Australian Government

Commonwealth Environmental Water Office

Water for the Environment

Red milfoils, Piggery Lake Yanga N.P. (Photo: Charles Sturt University)

W4TE Toolkit

Environmental water

- Deliver water- flows, infrastructure, pumping
- Trade water
- Carry over water

Land management/Other things

- In cord other land managers and groups

People and Knowledge

- landholders, scientist, community members, NRM organisations, water holders, aboriginal people, irrigation corporations.

Long-Term Water Reflection

Year / allocation	Wet>>Dry			
2015-16 (37%)				
2016-17 (100%)				
2017-18 (45%)				
2018-19 (7%)				
2019-20 (11%)				
2020-21 (100%)				

Water for the environment 2020-21

- Wet year with General Security reaching 100% in January
  - ~259 GL of HS,GS and SAL to date
  - Carry over ~84GL (24%)

- Wet year
  - Build resilience of the system
  - Seen the river rise and fall but not overbank
  - large floodplain watering year
  - 18 actions to enhance habitats and threatened spp
  - Small amount of pumping

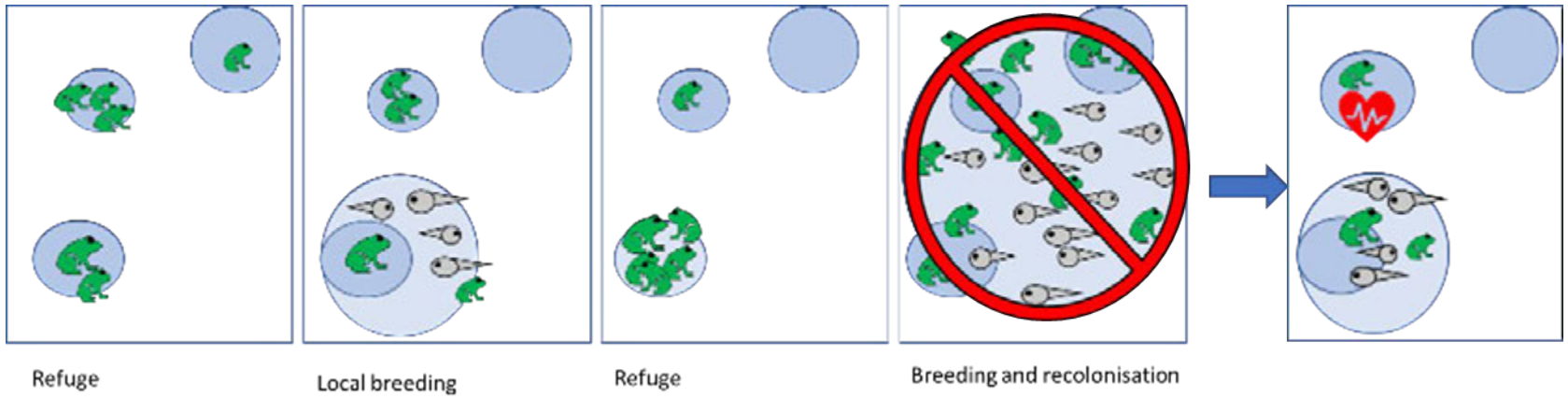
Southern bell frog, Nap Nap Swamp (Photo: Charles Sturt University)

W4TE - Southern bell frogs in the Murrumbidgee

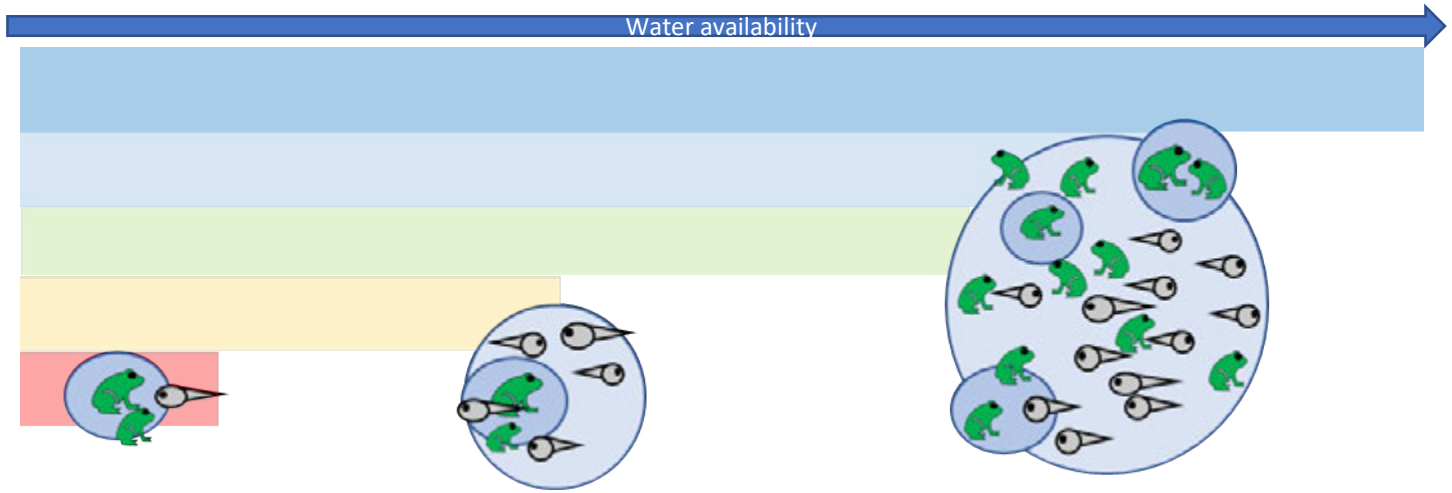
Challenges

Water extraction, drought and climate change are reducing the frequency and extent of floodplain inundation

