

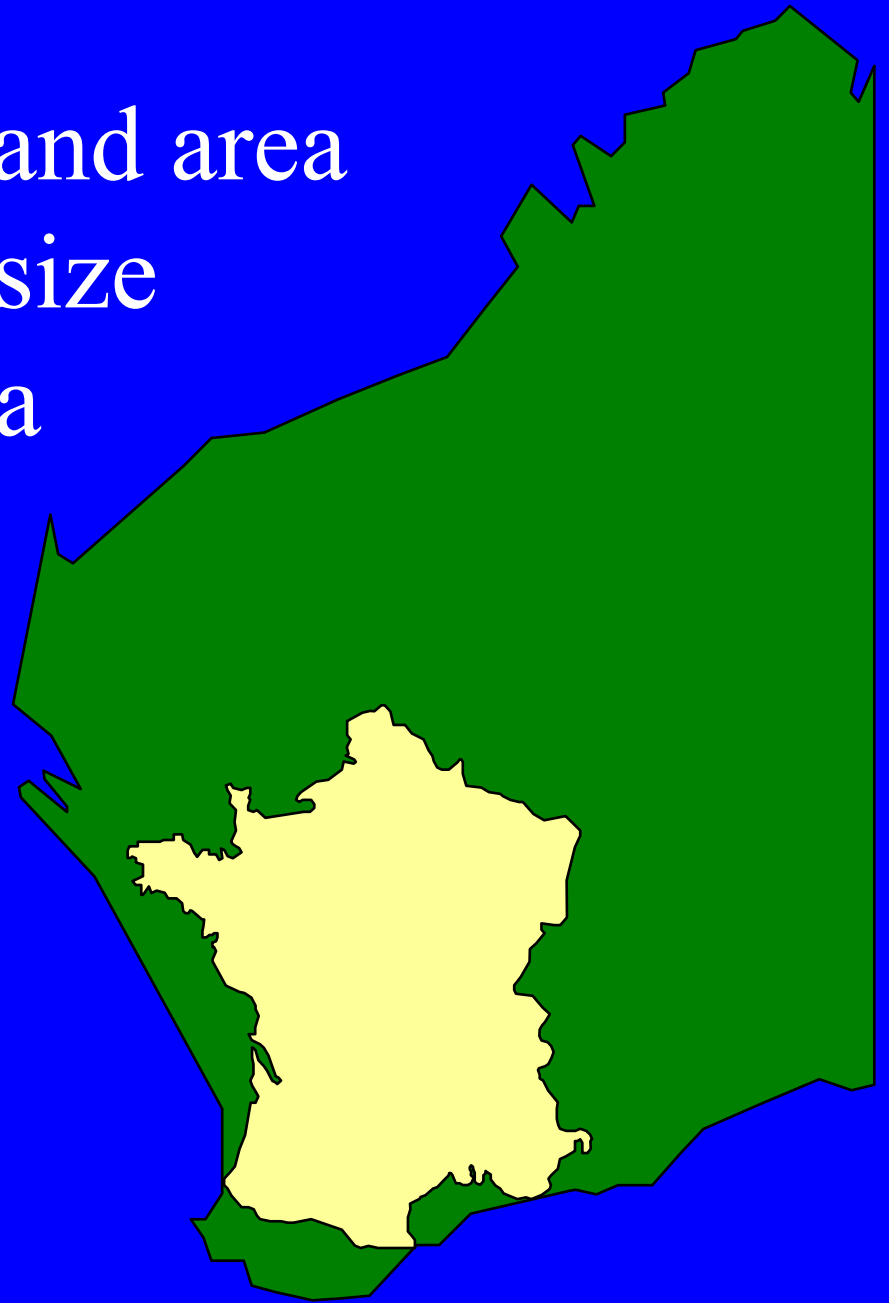
Conservation and mining . Case studies from Western Australia

