Submission: Our Waterways Future

About EIANZ

The Environment Institute of Australia and New Zealand (EIANZ) is Australasia's peak body for environmental professionals. We represent around 4,000 members and certified environmental practitioners in our region.

Our members come from a diverse range of technical professions, including scientists, policymakers, engineers, lawyers, and economists. They are at the forefront of issues such as impact assessment, biodiversity, climate change, and nature positive. EIANZ represents environmental practitioners at all stages of their career, from student and early career practitioners to senior leaders.

The Ecology Special Interest Section (SIS) of the Environment Institute of Australia and New Zealand (EIANZ) welcomes the opportunity to provide feedback on the *Our Waterways Future* draft strategy.

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We commend the initiative's intent to provide a long-term vision for waterway health and resilience across the Gold Coast Region. This submission draws on the collective expertise of practicing ecologists and environmental professionals with substantial field-based experience in aquatic and riparian systems, biodiversity conservation, and landscape-scale ecological management.

Vision and Principles

We commend the strategy's ambition to provide a long-term, integrated approach to waterway health and resilience across the Gold Coast Region. We strongly support the vision for inclusive and collaborative management but recommend strengthening the guiding principles to explicitly embed ecological integrity. Effective waterway management must prioritise the protection and enhancement of environmental values, acknowledging the interconnected nature of ecosystems and the cumulative impacts of coastal and catchment changes.

We recommend that "effective management" be clearly defined as involving the assessment, conservation, and restoration of natural systems, as reflected in language on page 5 of the draft. Embedding ecological integrity as a foundational principle ensures that social and economic goals are grounded in long-term environmental sustainability.

Ecological Outcomes

While the strategy references ecological health, it lacks clarity on how this will be measured. We recommend the development of specific ecological indicators such as native species diversity, hydrological regime integrity, macroinvertebrate indices, and habitat connectivity and condition, supported by long-term monitoring programs. In a region containing high-value ecosystems such as Ramsar-listed wetlands, ecological outcomes must be underpinned by rigorous technical studies that account for the interconnected nature of water flows and the sensitivity of these systems to disturbance. These ecosystems deliver critical services such as flood mitigation, water filtration, and carbon storage. Preserving the integrity of these systems is essential to sustaining the values the strategy seeks to promote.

The draft strategy states that Local Waterway Plans will "ensure each waterway remains functional, thriving, and well-integrated" (p.16). However, the intended meaning of "functional" remains unclear and could be interpreted in various ways, ranging from ecological functionality to recreational or infrastructural utility. To enhance clarity and guide effective implementation, we recommend that the strategy clearly define the purpose and scope of the Local Waterway Plans. Specifically, the objectives should emphasise the protection and restoration of ecological function, including hydrological connectivity, habitat integrity, and resilience to environmental pressures. Providing a clear definition will help ensure that Local Waterway Plans are consistently applied, scientifically grounded, and aligned with the broader vision for long-term waterway health and sustainability.

Implementation Framework

The governance structure outlined in the strategy would benefit from stronger scientific oversight. Currently, there is little detail on how ecological knowledge will be embedded into the development and implementation of the Local Waterway Plans. We recommend establishing an ecological science advisory group to ensure that management actions are grounded in current research and ecological monitoring.

The strategy provides limited direction on how the 'Nurtured Environment' outcome will be implemented in practice, particularly through the Local Waterway Plans. The absence of clear management or improvement objectives risks creating an impression that waterways are being observed rather than actively managed or restored. While monitoring is a critical component of evidence-based decision-making, it is not a substitute for proactive management. As currently framed, the strategy appears largely passive and reactive, which may translate into Local Waterway Plans that lack the ambition needed to support ecological enhancement and resilience.

To address this, we recommend that the strategy explicitly require the inclusion of environmental management objectives within each Local Waterway Plan. These objectives should go beyond monitoring to include actions aimed at protecting, restoring, and enhancing ecological function. Embedding clear, outcome-driven goals will help ensure the strategy reflects the intent of a truly "nurtured" environment and delivers measurable ecological improvements across the region.

Where environmental offsets are considered, the Mitigation Hierarchy must be strictly applied, with avoidance and minimisation prioritised over compensation. Offsetting should be treated as a last resort and only used where no feasible alternatives exist. In such cases, offsets must meet the principles of like-for-like offsetting, ensuring that the environmental values being impacted,

such as habitat type, ecosystem function, and species, are replaced with equivalent ecological values in both type and condition, and within the same bioregion where possible.

