing future decision-making and transition negotiations.

CSIRO Storm Bay Model Extension
Potential Strategic Application to D'Entrecasteau Channel Marine Farms

Hypothesis
Recalibrating the CSIRO Storm Bay model for the D'Entrecasteau Channel will improve confidence, reveal greater local sensitivity, and support evidence-based environmental recovery and management strategies.

Proposition
The existing CSIRO Storm Bay model provides a credible foundation for understanding environmental processes within the D'Entrecasteau Channel. Extending and recalibrating the model using Channel-specific monitoring data may significantly improve its predictive capability and provide a robust scientific framework for evaluating alternative environmental, production and restoration pathways.

The CSIRO Storm Bay hydrodynamic–biogeochemical model includes the D'Entrecasteau Channel within its domain and reproduces the Channel's major seasonal patterns and physical processes. The model characterises the Channel as a moderately flushed but semi-enclosed system, with residence times varying seasonally, nutrient inputs from both rivers and aquaculture, and episodic vulnerability to summer stratification and low oxygen conditions. While the model does not indicate system-wide eutrophication or ecosystem collapse, it suggests that environmental resilience decreases under warmer temperatures, stronger stratification, reduced flushing and increased nutrient loading. Overall, the Channel can be described as a conditionally resilient and moderately productive embayment.

Confidence in model predictions could be improved through Channel-specific recalibration using local current, temperature, salinity, nutrient and dissolved oxygen datasets. Recalibration would refine estimates of residence times, vertical mixing, stratification strength, nutrient retention and oxygen dynamics, while reducing uncertainty in predictions. It is unlikely to alter the broad hydrodynamic understanding of the Channel but would probably reveal greater spatial variation and identify sensitive embayments and low-flushing areas more clearly.

A recalibrated model would likely demonstrate longer residence times in some embayments, stronger summer stratification, increased sensitivity of bottom waters to oxygen depletion, and more pronounced local nutrient and chlorophyll responses. The overall nitrogen balance and export to Storm Bay would likely remain similar.

Such a model could provide a robust scientific framework for evaluating alternative management scenarios, including biomass reductions or de-intensification strategies designed to improve environmental resilience and reduce conditions associated with elevated fish mortality. It could also help identify environmental targets consistent with biodiversity recovery objectives by modelling the nutrient, oxygen and sediment conditions associated with improved ecosystem health. While the model could not directly predict mortality rates or biodiversity outcomes, it would provide a powerful decision-support tool for assessing the environmental consequences and likely benefits of different management pathways.

STUDY GOVERNANCE AND SECRETARIAT ARRANGEMENTS

TISC recognises that locating the Study Secretariat within the Department of Premier and Cabinet (DPAC) offers practical advantages in that DPAC is well placed to coordinate across agencies, access relevant information, and provide administrative support to a complex whole-of-government review.

However, the proposed arrangements raise legitimate questions regarding both actual and perceived independence. The purpose of the study is to examine the environmental, economic, social and governance dimensions of the Tasmanian salmon industry, including the effectiveness of existing policy, regulatory and management arrangements. In doing so, the study will necessarily consider matters that fall within the responsibilities of several Ministers and agencies that have played significant roles in the development, regulation and oversight of the industry.

This should not be interpreted as criticism of any individual Minister, agency or public servant. Rather, it reflects the reality that government has multiple and sometimes competing responsibilities in relation to the industry. These include supporting regional employment and economic development, managing public resources, protecting environmental values, ensuring regulatory compliance, maintaining public confidence, and meeting State and Commonwealth statutory obligations. It is therefore reasonable to expect that Ministers and agencies may have differing perspectives regarding priorities, risks, successes and areas requiring improvement.

Against this backdrop, public confidence in the study will depend not only on the quality of its analysis, but also on whether its governance arrangements are demonstrably independent of both government and industry interests. For a review of this significance, avoiding perceived conflicts of interest is almost as important as avoiding actual conflicts.

In TISC's view, it is essential that there be a clear separation between administrative support and analytical judgement. The Study Lead and any expert panel should have sole responsibility for determining methodologies, evidence requirements, stakeholder engagement processes, findings and recommendations.

To strengthen confidence in the study, TISC recommends the following safeguards, regardless of where the Secretariat is based:

- the Study Lead should have clear authority over the work program, evidence gathering, analysis and final reporting;
- the Secretariat's role should be limited to administrative, coordination and logistical support functions;
- all submissions received by the study should be published, subject only to legitimate privacy or confidentiality requirements;
- the methodology for assessing and weighting evidence should be publicly available;
- significant technical advice and commissioned research should be published;
- stakeholder engagement processes should be transparent and consistently applied;
- findings and recommendations should not be subject to amendment or approval by participating agencies or Ministers prior to publication;
- any potential conflicts of interest involving panel members, advisers or commissioned experts should be publicly disclosed; and
- the study should clearly document how competing evidence, stakeholder perspectives and areas of uncertainty have been considered.

These measures would help ensure that the study is seen as an independent assessment undertaken in the public interest.