- Refuge habitats isolated for longer periods
- Larger breeding events occur less frequently
- Recolonisations occur less frequently



Planning



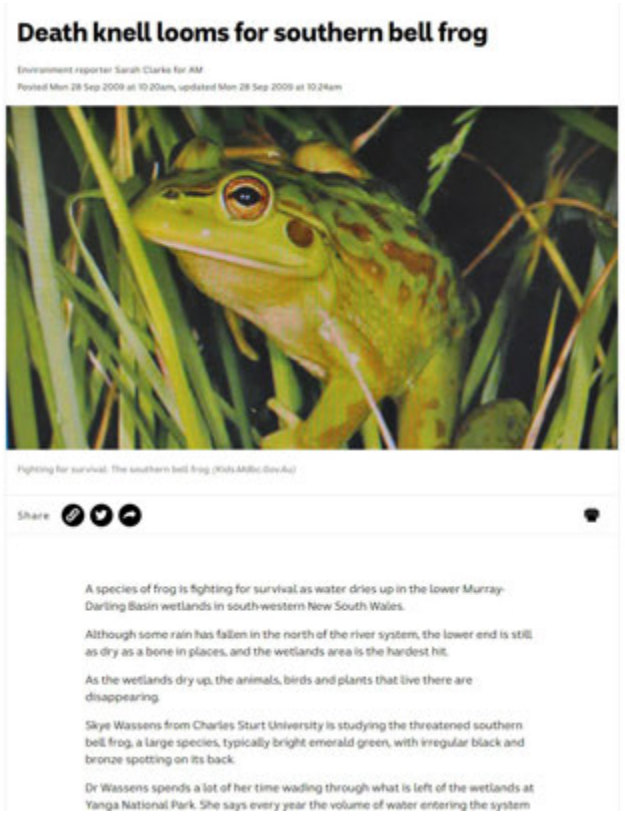
Very Dry Years
Focus on Refuge
Pumping/ deliver to single wetlands
Manage predators to support breeding
Top ups
Year round refuge

Dry-Moderate Years
Dry years plus
Local breeding
Filling and linking some wetlands
Providing breeding habitat
Watering for recruitment

Wet Years
Dry and moderate years plus
Breeding and recolonisation
Events link wetlands, floodplain and landscapes

A conservation success story - recovering southern bell frog populations (Vul. EPBC Act 1999) with environmental water

September 2009



Death knell looms for southern bell frog

Environment reporter Sarah Clarke for AM

Posted Mon 28 Sep 2009 at 10:20am, updated Mon 28 Sep 2009 at 10:24am

Fighting for survival: The southern bell frog (Kids ABC.Gov.Au)

Share

A species of frog is fighting for survival as water dries up in the lower Murray-Darling Basin wetlands in south-western New South Wales.

Although some rain has fallen in the north of the river system, the lower end is still as dry as a bone in places, and the wetlands area is the hardest hit.

As the wetlands dry up, the animals, birds and plants that live there are disappearing.

Skye Wassens from Charles Sturt University is studying the threatened southern bell frog, a large species, typically bright emerald green, with irregular black and bronze spotting on its back.

Dr Wassens spends a lot of her time wading through what is left of the wetlands at Yanga National Park. She says every year the volume of water entering the system

https://www.abc.net.au/news/2009-09-28/death-knell-looms-for-southern-bell-frog/1444726

September 2019

Frog numbers and wetlands surviving drought through 'precise' environmental water flows

ABC Riverina • By Nellie Connors, Wayne Sellards

Posted Wed 25 Sep 2019 at 4:26am, updated Thu 26 Sep 2019 at 7:42am

Southern bell frogs have a loud, distinctive call and are making a welcome return. (Supplied: Damian Michael)

Share

Controversial environmental water flows are believed to be the driving force behind the revival of a endangered native frog, despite the drought.

Once found across most of south-eastern Australia and Tasmania, the southern bell frog has been in decline since the 1970s and was almost wiped out by the Millennium Drought.

Key points:

- Southern bell frog numbers are recovering after the species was

https://www.abc.net.au/news/2019-09-25/southern-bell-frog-wetlands-recovering-despite-drought/11547096

Southern bell frogs - recovered to pre-drought levels

Increase adult survival

- Maintain high quality refuge habitats throughout the year

Increase tadpole survival and recruitment

- Reduce predators (wetland pumping and carp screens)
- Extend inundation duration (top up flows)
- Ensure suitable foraging habitat for juveniles

Facilitate dispersal

- Provide opportunities for recolonisation – large connected floodplain flows during periods of moderate-high water availability

Waterbirds

- 20+ waterbird breeding events
- Over ~15,000 pairs of straw-necked ibis and 3,000 pairs of glossy ibis (+other spp) bred at Eulimbah Swamp in Gayini (Nimmie-Caira).
  - **Colony established and supported solely by environmental water (and a lot of effort by the NNTC)**

(Jamie Woods, NNTC)

Waterbirds

- Supported breeding of threatened Australasian and little bitterns
  - importance of tall spike rush wetlands
- Egrets, spoonbills, herons, cormorants, darters, threatened blue-billed and freckled ducks, and brolgas

Australasian bitterns, Breer Swamp, Yanga N.P. (Matt Herring)

Highlights

Frogs

- Southern bell frog population in Lowbidgee recovered to pre-Millennium drought numbers

Waterbirds

- 20 water bird breeding events
- Large waterbird colony triggered and supported by W4TE

Acknowledgements

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