

March 2021

MINING AND BIODIVERSITY

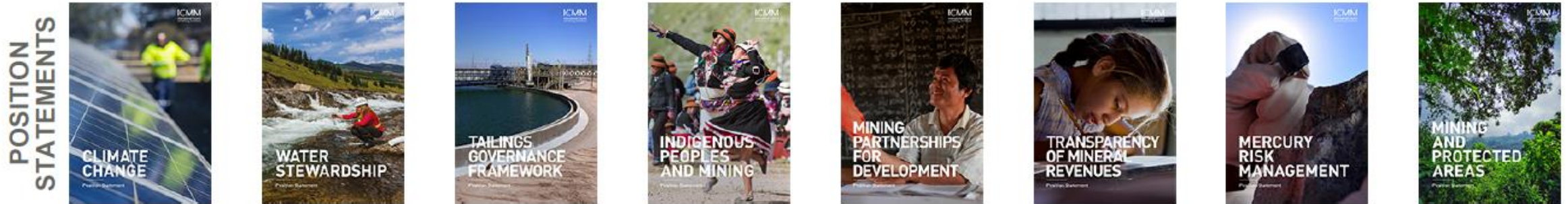
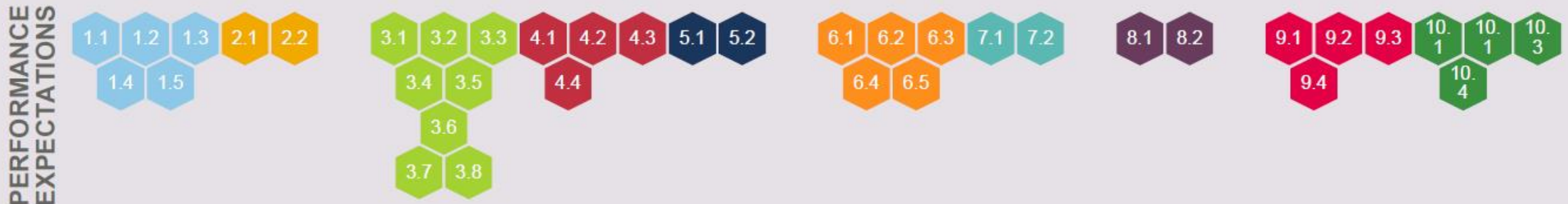
Hafren Williams, Manager Environment and Responsible Sourcing
The International Council on Mining and Metals

ICMM COMPANY MEMBERS

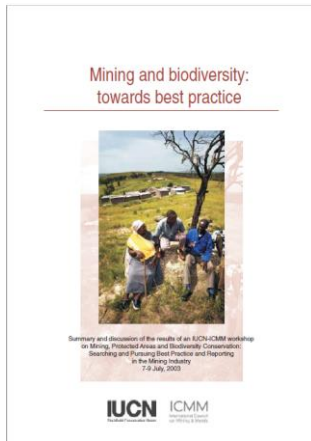
Representing 28 member companies and over 35 regional and commodities associations



ICMM MEMBERSHIP REQUIREMENTS



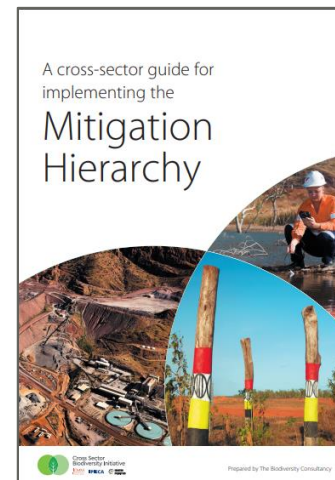
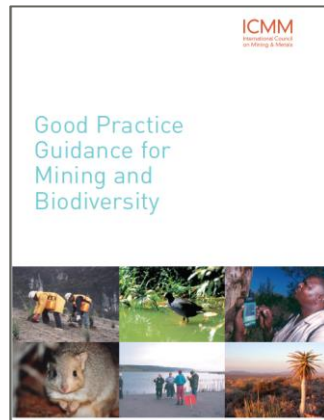
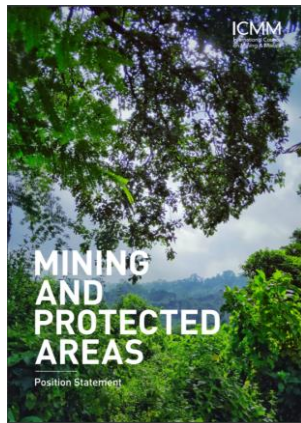
MINING AND BIODIVERSITY MILESTONES



2003-2004

2014-2015

2020-2021



PRINCIPLE 7



Assess and address risks and impacts to biodiversity and ecosystem services and apply the mitigation hierarchy with the ambition of no-net loss

Throughout the mine-life cycle

1. Explore and identify mineral deposit (location specific)
2. Land-use for pit/underground, infrastructure, accommodation etc.
3. Use and discharge water for processing ore, groundwater management
4. Use energy for crushing rocks, mine vehicles
5. Management of biodiversity, noise, dust, waste and potentially hazardous materials
6. Stakeholder engagement and supporting economic development
7. Close mine with stable landform, soil, geochemical stability, long-term water quality and ground water management
8. Legacy management

Dependencies and the business case for managing impacts?

- Dependency on water
- Social & legal licence and being a responsible business

Planning and decision-making

1. Business decision-making around where to invest e.g. not to explore or mine in World Heritage Sites
2. Understanding biodiversity risks and impacts across a portfolio
3. Biodiversity baseline studies as part of environmental impact assessment
4. Apply mitigation hierarchy with ambition of no-net-loss of biodiversity: avoidance, minimisation, restoration and offsetting of residual biodiversity impacts
5. Catchment-scale assessment of water-related risks
6. Optimising land-use through mine-planning

ICMM Mining Principles

Ongoing adaptive management

1. Biodiversity management plans and monitoring
2. Environmental management systems
3. Reduce and manage waste, tailings storage facilities
4. Set targets, reduce energy use and disclose GHG reductions
5. Innovation for low-carbon vehicles
6. Water stewardship and collaboration to ensure sustainable use
7. Planning and designing for closure, including rehabilitation, landform, soil, vegetation, water quality and waste

CHALLENGES

How science can help...

With effective management of biodiversity impacts

1. Accurate and accessible biodiversity data
2. Understanding species and ecological processes and their sensitivities to impacts
3. Common indicators for monitoring biodiversity and metrics to compare impacts across sites and businesses for biodiversity
4. Cost-effective technology for monitoring biodiversity

With the business-case

1. Enhance understanding of national or finance sector dependencies on nature, so this informs strategic land-use planning / access to finance
2. Strengthen capacity and tools/technology to reduce cost of strategic land-use planning by governments
3. Enhance understanding of nature-related risks and opportunities for meeting environmental commitments and reducing closure liability



RESOURCES

- [ICMM Mining Principles](#)
- [Mining and Protected Areas Position Statement](#)
- [ICMM Guide to Mining and Biodiversity](#)
- [A cross-sector Guide for implementing the Mitigation Hierarchy](#)
- [Good Practices for the Collection of Biodiversity Baseline Data](#)
- [ICMM Water Stewardship Position Statement](#)
- [ICMM Practical Guide to Consistent Water Reporting](#)
- [Integrated Mine Closure: Good Practice Guide](#)
- [Global Industry Standard on Tailings Management](#)