

The Hon. Barnaby Joyce

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Parliament House
Canberra ACT 2600
minister@maff.gov.au



1st June 2017

Dear Minister Joyce,

I am writing to you on behalf of the Speak Up campaign, which is a grassroots voice for concerned farmers, businesses and environmentalists. Many groups within the Murray Valley are directly impacted by environmental watering programs, as such are keen to work with authorities to achieve the best outcomes possible for social and ecological outcomes. We support the appropriate use of environmental water and see it as one of the important tools for improving river health, but must be conducted in a balanced way that explicitly acknowledges the advantages and disadvantages.

Our group would like to bring our concerns about the proposed environmental watering plans for 2017 – 2018. As stated by the MDBA (MDBA 2017. *Basin environmental watering outlook for 2017–18*) the environmental watering aims to build on the floodplain inundation of 2016.

We are writing to you as we feel that the risks of further floodplain inundation this year outweigh the benefits due to the unintended consequence of carp breeding and proliferation at a basin scale due to the 2016 flooding. The most recent science indicates that re-inundation of wetlands in the basin directly after a carp breeding event will significantly increase carp numbers and their ability to maintain high populations. This will result in severe continuing impacts on our native fish stocks, and other aquatic flora and fauna.

Research completed by the Arthur Rylah Institute for Environmental Research (ARI) '*Managing Flows and carp - Technical Report Series No. 255*' provides evidence for why increased environmental flows that re-inundate wetlands, including the Lower Lakes will result in significant breeding of carp, and allow for movement of now trapped populations back into the main river system.

The graph at the top of page 2 (Figure S1) clearly shows that carp populations increase substantially if adjacent wetlands are inundated in consecutive years. Given the mass breeding event that has just occurred, there is every chance that an increase in carp numbers will occur as shown in the red line in Figure S1.

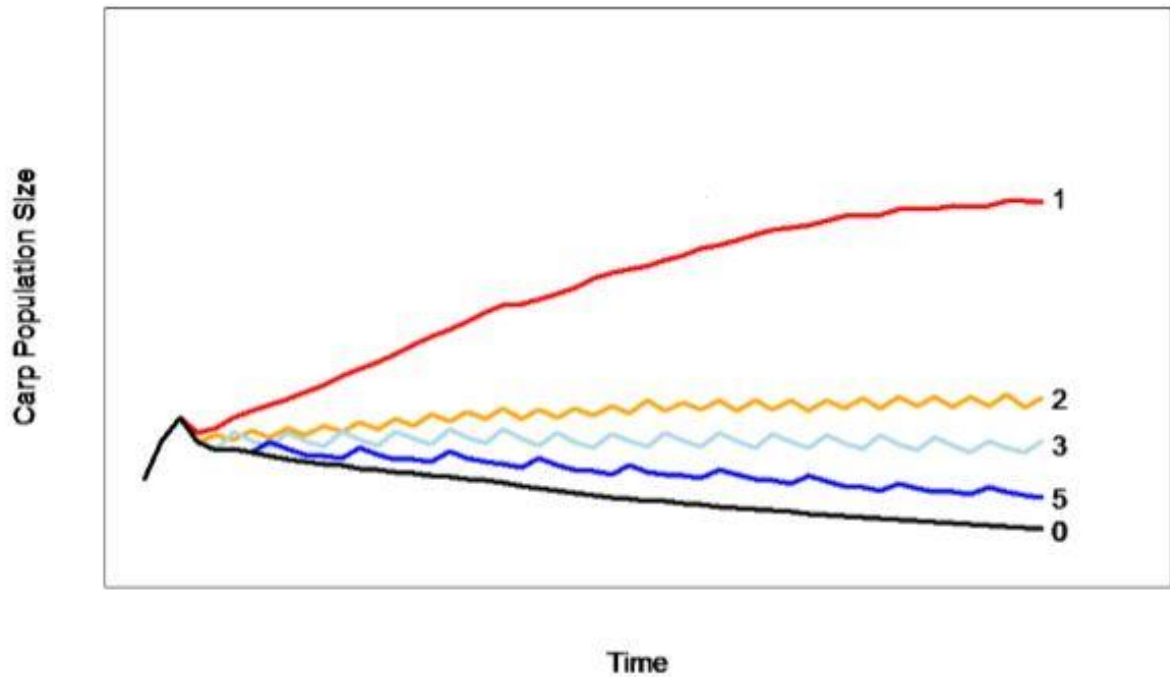


Figure S1. The likely relative changes in Carp populations over time with different flow sequences Within-channel flows covering instream benches (0) and irrigation flows providing limited annual access to adjacent wetland habitats every fifth year (5), every third year (3), every second year (2) or every year (1).

