

# Deep Water: Heritage integrity and groundwater extraction in the Pilbara, Western Australia



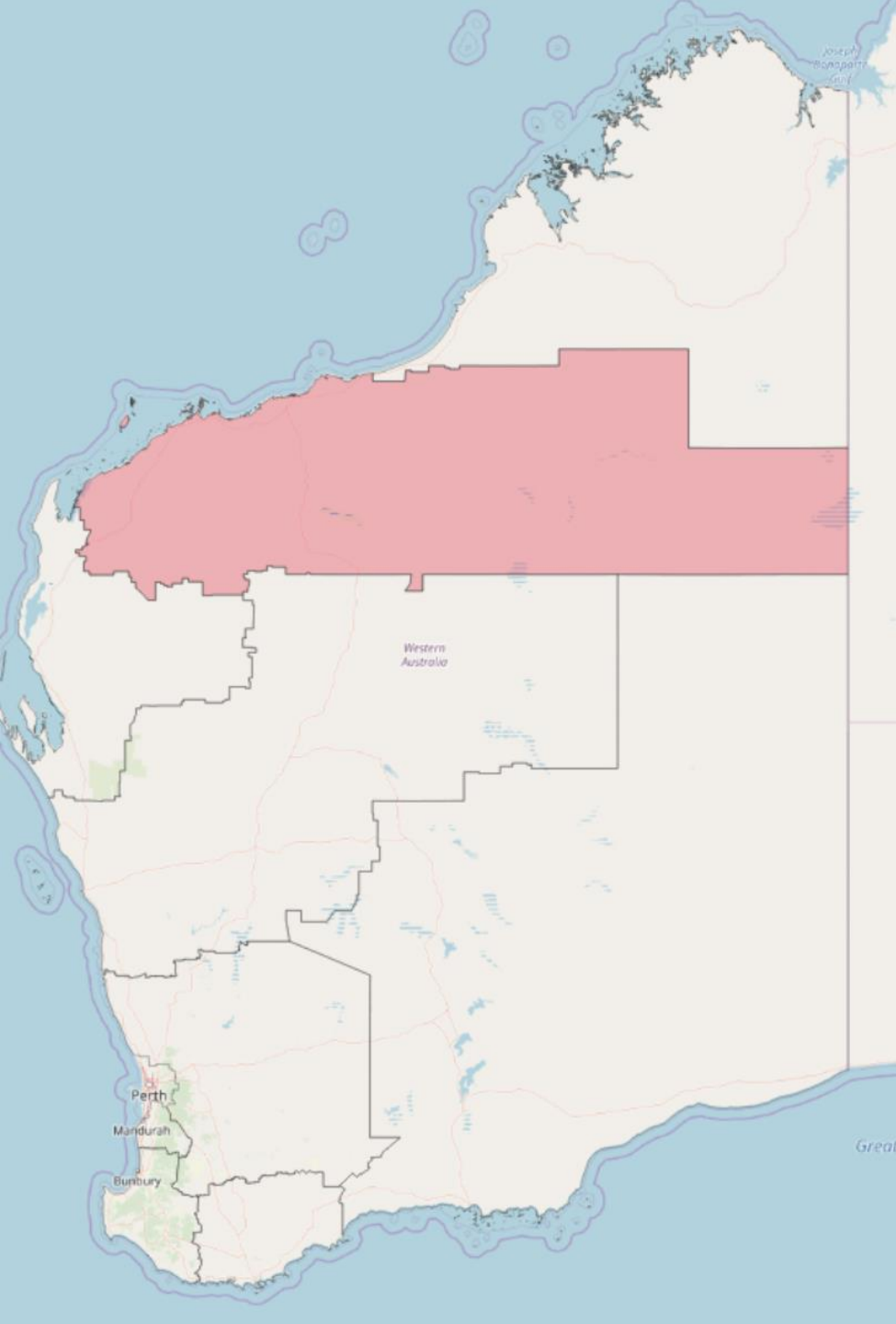
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# Co-Authors