Frank Batini

Synopsis

- Many processes threaten biodiversity
- Mining is not a major threat
- The mining industry can assist conservation
- There are many valuable areas not in Reserves
- Conservation “on” and “off” reserves requires partnerships

France occupies a land area
about a quarter the size
of Western Australia



Background data- Western Australia

- Area – 250 million hectares
- Population – 1.85 million
- Aboriginal population - 50000 , < 3 %
- Area affected by mining- 0.6 million hectares
- Area in good condition 186 million hectares
 - Reserve lands – 22 million hectares
 - Aboriginal lands – 25 million hectares
 - Unallocated lands – 95 million hectares
 - Pastoral leases - 44 million ha
- Conservation on and off reserves

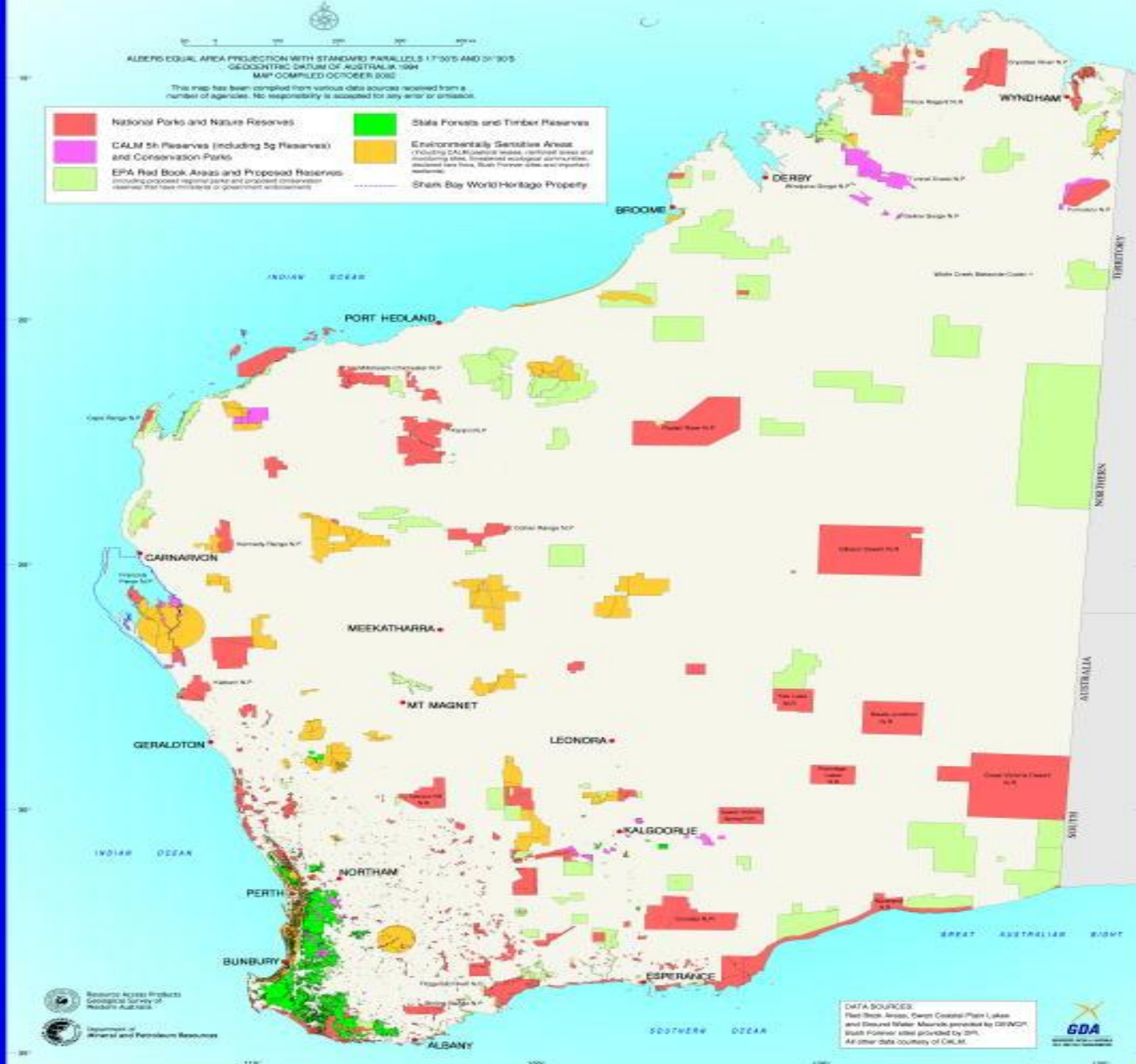
CONSERVATION RESERVES AND OTHER ENVIRONMENTALLY SENSITIVE LANDS IN WESTERN AUSTRALIA

