

# Allocation issues in fisheries management Sharing the Fish '06

Allocation across jurisdictions  
27 February 2006

**Wendy Craik**  
Chief Executive  
Murray-Darling Basin Commission



# Sharing the resource

In 1908, Winston Churchill dreamed of the day when:

***“...every last drop of water which drains into the whole valley of the Nile shall be equally and amicably divided among the river people, and the Nile itself shall perish gloriously and never reach the sea”.***

# Sharing the resource

T. H. Huxley, an influential figure in British fisheries management in the late 19th century, delivered the following statement to the International Fisheries Exhibition in 1883:

***"I believe, then, that the cod fishery, the herring fishery, the pilchard fishery, the mackerel fishery, and probably all the great sea fisheries, are inexhaustible; that is to say, that nothing we do seriously affects the number of the fish. And any attempt to regulate these fisheries seems consequently, from the nature of the case, to be useless. "***

# Publicly owned resources

- “Tragedy of the commons”
- Ownership
- Stewardship
- Responsiveness

# Fish <sup>(1)</sup> and water <sup>(2)</sup>

- Evolution of management
- Features of management
- Parallels/differences
- What have we learned?
- The future

(1) Commonwealth, (2) MDBC

# Fisheries



# Fisheries: history pre-1991

- ‘Command and control’
- AFS in DPIE
- Little consultation
- Conservation and input controls
- Excess capacity, full/over exploitation, poor economic performance
- 1988: ‘New directions.....’

# Fisheries: history post-1991

- **Institutions**

Offshore constitutional settlement

DPI – policy

AFMA – management

FRDC – research and development

- **Objectives**

Ecological sustainability

Economic efficiency

# Fisheries: management

- Fishery management plans
- Statutory fishing rights
- Total allowable catches (TAC)
- Management Advisory Committees  
(government, industry, environment)
- Statutory authority – Board  
(government, industry, science, other)

# Fisheries: management

- Management plan objective, areas, gear, timing
- TAC per species (annual)
  - Catch history
  - Stock status and history
  - Stock interactions
  - Market factors

# Fisheries: management

- Statutory access entitlements
  - Share of total allowable catch
  - Tradable
  - Limited carryover
- By catch arrangements

# Fisheries: issues

- Increasing efficiency
- Overfishing stocks
- 29 stocks overfished/exploited
- Cost of management/monitoring
- Illegal fishing
- Harvest strategy frameworks
- \$220m adjustment package 2005



**Water**

# Water: history pre-1992

- Constitution
- 1915 River Murray Water Agreement
  - SA, NSW, Vic, Commonwealth
  - Water sharing principles
  - Infrastructure
  - Focus on River Murray
- 1987 Amendments
  - Basin plus river
  - Impacts on shared water resources