As already stated carp numbers have a direct impact on native fish numbers for several reasons:

- They invade native fish habitats, taking up living and breeding space
- They steal native fish food sources
- They muddy the waterway creating a challenging environment for native fish
- They eat native fish eggs and young, and both juvenile carp and adults are aggressive to natives

Reducing the amount of carp in our waterways is essential to improving native fish stocks. As indicated by the graph above another wet year that connects wetlands to main water channels will result in another mass carp breeding event, as seen late last year and early this year. Another mass carp breeding event will do untold damage to our native fish stocks.

The 2017-2018 MDBA watering plans state that –

“A series of flow events released from upstream storages in spring, late summer and autumn over the next 12-24 months will disperse young Murray cod and encourage silver perch and golden perch to complete staged migrations and redistribute throughout the southern connected Basin. Flows through the system that reach the Murray Mouth in winter will support migrations of adult lamprey from the ocean into the River Murray.” We are concerned that there is no mention of the unintended consequence, about the fact that carp will take advantage of the food and habitat resources before native fish can, and lead to an actual decrease in the ability of these juvenile native fish to sustain themselves. Floodplain inundation for two consecutive years will provide the ideal conditions for carp, putting the young native fish at risk as they try and move through the system.

The research conducted by ARI clearly states that environmental watering which results in floodplain inundation can have the unintended consequences of providing the ideal conditions for carp breeding and proliferation throughout successive years. There is a whole body of research that demonstrates that native fish numbers are lower than carp numbers, and that carp take up to 90% of the biomass in many areas. This would be higher considering the recent flooding, and the native fish kills that have occurred in much of the southern connected basin due to the hypoxic blackwater event.

The carp explosion has been shown to be correct in numerous fishing completions across the southern basin. Examples include, the 16 660 carp caught in 9 hours in SA (the average over the last 4 years is less than 2000), the Wakool fishing competition resulted in only 4 native fish been caught, and thousands of carp. The Deniliquin Fishing competition was similar for carp numbers.

In relation to the native fish kills in 2016, these events were significant, and further advantages the carp. Fishing competition results both in Deniliquin and Wakool support that significant impacts did occur, and the community people we spoke to at the time stated 'it was the worst they had ever seen around the Moulamein area, and much worse than in 2010-11'. The Moulamein fishers are also reporting the worst catches since they can remember. Obviously environmental water has a role to play here in recovery as it did in 2010/11 fish kills, but this should be aimed at in-channel flows that don't benefit carp. In addition, it is impossible to design an appropriate environmental flow program around recovery, if there have been no system wide surveys assessing native fish populations following the 2016 floods and fish kill events. To our knowledge in our home system, the Edward-Wakool system, no system wide surveys have taken place to assess the native fish population base post the blackwater event. After the 2010-11 hypoxic blackwater event, this was done at around 30 sites in the Edward-Wakool system, and we have seen this data used many times.

In general, it is impossible for us a group to support further floodplain inundation again this watering year, for three main reasons stated below.

Firstly, the flooding resulted in significant financial cost and wellbeing for local communities, including lack of access to public areas (e.g. national parks). For this to take place in consecutive years it is evidence that a triple bottom line approach is not applied in MDBA planning. Although we realise the flows will be lower than the unregulated flooding, access will be lost for recreational purposes to areas such as the Barmah-Millewa if they are flooded.

Secondly, there are no indicator species that require floodplain inundation every year, neither fish, birds, trees, frogs, turtles etc, need floodplain inundation every year. It may be argued that due to the supposed poor condition of the floodplain species, more frequent watering is required (as stated by MDBA), but this is negated by the fact that the negatives such as carp breeding would far outweigh any positives. We should also remind ourselves that the regulators in the Barmah-Millewa were originally installed to keep water out of the forest.

Thirdly, the large flows that the MDBA states are needed at the border in SA to keep the Murray mouth open did not work, and led to significant third party impacts upstream. So the modelling assumptions used by the MDBA are obviously flawed. So why would we have support for a process that is obviously based on flawed assumptions and modelling?

Specific Watering Priority Concerns.

Lower Lakes

The ARI report also states that the carp population in the Lower Lakes is estimated to be 846 000 adult carp, but can hold a carrying capacity of 4,195,000. Last year's floods have created the ideal breeding conditions, thus it could be presumed that there could be up to 4 million carp in the Lower Lakes currently, ready to spawn again if conditions are right. If environmental water is delivered to the Lower Lakes this year, we should expect increased carp numbers at the expense of native fish populations.

Moira and Barmah Lake

The Moira Lake centred in the middle of the Barmah-Millewa Forest is a well-studied and significant breeding ground for carp. During a presentation on carp we saw that it *"was estimated that Barmah Lake and Moira Lake were the most likely recruitment sources for 98% of the fish collected from Torrumbarry Weir"*. This research came from a paper. Obviously this shows that if we inundate the Barmah-Millewa this watering year, all of these carp will have access back to the main river and continue to severely impact the native fish populations that are trying to recover from the devastating hypoxic blackwater event. We need to dry it out and kill these carp as has been successfully done in the past.