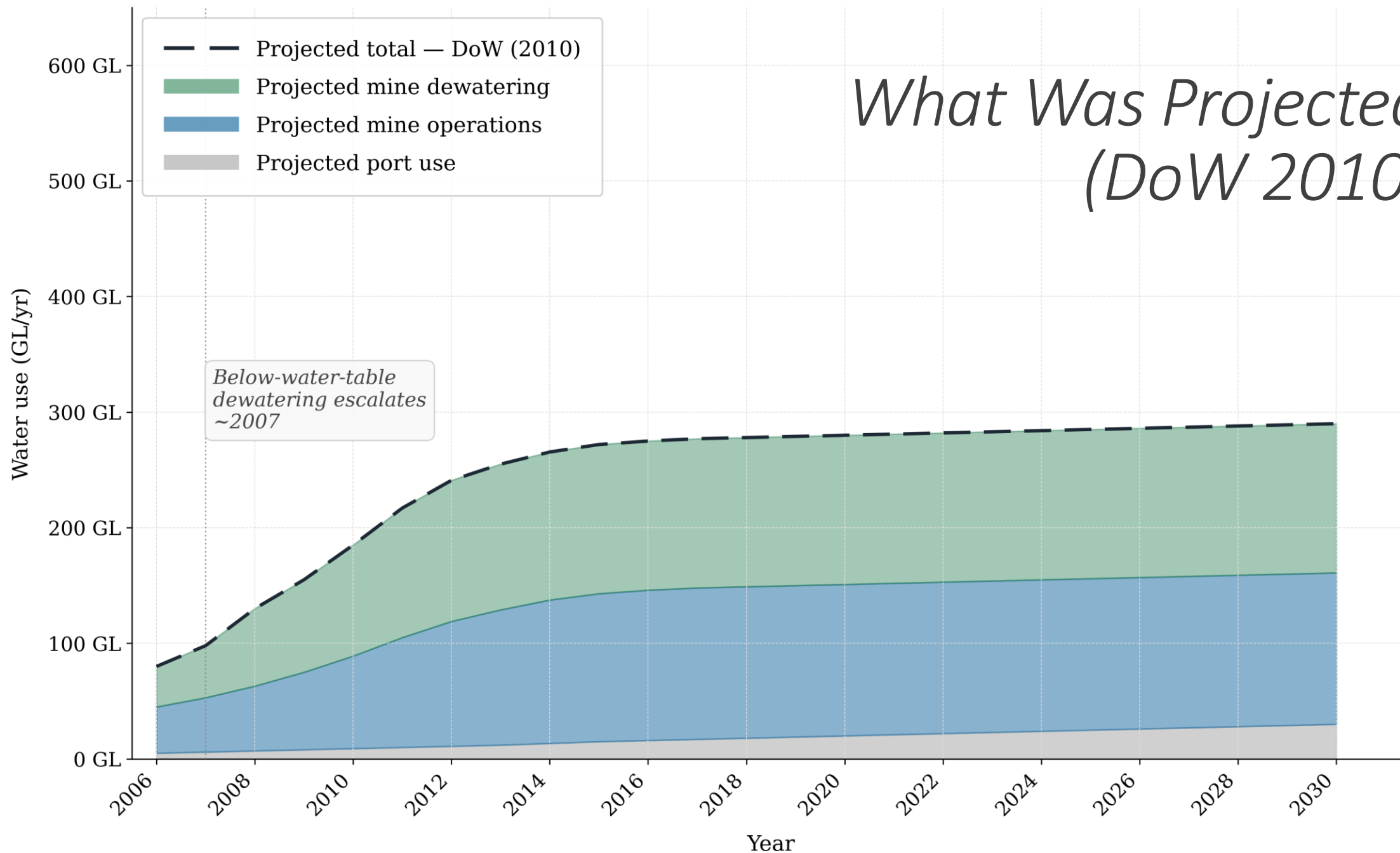
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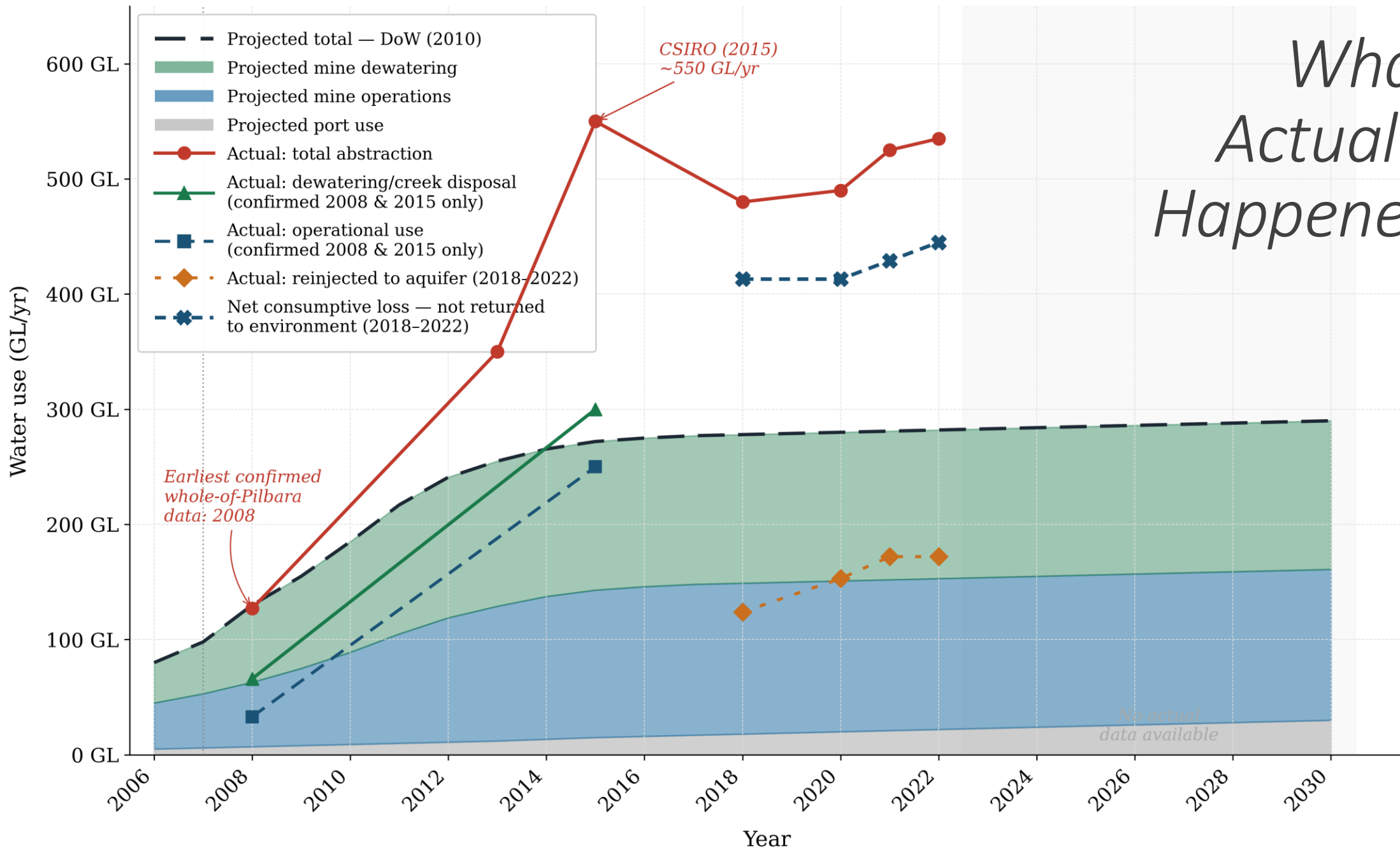
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# *What Was Projected (DoW 2010)*





