



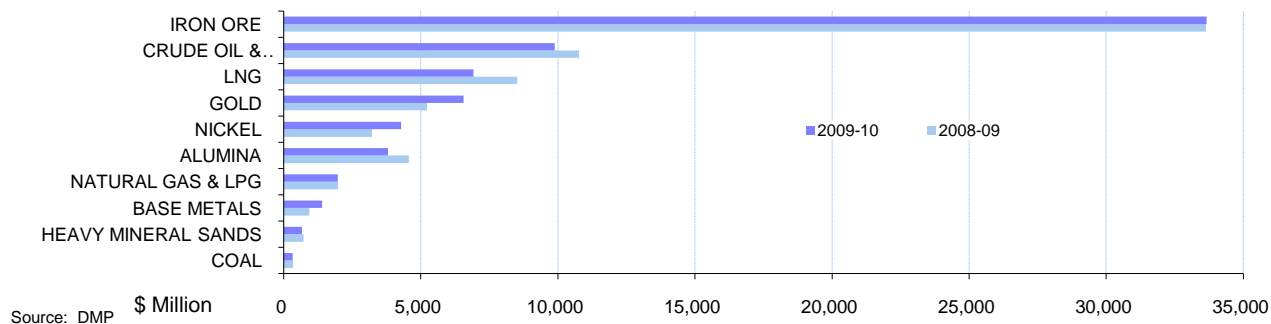
Government of **Western Australia**
Department of **Mines and Petroleum**

13th International **Riversymposium**

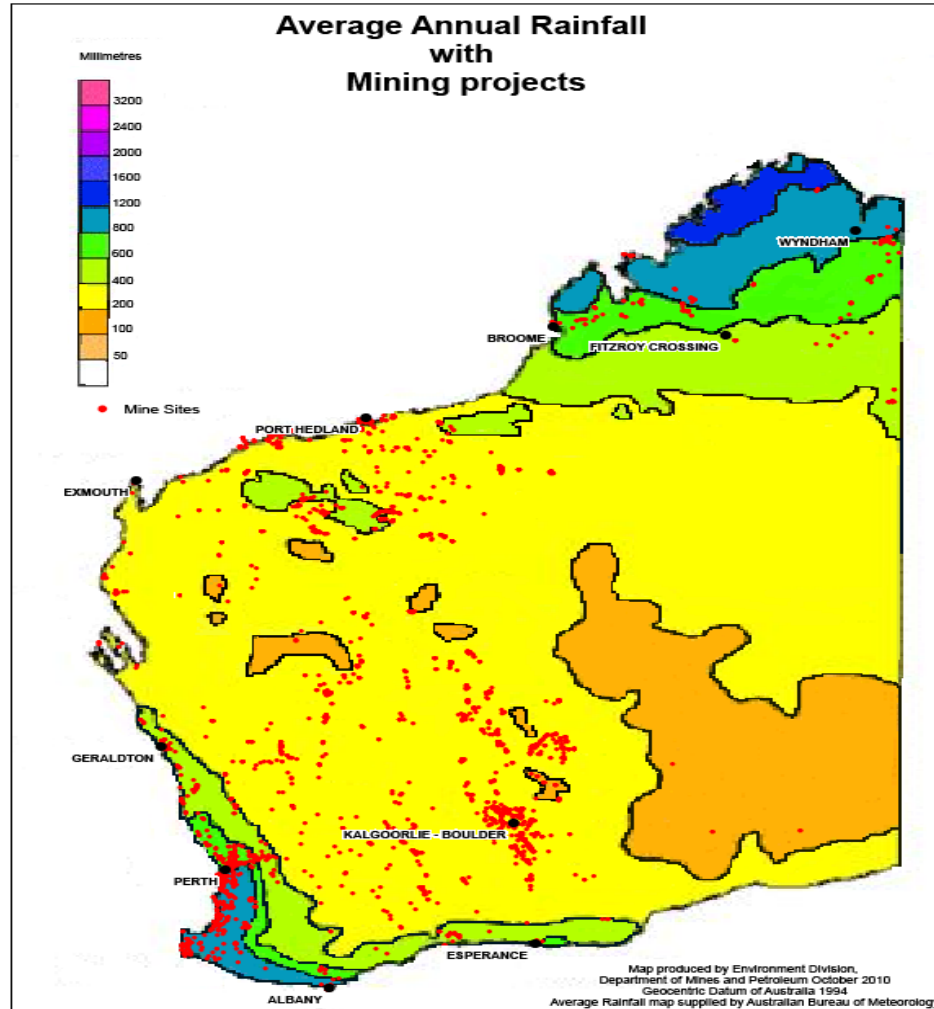
Richard Sellers
Director General
Department of Mines and Petroleum