TIMER SEA

ALBERS EQUAL AREA PROJECTION WITH STANDARD PARALLELS 17°30'S AND 34°30'S
GEOCENTRIC DATUM OF AUSTRALIA 1984
MAP COMPILED OCTOBER 2002

This map has been compiled from various data sources received from a number of agencies. No responsibility is accepted for any error or omission.

- | | | | |
|---|---|---|--|
|  | National Parks and Nature Reserves |  | State Forests and Timber Reserves |
|  | CALM 5h Reserves (including 5g Reserves) and Conservation Parks |  | Environmentally Sensitive Areas (Including CALM Special Areas, National Wetland and Ecological Areas, Environmental Ecological Priority Areas, Wetland Areas, State Reserve Sites and Vegetation Reserves) |
|  | EPA Red Book Areas and Proposed Reserves (including proposed regional parks and proposed conservation reserves that have received a government endorsement) |  | Shark Bay World Heritage Property |



Resource Access Projects
Geological Survey of Western Australia
Department of Mineral and Petroleum Resources

DATA SOURCES:
Rural Shovel Areas, Great Coastal Plain Urban and Escaped Water Mounds provided by DEWHP
Wetland Potential sites provided by DPA
All other data courtesy of CALM



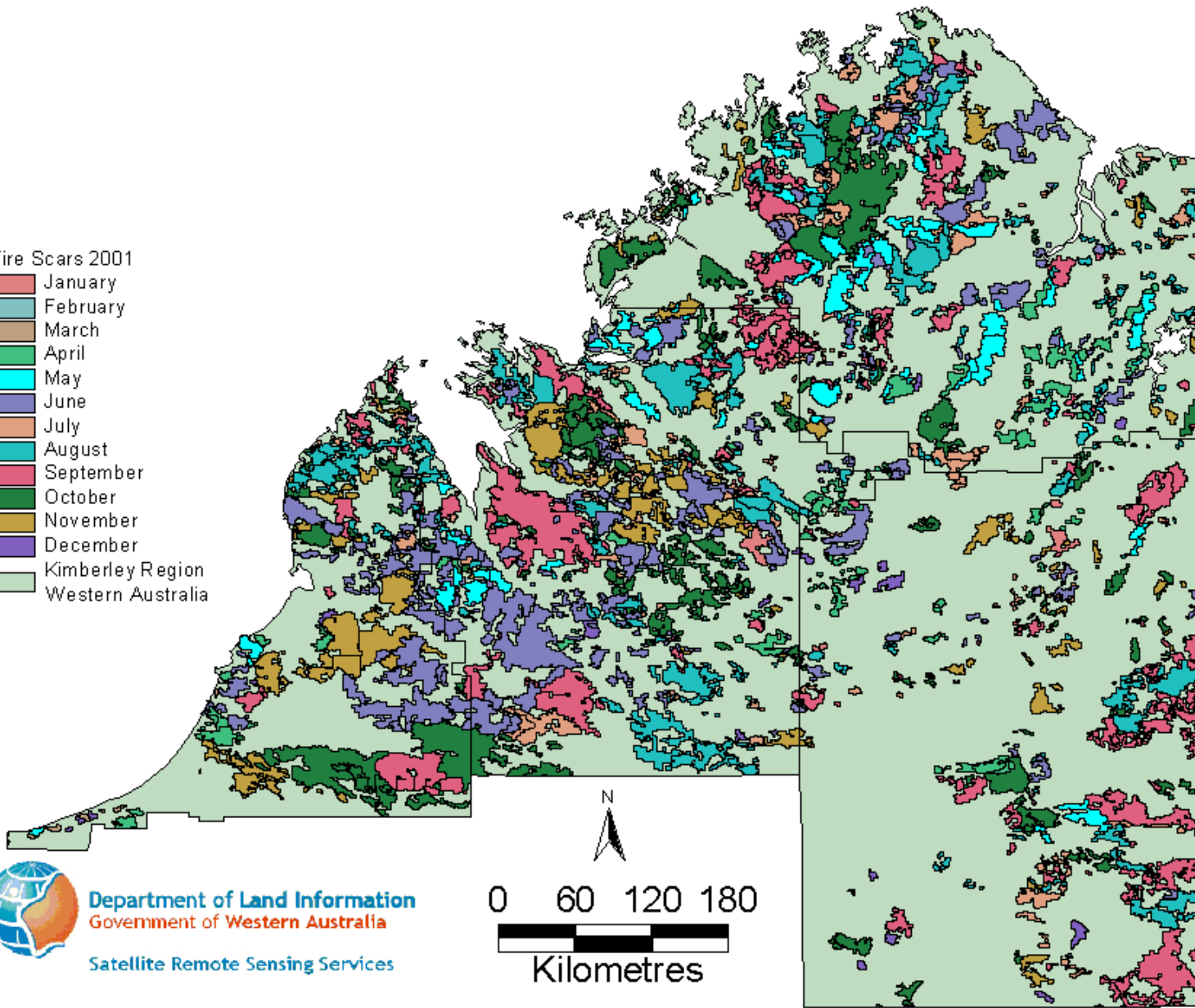
Main Threatening Processes

- Fire
- Feral animals (herbivores and carnivores)
- Weeds
- Dieback disease
- Salinity
- Eutrophication
- Land clearing
- Overgrazing
- Climate change
- Tourism

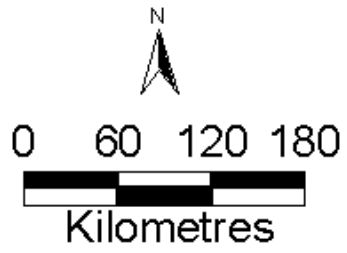
Fire Scars Mapped From NOAA-AVHRR Satellite Images for Kimberley Region Western Australia - Year 2001

