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Sea to hume fish passage task force

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THE FISH PASSAGE TASK FORCE



Outline of talk

- FPTF – Why?
- How does it work?
- Achievements
- Points of Difference
- Improvements
- Complementary actions
- Conclusions



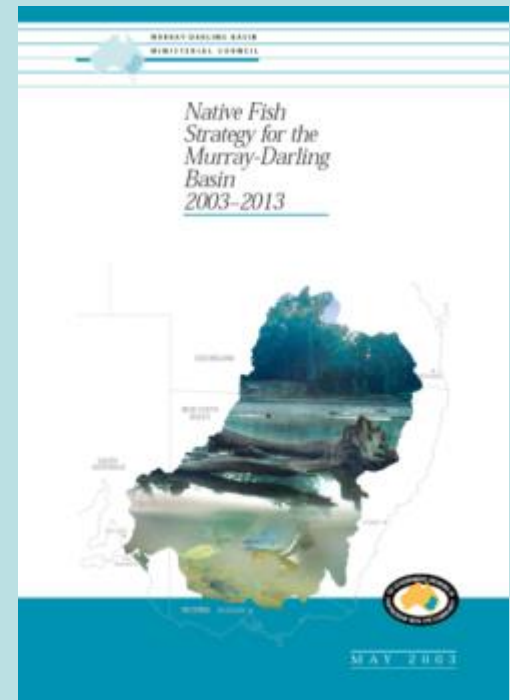
Status of native fish

- About half of the 35 spp are listed as threatened
- Decline of iconic spp
- Presence of 12 alien spp
- Loss of commercial fisheries
- Decline in recreational fishing success

