

Response for the Independent Review into the February-March 2023 fish deaths in the Darling- Baaka River, Menindee

25/07/2023

I am Barbara Webster, 218 Wilson st, Broken Hill. I lived in Menindee for 8 years in the last 20 and tendered our citrus orchard. We were small time irrigators. I also spent many weekends on the Baaka since 1987. Thank you for allowing my say for this review.

I propose the hypothesis that numerous changes to the Baaka- Darling River flows have combined to set the stage for further fish kills.

In a nutshell, every hectare of land that has been sterilised by clearing, herbicides, pesticides and baked in summer sun will hold less life in the form of microbes and worms. Any land such as the Tara and Warra regions at the tip of the Barwon- Darling catchment in QLD, and waterways such as the Condamine River that now have coal seam gas bubbling up to escape into the atmosphere will also have a negative impact on survival of a healthy microbial ecosystem. One can assume consecutive decades of such treatment of land will change the microbial structure, or render the land more sterile. When 1 such hectare adjoins thousands of such hectares in all directions, there is little chance that the adjoining country will have sufficient microbes and worms to share. Every time a large rain event drenches such land, the runoff ends up in the river system.

I remember the bucket loads of writhing worms during a flood by our place at Menindee as they were being swept into a culvert back into the Baaka in 1998. From healthy soil. I would like to live long enough to know that can occur from every farming venture along the Murray Darling basin. Regenerative farming ... towards organic. Stabilizes ground, organisms, carbon sequester, insect and bird balances, and protects our water from excessive herbicides and pesticides.Sustainability.

Other possible reasons for the fish kill in 2023:

- a) no fish ladder to upstream, so fish can get into the weir pool, but not out.
- b) Carp foraging habits annihilating the riverine oxygen - producing plants
- c) The prolonged high flood appeared to kill the reeds that lined the Menindee weir pool, reducing oxygen conversion and toxin clearance when the water finally receded.
- d) Some Menindee residents noted the floodplains missed out on the normal massive revegetation as the floods finally receded. Don't know why, or if it resolved later.
- e) Turtles and other invertebrates that clean up dead things in the river would be far and few between now, after almost the entire river went dry for so long and so deeply (below the mussel line in the riverbed) only a few years ago, so again a reason from a stressed system that has had its compensatory ability compromised.

f) The very large cod would be missing from the Menindee lake system and the Baaka from the previous fish kill and dry river and lakes in 2019. Pelicans were not as abundant along the river as in some of the previous floods. Less apex predators available for too many fish.

Do pollutants from decades of bygone cotton farming still leach out through the soil and crab holes, as old rusting pesticide containers in farm tips?

Does a poorer variety and less volume of microbes from roundup ready crops enter the water ways when there is rain run-off?

As NSW farming communities are supposed to keep their crop run-off water contained to their own land, one would think there is a good reason for this.

2022: massive floods covered the catchment land of the Barwon- Darling. Did these floods breach farm run-off containments? Very likely.

Did these floods reach floodplain regions that hadn't seen a flood since all the leaves fell off the native trees for decades, during the last 2 or 3 droughts? Possibly leading to the blackwater events we witnessed? Very likely.

Why so likely? Because the irrigation industry progressively took more and more water from the Barwon-Darling catchments over the decades, rendering upstream rain events to rarely reach floodplains.

Blue green algae was detected at Menindee about 1989, or 1990. The water mob of the time were queried that upstream chemicals may have upset the concentration of zooplankton in the waterways. This may have limited the response of the ecosystem to eat and quell the outbreak of the green blue algae in the early stages.

Menindee locals claimed there had not been such an outbreak of blue green algae in their experiences. Much blame was cast on the upstream cotton industry, which had been responsible for broadacre clearing of land around the Darling River catchment. Herbicides and insecticides now banned were applied to those crops. The cotton industry was also blamed for reduced flows in the Baaka- Darling by Menindee locals. These were people who had lived on the river all their life, and their forbears lives, up to 40,000 years ago. They all claimed the problems with the Darling River coincided with the 1st cotton farms upstream, and progressed with further agricultural lucrative developments.

The water mob claimed to have found naturally high levels of phosphate in the Menindee land by the river. They blamed the problem of blue green algae on the local soil types at Menindee.

My feeling from the water mob's response was insufficient background data was available from the Darling River floodplains and waterway to find enough scientific evidence to support the theory to condemn the cotton industry. There was/ is a major assumption that dilution during the course of the river would negate any adverse effects agricultural chemicals would have. Seeing the river run white from a flood way up north has convinced me that chemicals in the clays and waters can travel down easily during floods.

Strategies to overcome these issues are actually quite simple:

- a) Incorporate fish traps and passages the Baakandji way into the weirs
- b) Utilize carp products for fertilizer, and support strategies to net carp when they are attracted upstream to breed
- c) Attempt to refrain from such prolonged floods in the future. Listen to the locals. Take their advice seriously, and act without delays.
- d) Encourage regenerative farming practices throughout Australia. If this means international companies won't be happy, let them sell up to family farmers, who have more at stake, being a farm to leave for generations. Encourage cotton growing where irrigation isn't required. Dry land cotton.
- e) Prioritise the Baaka, the River, her floodplains and her lake system over those who wish to use her for massive financial gain. Think of the Baaka as our Mother.**