*What  
Actually  
Happened*

# Water as Living Country

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- For Traditional Custodians, water is not a resource
- It is heritage, identity, and living culture
- Surface water and groundwater are one connected system
- Springs, pools, and creeks carry ancient songlines
- Their loss is a loss of cultural and spiritual well-being
- Country and people are understood as interdependent



May 2023



April 2026

# Social Impact Assessment in Western Australia

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- Environmental approval triggers consultation with native title holders
- Called "social surroundings assessments"
- Scope is legally limited: only biophysical-linked social impacts count
- "Pure" social impacts fall outside the regulatory definition
- No broad standalone SIA requirement at state level in Western Australia
- Traditional Custodians often unclear on the rights they hold

# What Happened in the Field

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- Three-day consultation on a proposed multi-pit mining expansion
- All pits involve mining below the water table
- Dewatering would partially replace an existing borefield
- Traditional Custodians asked: which option causes less harm?
- Proponent could not provide comparative data
- Two years on, that data has still not been supplied

# Two Distinct Problems

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- Problem 1: data and modelling doesn't exist
- Problem 2: data exists but isn't shared equitably
- Data reflects proponent priorities, not TC values
- Same patterns: 2010-12 to 2024, unchanged
- SMEs help — but Traditional Custodians wary of dependence
- This is a governance failure, not just a data gap

# A Way Forward: Adaptive Pathways Principles

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- Structured, flexible decision-making under uncertainty
- Actions staged and sequenced, not locked in upfront
- Triggered by agreed thresholds — not calendar dates
- Particularly suited to irreversible or high-stakes impacts
- Already used in climate adaptation; rare in mining contexts
- Calls for adoption in this sector are growing

Governance:  
Joint  
Management  
Committee:  
Core principles

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Formal agreement between proponent and  
Aboriginal Corporation