Western Australia's mining sector

- In 2009-10 resources was valued at \$71b to the economy
- Iron ore output was 396 million tonnes and almost 48% of total state value
- New capital expenditure increased by 11% to \$5.9b in the June quarter



WA – one of the driest areas on the planet



Department of Water

- Mining sector used 620 gigalitres of water
- Forecast to increase to 1000 gigalitres by 2030



Operators need to be resourceful and innovative

- Common practices include:
 - Dewater
 - Recycling
 - Fit for purpose
- The mining sector can occasionally suffer from too much water



DMP is involved in the regulation of water

1. Regional planning of water discovery and security
2. Policy controls for legislation and guidelines
3. Setting approvals conditions on tenements



Tailings Dam Rehabilitation - Before and After

Water trading

- Water trading not catered for in Western Australia legislation
- The National Water Initiative
- Proposed Water Resource Management Bill

“Fit for Purpose” water use

- Includes:
 - Use of lower grade sources
 - Recycled water or saline groundwater
- Examples include:
 - Alcoa McCoy crusher facility
 - Kalgoorlie Consolidated Gold Mining using hypersaline water

Policy controls

- Mining Act 1978
- Environmental Protection Act 1986
- Agreements with the Environmental Protection Authority and the Department of Water

Three DMP Guidelines

1. Protection of Surface and Groundwater Resources during Exploration Activities
2. Mining Proposals in Western Australia
3. Mining Closure being drafted

Administrative agreement

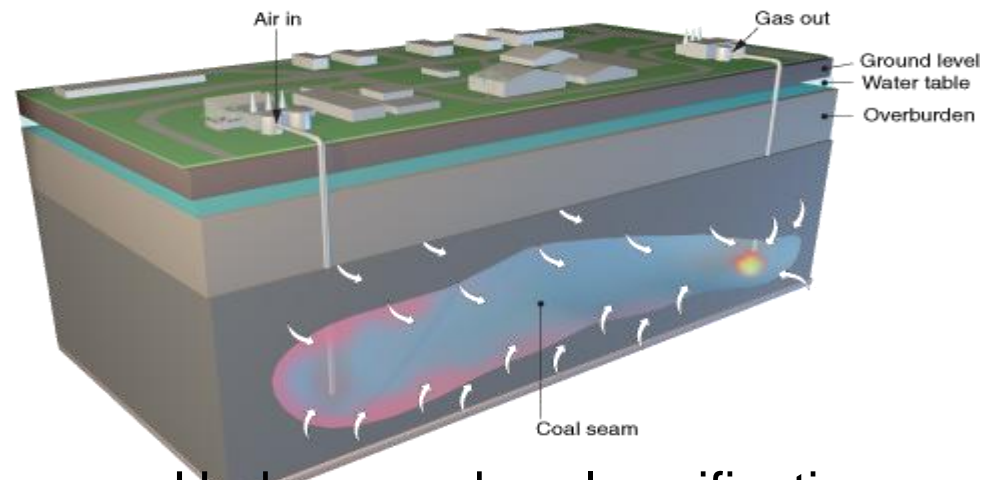
“Activities requiring the abstraction of groundwater are prohibited unless a bore construction and abstraction licence has been granted by the Department of Water”

Opportunities for the use of mine dewater by others



Possible new mining initiatives

- Underground coal gasification
- Coal seam gasification
- In-situ leachate uranium



Underground coal gasification

Source: Science & Technology Review E-News letter

Scarcity of water – one of many challenges

- Other challenges:
 - Lack of supporting infrastructure
 - Vast landmass
 - Extreme temperature
 - Low population



Efforts of industry peak bodies

Water Resource Management

Issues & Priorities for the Resources Sector

STRATEGIC WATER MANAGEMENT in the Minerals Industry

A framework

Members believe that the mining, minerals and industry acting collectively can best ensure its access to land, capital and markets as well as its safety and respect by demonstrating its ability to contribute successfully to sustainable development.

Members offer strategic industry leadership achieving continuous improvements in sustainable development performance in the mining, minerals and metals industry. ICMC provides a common platform for the industry to share challenges and opportunities as well as to engage with key stakeholders on issues of common concern at the national level, based on science and principles of sustainable development.

ICMM
International Council
on Mining & Metals

ICMM SUSTAINABLE DEVELOPMENT FRAMEWORK
ICMM Principles

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Thank you