Fire Scars 2001

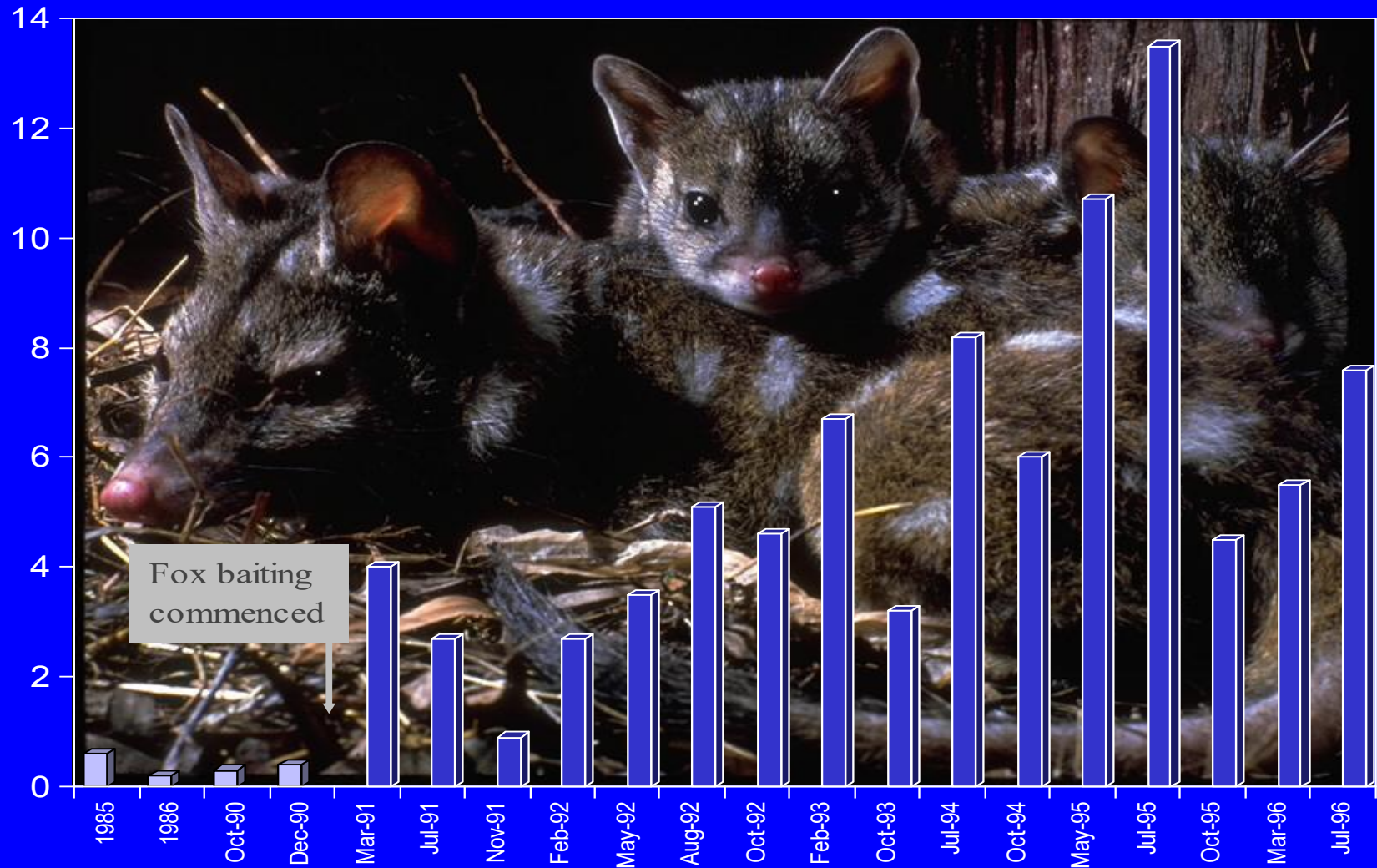
- January
- February
- March
- April
- May
- June
- July
- August
- September
- October
- November
- December
- Kimberley Region
- Western Australia



Department of Land Information
Government of Western Australia
Satellite Remote Sensing Services



The impact of fox control on Chuditch at Batailling forest



Mining

- Major gold discoveries, late 1800's
- Value of production \$A 27 B , 25% of GSP
- Agriculture 6B, Tourism 4B, Fisheries 1B
- Royalties \$A1 Billion/annum
- Main minerals include
 - Iron ore
 - Gold
 - Bauxite
 - Petroleum and natural gas
 - Mineral sands
 - Nickel
 - Diamonds

Major restrictions on mining access

- Reserve lands (Conservation)
- Indigenous lands (power of veto)
- Cleared and farmed freehold lands (veto)
- 22+25+16 million ha
- 25 percent of State approximately
- Native Title considerations (80% of State)

Mining on reserve lands

- Permitted by State Mining Act
(Parliament, EIA by EPA and conditions)
- Policies- Coalition and Labor governments
- 1991-1997:
 - 502 tenements granted
 - 32 exploration programs
 - 6 proposals to mine
- 2001-2003
 - Minimal action