Infrastructure Planning and Environmental Pressures

The framework identifies objectives centred on access, connection, and destinations, and includes a welcome commitment to "evidence-based decision making" (p.14). This is a critical principle that must underpin all infrastructure planning and management actions. However, the strategy provides limited detail on how this commitment will be operationalised, particularly in relation to environmental considerations.

To support meaningful evidence-based decision making, the framework must be underpinned by current and spatially explicit data on the condition of local ecosystems and the services they provide, such as water purification, flood mitigation, and habitat provision. Clearer guidance is needed on how ecological evidence will directly inform infrastructure siting, design, and ongoing management, especially in ecologically sensitive or hydrologically connected areas.

It is essential that future infrastructure projects avoid undermining ecosystem function. This requires the integration of ecological constraints into early planning stages and the adoption of assessment tools such as carrying capacity studies to guide development intensity and visitation levels. Without this level of detail, there is a risk that evidence-based principles remain aspirational rather than actionable, potentially compromising ecological integrity and long-term waterway health.

Carrying capacity studies are needed for locations proposed for increased access or development. Without these, there is a risk that visitation, vessel traffic, and associated pollution could erode the ecological values that underpin the social and cultural significance of these sites. Such studies should inform site selection and the development of environmental management plans to avoid cumulative degradation of aquatic and riparian ecosystems.

Resilient nature-based solutions should be prioritised over hard infrastructure wherever feasible. Maintaining the resilience of ecosystems is critical to preserving the regulating services they provide, particularly in regions that have experienced flash flooding, water quality decline, and biodiversity loss. Interventions should be guided by ecological sensitivity, and designed to support long-term ecological function rather than short-term amenity gains.

Threats and Pressures

The draft strategy identifies a range of key threats; however, the analysis would benefit from a more comprehensive discussion of existing pressures, particularly those arising from increased recreational use of waterways. High levels of visitation, vessel activity, and associated infrastructure can exacerbate bank erosion, disturb sensitive fauna, introduce pollutants, and degrade habitat quality, especially in ecologically significant and hydrologically connected systems.

In addition, the strategy should give greater emphasis to habitat fragmentation, invasive species, and cumulative impacts, which are particularly acute in peri-urban and recreationally targeted areas. These pressures are already shifting species distributions, altering ecological interactions, and contributing to ecosystem decline.

To safeguard long-term ecological resilience, the strategy should incorporate a stronger focus on ecological thresholds and tipping points, recognising that some impacts may lead to irreversible changes in ecosystem structure and function. Addressing these complex pressures requires proactive planning, robust ecological data, and adaptive management approaches that prioritise ecosystem integrity alongside recreational access.

Engagement and Partnerships

We strongly support the inclusion of Traditional Owners and local communities in shaping the strategy. However, partnerships must extend beyond engagement and consultation to incorporate genuine co-leadership in planning, governance, and ecological decision-making. This reflects both an ethical responsibility and a strategic imperative, given the increasing national and international momentum toward embedding Indigenous rights and cultural values in environmental management frameworks.

Indigenous knowledge systems provide deep, place-based ecological insight, encompassing hydrological cycles, species relationships, seasonal indicators, and long-standing custodianship practices. Embedding these knowledge systems into waterway management frameworks will enable more holistic, culturally informed, and ecologically resilient outcomes.

Key Recommendations

1. To effectively implement the strategy's vision, the framework must provide clear direction on how measurable ecological indicators, baseline condition assessments, and adaptive management processes will be embedded within Local Waterway Plans. These elements are essential to ensuring that ecological outcomes are not only aspirational but achievable and trackable over time. The strategy should specify how each waterway plan will incorporate quantifiable indicators of ecological health, supported by consistent data collection and long-term monitoring. This information must be used to inform adaptive management, enabling responsive actions to emerging pressures and ensuring that waterway health is maintained or improved over time.
2. Ecological resilience should be embedded throughout the strategy's implementation, including an emphasis on nature-based solutions and avoidance of interventions that compromise ecosystem integrity. The function and services provided by ecosystems, such as water purification and flood mitigation, must be protected to ensure the long-term viability of both natural and human systems.
3. We recommend the formation of an ecological science advisory group to guide evidence-based decision-making, alongside Traditional Owner-led governance models that reflect shared stewardship.
4. Infrastructure planning must be underpinned by technical assessments of ecological condition, waterway connectivity, and carrying capacity. Development should avoid or minimise ecological impact, with offsets used only as a last resort in accordance with the Mitigation Hierarchy.
5. The strategy should explicitly address the 'Nurtured Environment' outcome and ensure that ecosystem protection is not subordinated to access and tourism objectives. Sustaining ecological integrity is essential to maintaining the natural values that support community identity, economic development, and cultural connection.