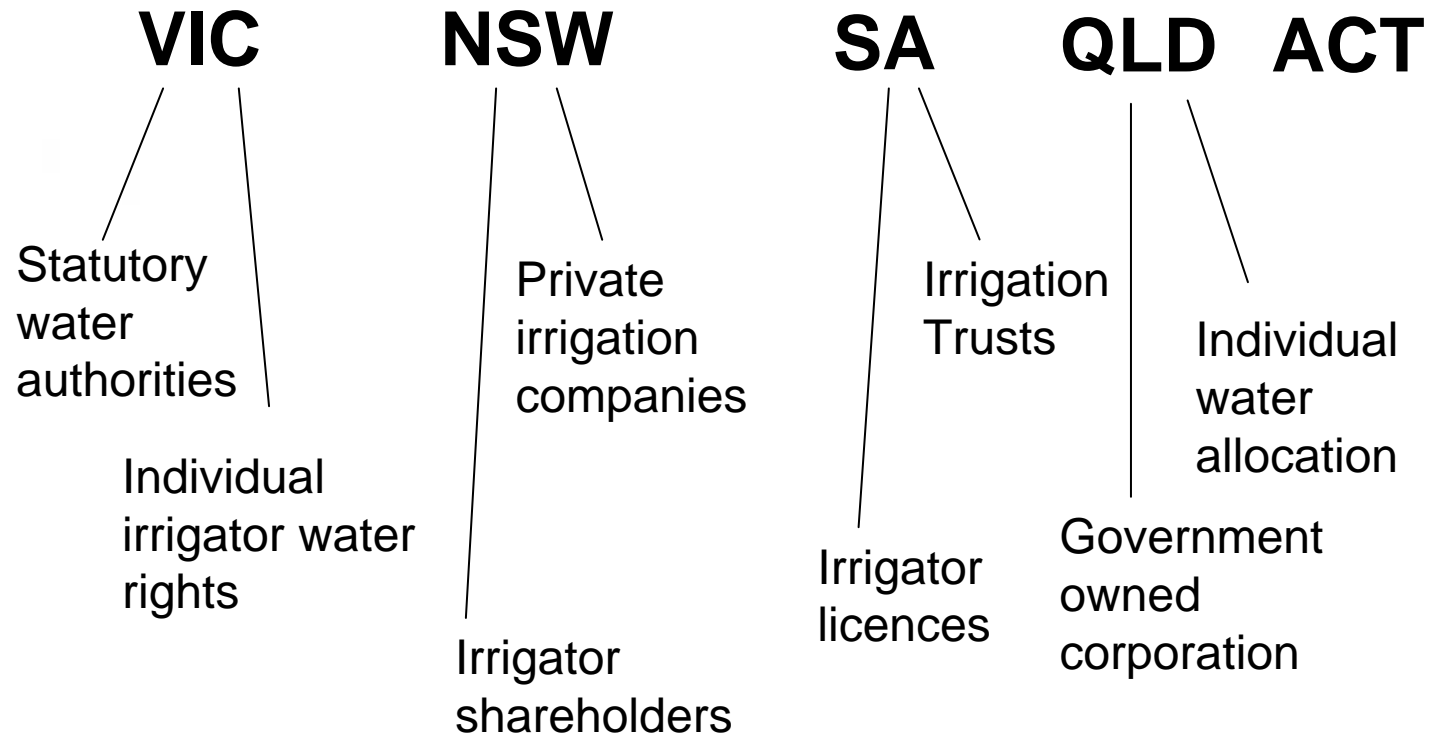
# Water: history post-1992

- 1992 Murray-Darling Basin Agreement
  - Original water sharing rules
  - Promote/coordinate planning and management for equitable and sustainable use of land, water and other resources
  - Qld and ACT sign by 1998

# Water: management

- **Institutions**
  - Constitution
  - MDBC
  - States
  - Irrigation organisations
- **NCP, NWI**

# State management



# Water: management

- Water sharing principles
- 1995: Cap on valley surface water diversions
- Irrigation, town allocations within cap and availability by States
- Management plans

# Water: management

- Annual agreed share provided to States
  - Timing
  - Rainfall/outlook
- States announce allocations
  - Rainfall/outlook
  - Limited by cap
  - Kind of entitlement

# Water: management

- Statutory property rights
  - Range of products (high, general, sales)
  - Share of states allocation
  - River valley dependent
  - Unbundling of rights (land, channel capacity share)
  - Carryover NSW general security
  - Tradability limited

# Water: issues

- MDB Agreement
- Water sharing rules
  - Assigned for irrigation
  - Current challenges
- Over allocation
  - The Living Murray (TLM)
  - National Water Initiative

# Water: issues

- Water trade
  - Temporary vs permanent
  - Exchange rates or tagging
  - Environmental clearances
  - Stranded assets

# Water: issues

- Risks to shared water resources
  - Climate change
  - Groundwater
  - Farm dams
  - Bushfires
  - Return flows
- Monitoring
- Measurement

# Parallels/Differences



# Parallels: fish and water

- Management plans
- Access/property rights
- Shares of resource available
- Tradability of entitlement
- Sustainability of extractions

# Parallels: fish and water

- Over-allocated resources
- Associated strategies
- Recovery programs
- Monitoring/measurement
- Increasing user efficiency

# Differences: fish and water

- Approach to extraction limit
- Total limit on extractions
- Nature of entitlement
- Kind/level of end user involvement
- Complexity of entitlement
- Conservation interest
- View of environment



**What have we learned?**

# What have we learned?

- Over-optimistic managers
- Over-allocate our natural resources
- Not cautious enough
- Poor understanding of reasons for resource variability

# What have we learned?

- Manage on history
- Poor understanding of sustainable resource requirements
- Independent monitoring programs costly but necessary
- Statistically proving cause and effect difficult