Mining on reserve lands

- Access refused
- Exploration approved (minerals and petroleum)
- Expenditures \$A>80M, discoveries \$A>2.5 B
- Mining excisions from NP
 - Karijini excise 5000 ha, add 21000 ha (\$A600M)
 - Karlyamini excise 15000, add 15000 (\$A1.5-2B)
 - D'Entrecasteaux excise 350, add 1100 ha (\$A300M)
 - Watheroo excise 100 purchase 250 ha (\$A60M)
 - Several petroleum bases on island reserves

Mining related benefits

- State royalties \$A1 Billion pa
- Employment 17% (Indigenous)
- Compensation CALM - \$A3million/annum
- Westernshield Approx \$A 2 M over 10 years
- Woylie status review
- Data on flora and fauna eg Pebble mound mouse
- Penguin island education center
- GGT gas pipeline- Wanjarri management plan

Rehabilitation after mining



Mining related benefits

Partnerships off reserve

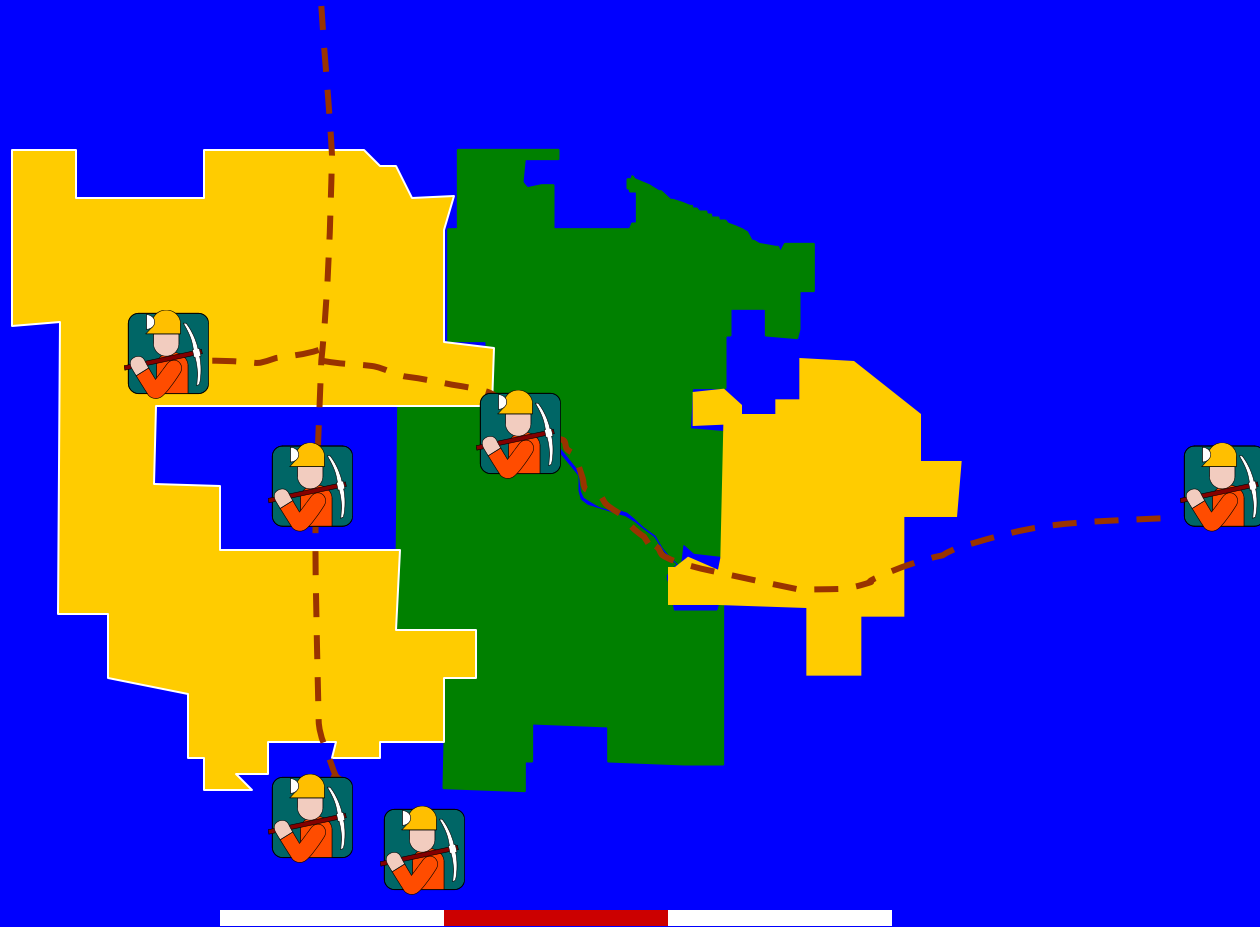
Karijini, Wanjarri, Mitchell Plateau, Mt Weld