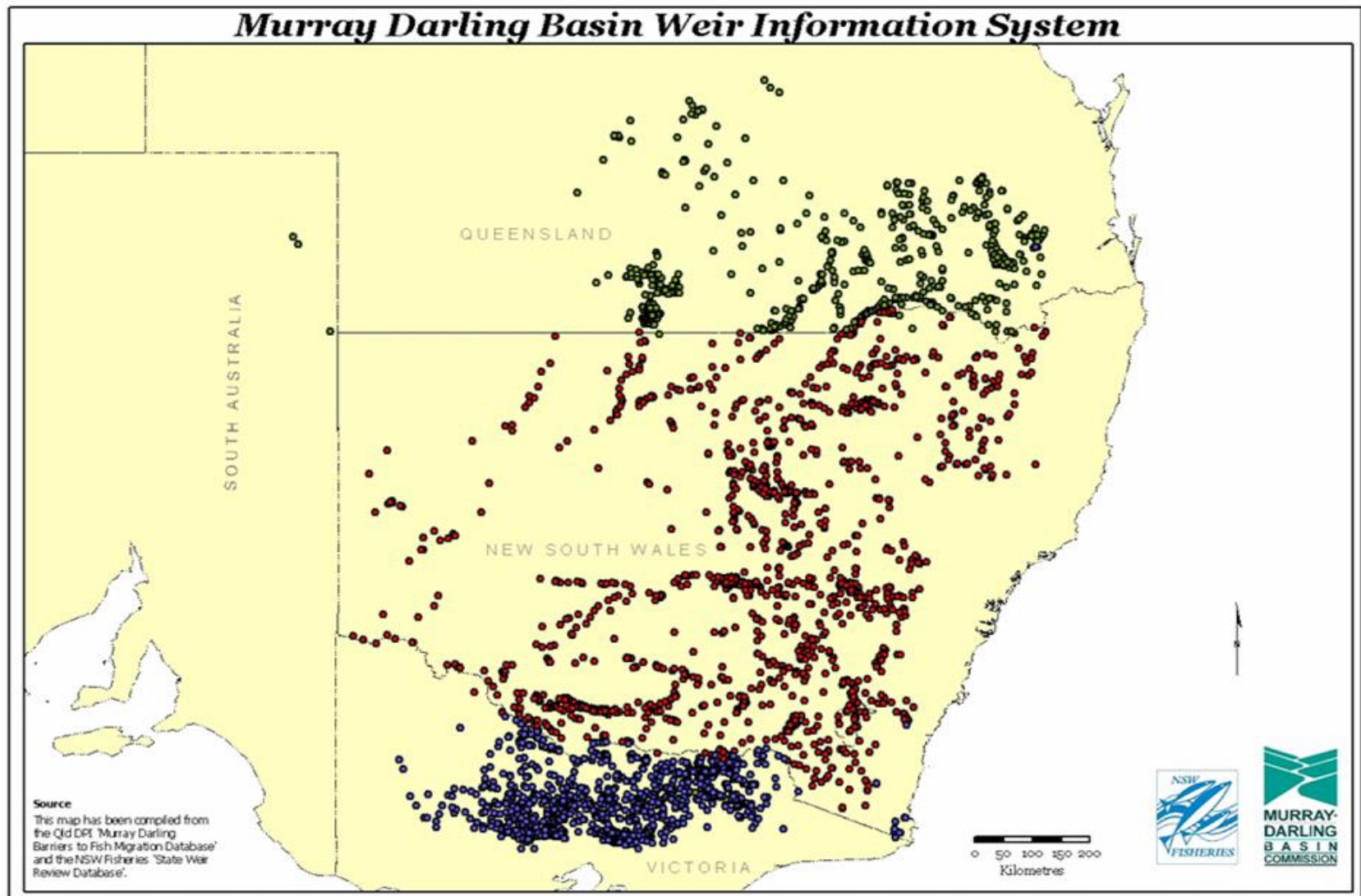


Native Fish Strategy

- A response to key threats to our native fish
- Aimed to restore native fish numbers to 60% of pre-existing levels.
- One of 6 objectives was improving fish passage



Barriers to migration



Why the Task Force was set up

- A lot of “old” fishways did not work
- Opportunistic – weirs being upgraded
- Consistent fishway design



- Ensured expertise & representation from all governments - capacity building

What did the FPTF aim to achieve?

- Fishways from Hume Dam to the Sea
- Integrate ecology, hydrology & engineering
- Low cost and innovative designs



What did the FPTF aim to achieve?

- Ensure appropriate monitoring and evaluation
- Develop a Basin-wide program
- FP is one element of overall riverine rehabilitation



Challenges

- Weirs are old structures
- Fishway entrance needs to attract a wide range of fish
- Broad range of fish sizes (20-1000 mm)



Challenges

- River can flood in any season



- Increasing interest in floodplain regulation



Who sits on the Task Force?