# What have we learned?

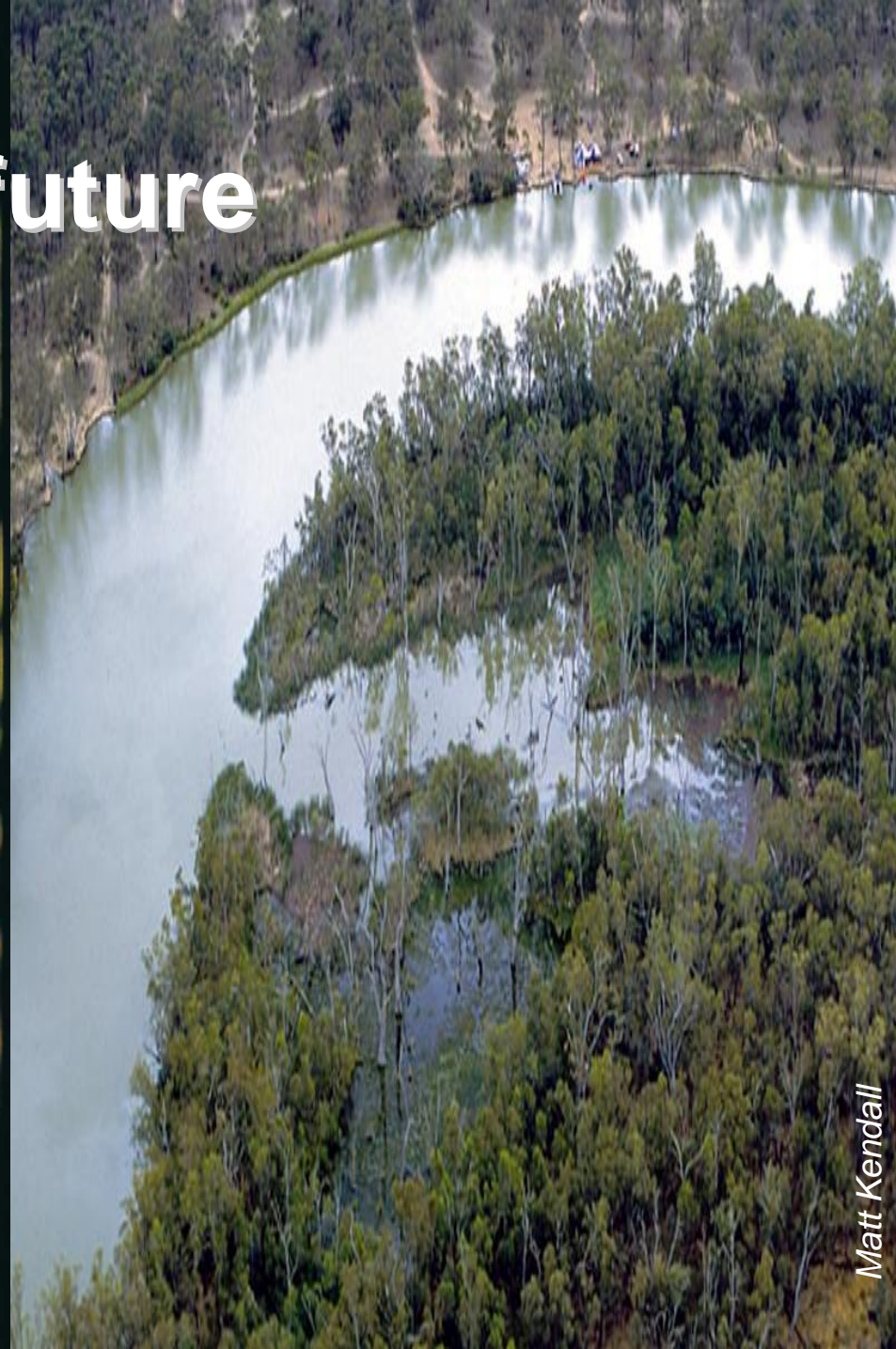
***“The failure of modern fisheries management is blamed on myriad socio-economic and technical problems, but the most fundamental reason for failure might be the overwhelming dominance of extractive interests in participatory decision-making venues.”***

Okey, T.A., Membership of the eight Regional Fishery Management Councils in the United States: are special interests over-represented?, Fisheries Centre, University of British Columbia, 2002.

# What have we learned?

- Poor testing of management assumptions
- Inertia in institutional arrangements
- Political caution

# The future



# The future

- Climate change
- Ecosystem budgets
- Interactions
- Community views

# The future

- Increasing user efficiency
- Illegal extractions
- Institutional arrangements