

Water Ledger



Smart Markets for Smart Water: Local Trading with the SWaN Exchange

Trading towards zero nutrient impact



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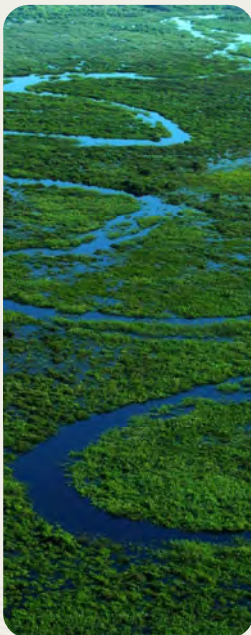
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Water Ledger

Origins in Brisbane, now a global company that builds next-generation markets to digitise and productise fresh water assets to unlock innovation and investment.



Stream, Wetlands and Nutrient

SWaN Exchange enables local markets for verified environmental services like flood mitigation, soil carbon storage, and riparian habitat. Empowers councils to issue credits and allows water utilities to purchase them to avoid costly upgrades.



Transparency and Governance

Provides traceability and local governance. NGOs act as market facilitators and project verifiers.



Market Impact

Digitises environmental markets reduce risk, attract co-investment, and scale nature-based solutions across fragmented jurisdictions.

Characteristics and Issues

- Across Queensland, utilities, councils, and regulators are investing to meet environmental compliance requirements.
- Leads to missed opportunities and higher overall costs.

Resulting Challenges

- Reactive, single-purpose, and localised projects meeting only permit requirements.
- Often fragmented, missing long-term benefits and resilience across catchments.



Definition and Focus

- Treats compliance as the minimum standard, blending green, grey, and digital infrastructure.
- Uses systems thinking and multi-point interventions in catchments.

Outcomes and Collaboration

- Delivers measurable environmental, economic, social, and cultural co-benefits.
- Involves diverse stakeholders in collaborative efforts.

Market Model

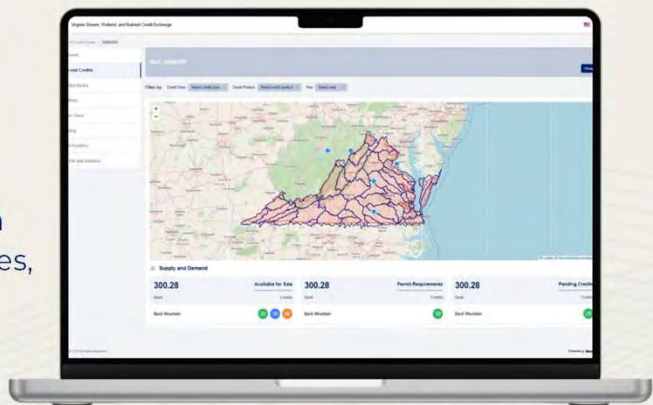
- Regulated markets for wetlands, streams, and nutrient credits.
- Developers meet environmental obligations by purchasing verified restoration credits.



Challenge: US\$166m a year market suffering from pervasive opacity and endemic uncertainty.

SWaN Exchange Role

- Registry and transparency platform tracking projects, verifying outcomes, and managing trades.
- Builds trust with regulators, participants, and the public.



Virginia Aquatic Resources Trust Fund (VARTF)



In-Lieu Fee Mitigation Program

- Pool payments from permittees invested in large-scale aquatic restoration projects.
- Focus on state and federal conservation priorities like wetlands restoration and riparian buffers.