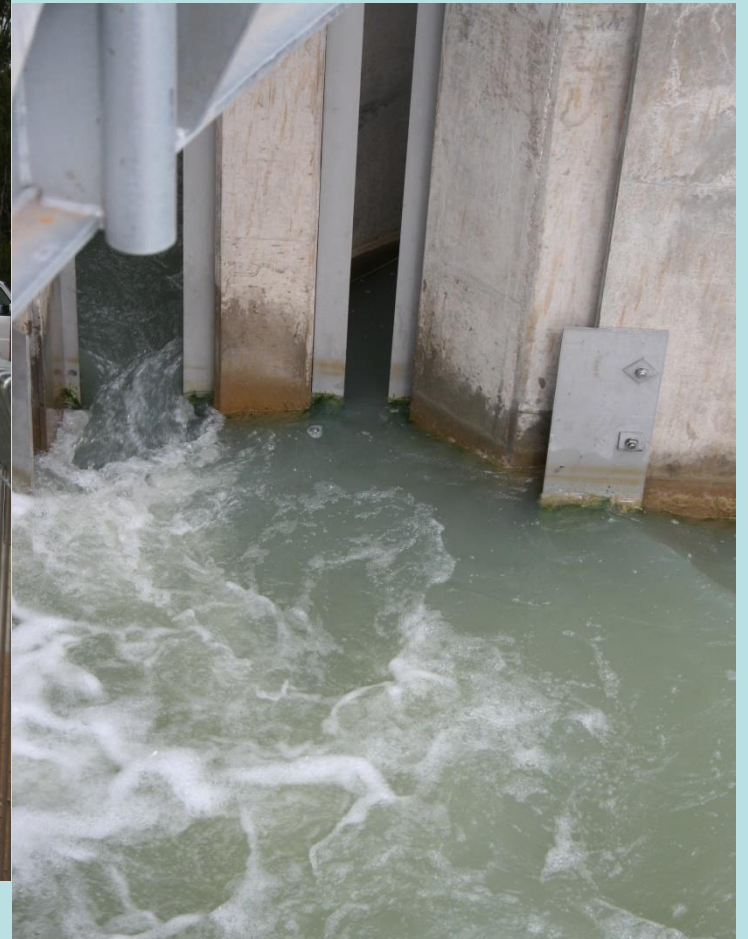
Achievements - innovative research



Scientific Discovery – Small fish migration



Achievements - Dual fishways

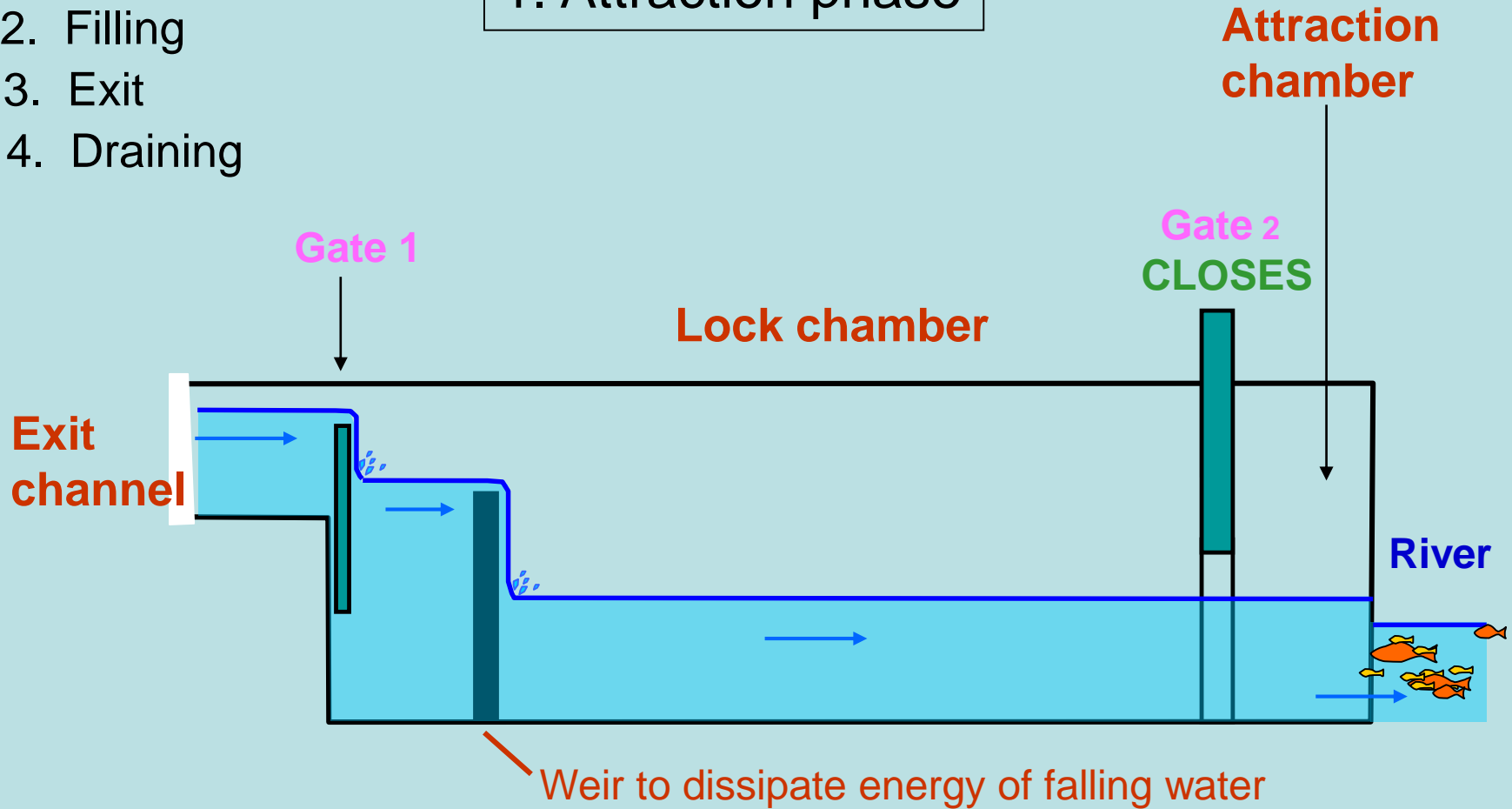


Lock 3 - small fish lock operation

Four phases:

1. Attraction
2. Filling
3. Exit
4. Draining

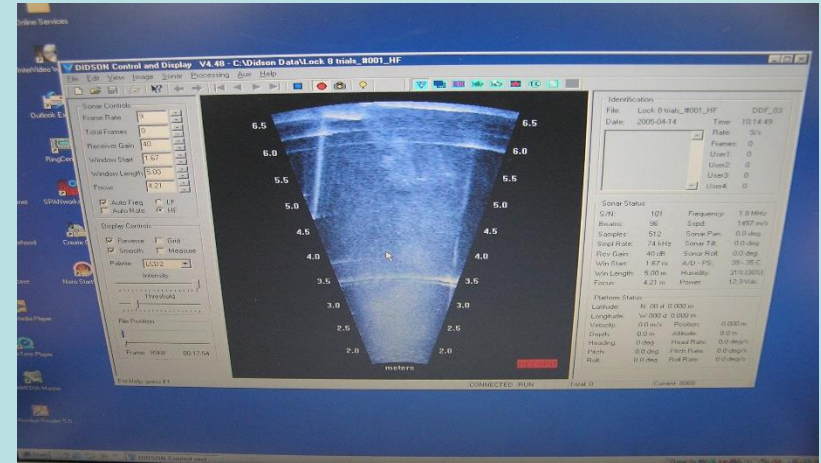
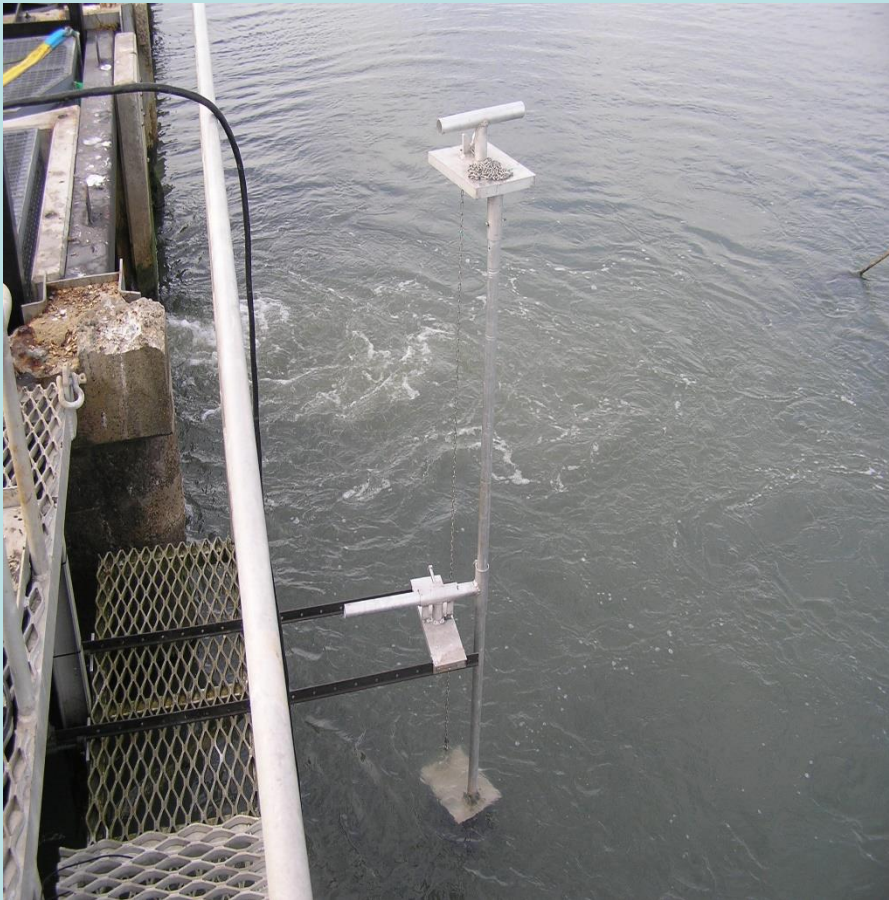
1. Attraction phase