Expansion of reserve system

- Minister Mines can oppose
- 40 percent increase in last 20 years
- GMS land purchases 3.6 million ha
- Forest reserves 600,000 ha recent additions

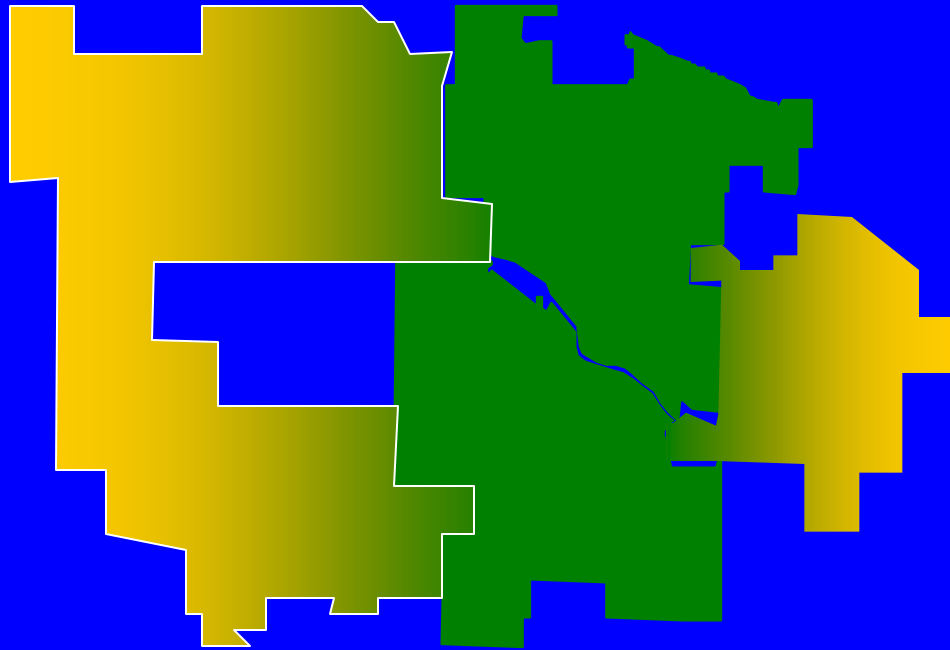
All reserve proposals are now opposed

Instances of joint approaches:Karijini



150 km

Instances of joint approaches: Karijini



Land Use Planning

- Comprehensive ESE assessments
 - State forest- old growth
 - Maud's Landing-tourism
 - Gorgon Gas-LNG/LPG
- State Sustainability Strategy (draft)
- Analysis and Policy decision

Conclusions

- Comprehensive land use planning is needed
- Environmental, economic and social considerations are required
- Case by case study is best
- Trust and good will are essential
- Mining can help to support conservation
- Some areas should not be mined
- Must address the key threatening processes
- Areas that are not formally reserved are very valuable for conservation of biodiversity