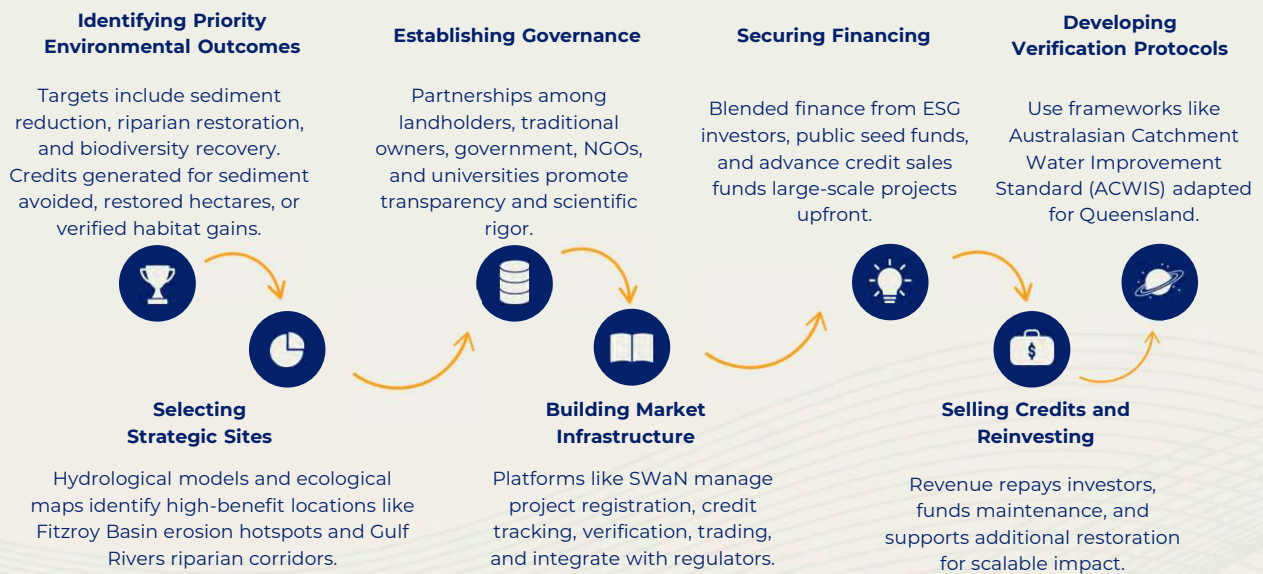
Outcomes and Success Factors

- Restored/protected over 20,000 acres since 1995, prioritising high ecological value sites.
- Combines science-based site selection, transparent governance, and scale to improve efficiency.

Lessons for Queensland

- Pooling offset obligations into strategic projects with long-term management benefits regulators and permittees.

Opportunities for Mitigation Banks in Queensland



Regulatory Alignment

Current policies lack support for pooled mitigation banking.

Solution: Adapt policies and pilot programs to enable pooling and stage credit releases with market platforms like SWaN.

Credit Methodology Development

Queensland-specific methods are lacking for sediment reduction and habitat restoration markets.

Solution: Leverage Eco-Markets' ACWIS framework as a science-based base for measurement and verification.

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Market Trust and Governance

Risk of perceived "pay to pollute" without strong governance.

Solution: Independent oversight, transparent reporting, and community representation.

Financing and Investor Confidence

Hesitation to fund before proven credit sales pipeline.

Solution: Blend public seed funding with private ESG capital; secure anchor buyers early.

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Long-Term Stewardship

Risk of neglected maintenance after project completion.

Solution: Require funded, long-term management plans financed by credit sales revenue.

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Lower Compliance Costs

Credits often more cost-effective than in-house projects considering lifecycle and maintenance costs.

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Risk Transfer

Mitigation bank sponsors bear performance risk; utilities buy credits only after verified outcomes.

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Flexibility and Time Savings

Buying credits meets compliance faster, freeing resources for core services.

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Co-Benefits Beyond Compliance

Projects deliver improved water quality, biodiversity, flood mitigation, and enhanced public amenity.

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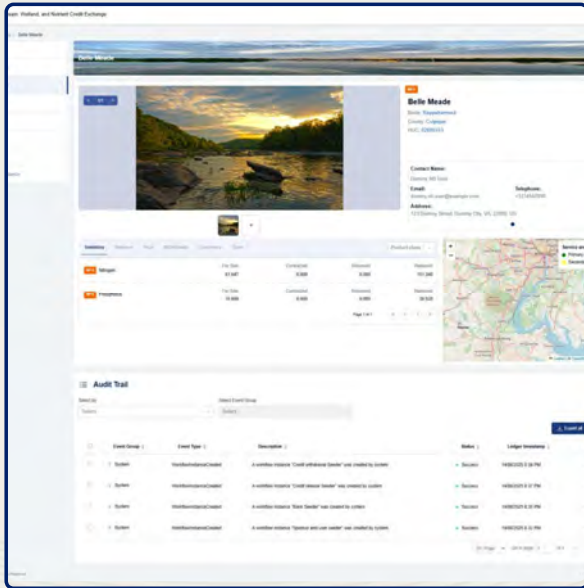
New Funding Pathways

Markets unlock ESG-linked finance, resilience bonds, and philanthropic investments.

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Regional Economic Development

Local offset investments generate jobs and procurement opportunities, strengthening social license.



Foundations of Market Trust

- Transparency, accountability, and reliable data are essential for participation and investment.

SWaN Exchange Features

- Unified digital infrastructure registering projects, issuing and tracking credits linked to verified outcomes.
- Records every project lifecycle stage, fully auditable and regulator-integrated.

Benefits for Queensland

- A transparent, auditable system addresses perceptions of market opacity and manipulation risks.
- Enables third-party verifiers, NGOs, and councils as governance actors for diverse oversight.

 **Systemic Investment Opportunity**

Compliance dollars can achieve outcomes, build resilience, co-benefits, and open new funding.

 **Learning from Virginia**

Mitigation banks and transparent registries turn fragmented cost into strategic investment.

Call to Action

If Queensland had the market infrastructure tomorrow, what projects and partnerships would you start? How can we encourage the beginning of a conversation about building such a system today?

Future Drought Fund



The FDF's vision is for an innovative and profitable agriculture sector, a sustainable natural environment, and adaptable rural, regional, and remote communities – all with increased resilience to the impacts of drought and climate change.

**WE PROVIDE INDISPUTABLE
ACCOUNTABILITY BETWEEN THE
WATER WE HAVE, THE WATER WE
USE, THE WATER WE SHARE, AND
THE VALUE WE EXCHANGE.**

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