Significant Scientific Discoveries – Carp separation cages



Fish counting technologies

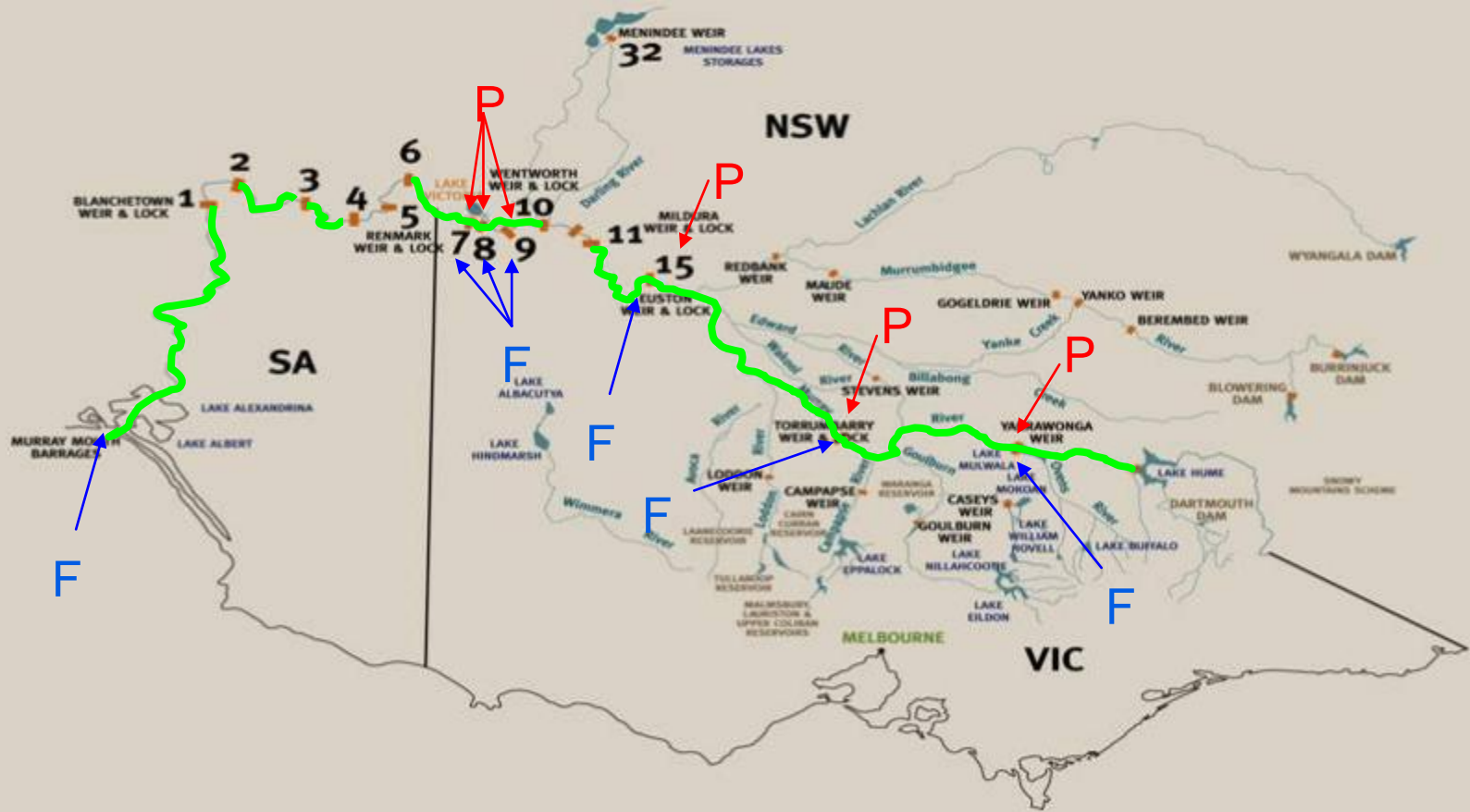


Has it worked?

- Effective fishways (millions of fish per year)
- Continual design and monitoring improvement
- Program has won numerous awards
- Designs being copied internationally



Sea to Hume Program



FPTF – Points of Difference

- Tri-state monitoring team
- Extensive PIT tagging program and data base
- Northern Basin (and other) fishways
- Model extended to SE Asian countries



Improvements - gender balance?



Improvements?