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Dedicated, intergenerational funding line  
secured upfront

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FPIC - grounded

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Local and environmental factor (water)-focused

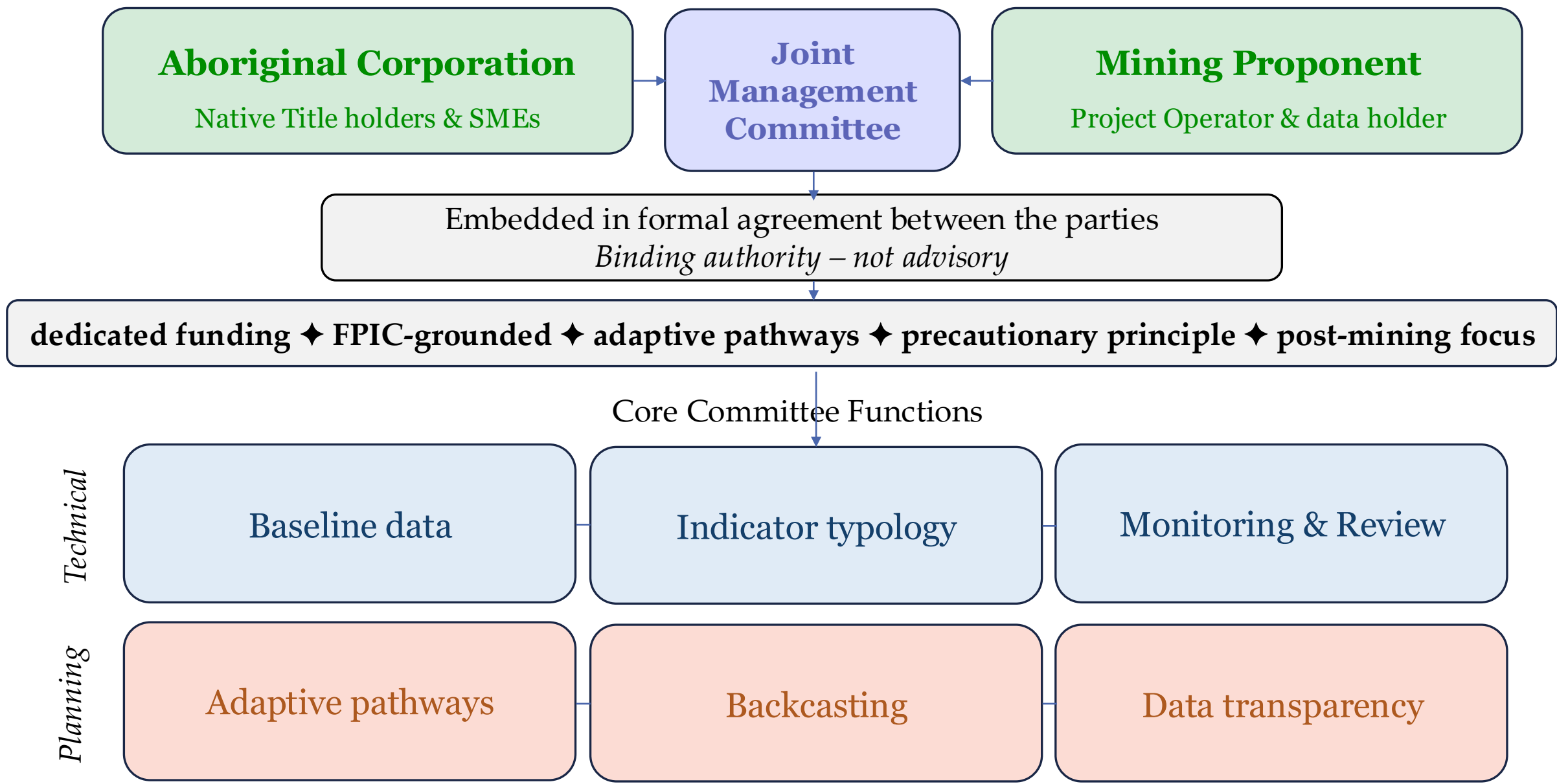
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Post-mining outcomes focus

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Adaptive pathways

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# Conclusion

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Extraction far exceeded projections; net loss rising

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Data opacity: a governance failure, not a technical gap

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Adaptive pathways + joint committee: path forward

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Traditional Custodians are decision-makers, not a checkbox

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Binding authority essential — advisory committees fail

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Backcasting: Water in the post-mining landscape



# Let's continue the conversation!

Message me your questions or comments in the IAIA26 app.

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