Improvements – communication, hardware, flows

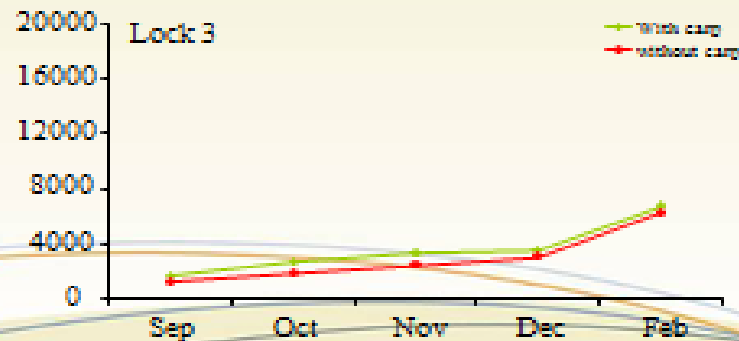
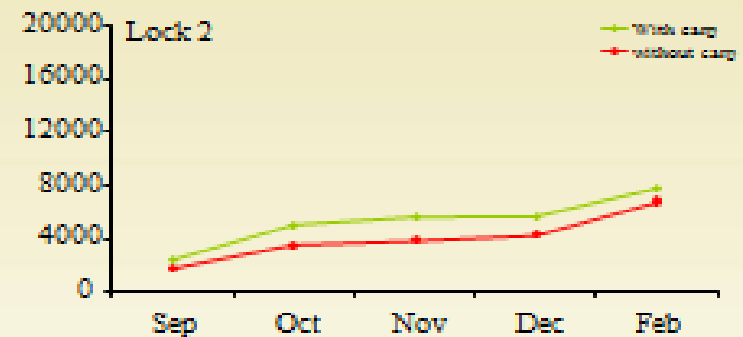
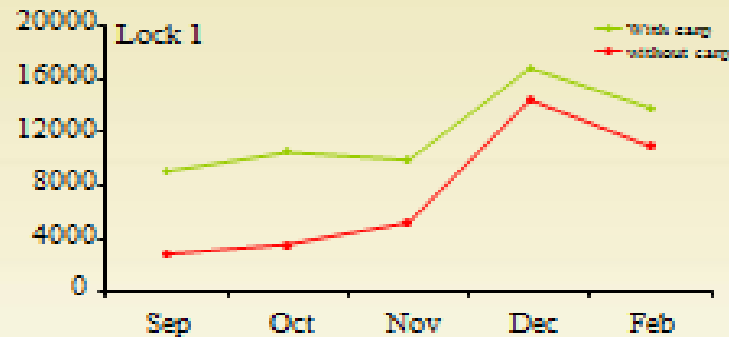


Improvements – small-bodied fish



Improvements – refining carp cages

Reducing accumulations



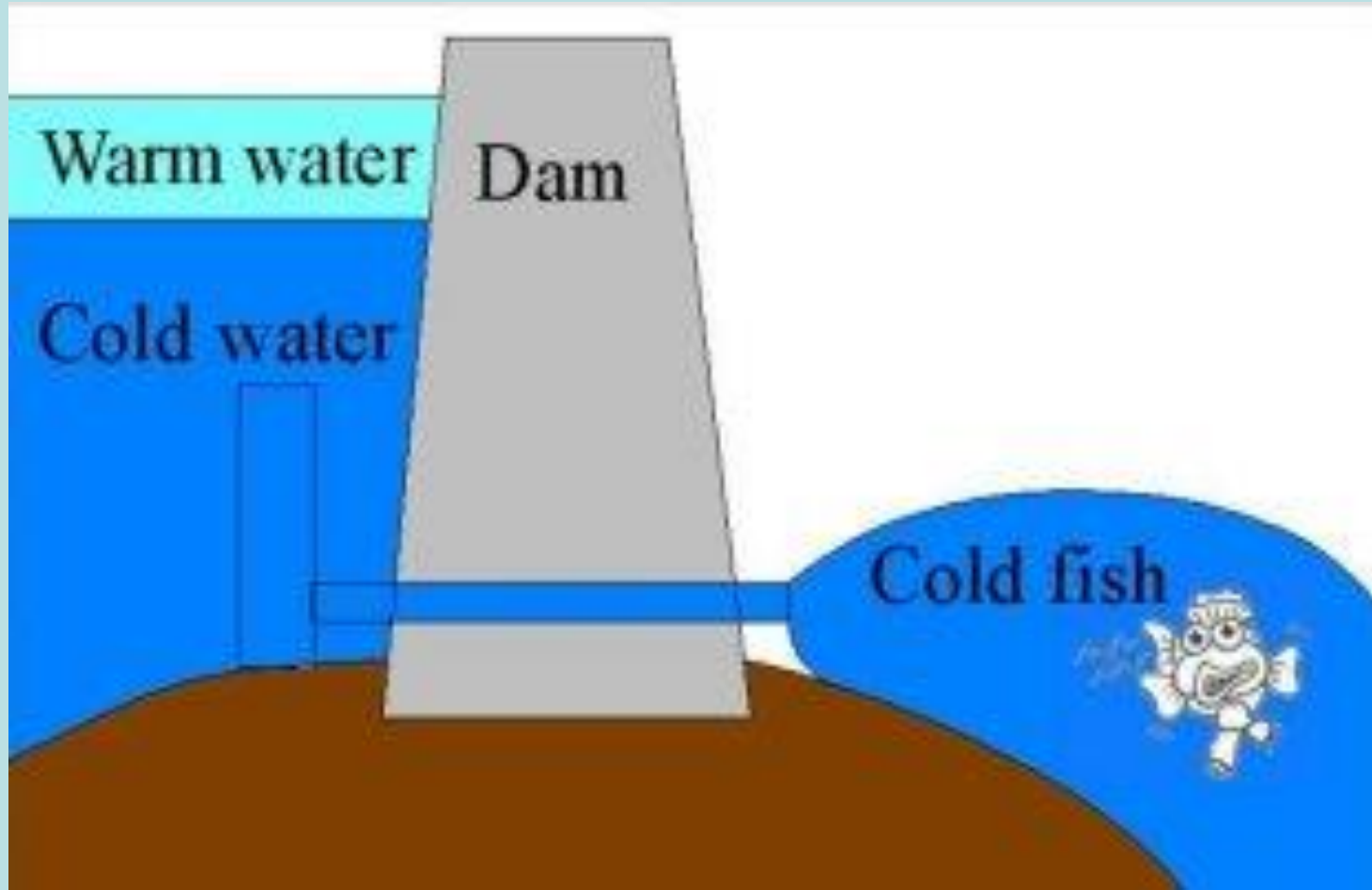
More carp at Lock 1
early in the season

Should decommission
carp trap after November
to maximise native fish
passage

Complementary actions - restore habitat



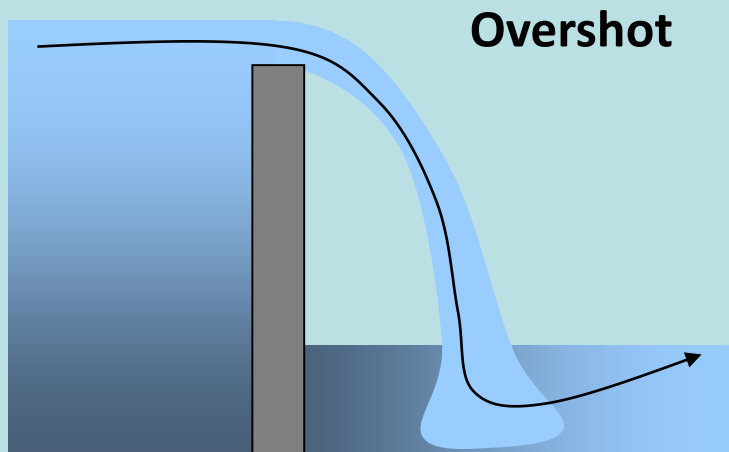
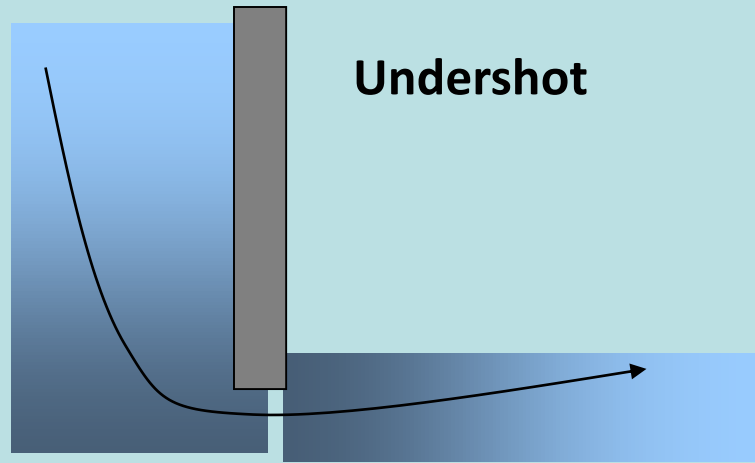
Complementary actions - Cold water pollution



Complementary actions – environmental flows



Complementary actions – fish mortality [d/s passage]



Complementary actions – invasive species



Conclusions

- Sea to Hume fishways were unique in restoring passage of whole communities
- Multi-disciplinary approach provided better solutions
- Adapted to new findings