Native Fish Status in Southern Connected

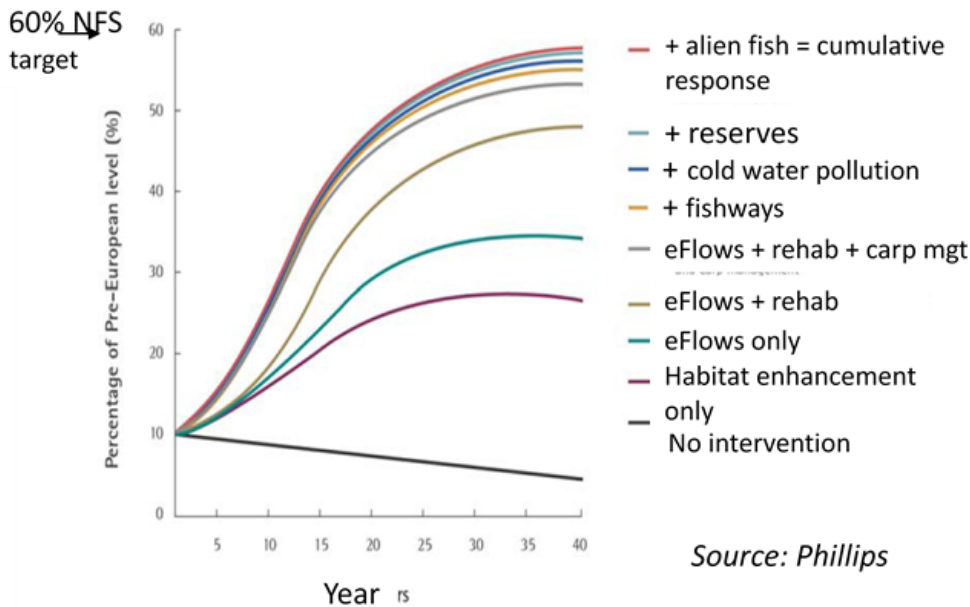
Due to the significant numbers of native fish lost during the 2016 hypoxic blackwater event, and due to the fact that there has not been a comprehensive follow up system wide fish survey to assess the native fish and carp populations (to our knowledge), we fail to see how environmental flow programs can be designed. If true adaptive management principles were being applied (as stated by the MDBA), then they would want to know the current fish situation, so that they could design 'evidence' based programs for them. The old saying, 'you cannot manage, what you do not measure', rings true in this case. In addition floodplain specialist fish are mostly locally extinct in the Southern Connected, so floodplain inundation won't benefit them, and won't benefit river fish as carp steal all the food benefits that come from the floodplain before it helps them.

Environmental Watering as a key threatening process to Native Fish

We also cannot support environmental water delivery to carp infested wetlands and the Lower Lakes as we are concerned it may constitute a 'Key threatening process' (under the Commonwealth EPB&C Act and in NSW the Threatened Species Act, and Victoria under the Flora and Fauna Act) through the proliferation of a listed pest species that has been proven to impact threatened species. Delivery of environmental water resulting in floodplain inundation to the wetlands will not only enhance carp breeding opportunities again leading to more carp, but also provide the opportunity for carp to move around and invade even more areas where native fish are already struggling. For example, Silver Perch are listed as a threatened species under Commonwealth, and both NSW and Victoria. Proliferation and movement of carp will negatively impact this threatened species, and especially wetland species such as southern pygmy perch also listed. This needs to be thoroughly investigated before environmental water can be delivered that we at least know will proliferate carp.

Complimentary Measures needed

Research shows that a multiple measures approach is needed to recover native fish (Figure 2), but there is still no real commitment that these needed measures will be included in or around the basin plan watering plans and that environmental water and these other measures will be implemented together. Fishways, restocking and pest species control programs are important considerations needed within environmental watering plans. The just add water focus will not work and research shows this.



Source: Phillips

Specific actions needed

Our community does support environmental watering. However, for the 2017/18 watering season, we think it is imperative to address these major concerns that both the science and our own eyes show us are real. We feel that the MDBA are ignoring both science and local concerns. Therefore, we do not support any future environmental watering programs resulting in floodplain inundation in the Murray System (or any other system) until the flaws drawn out in this submission are addressed. We are astounded that it would take a group like ours to have to bring them to the forefront. Why weren't these flaws in this submission addressed before the deriving of the 2017/2018 watering plans even took place? We won't enter into the discussion around appropriate stakeholder engagement around devising these plans in this submission, but there are obvious huge flaws in this process as well; how was local knowledge engaged in developing the 2017/18 water plan?

Also attached in Annex 1 is more information on the Lower Lakes and what could be done to improve the situation there and reduce it as a hotspot for carp breeding and proliferation.

This is a formal submission and we are looking forward to your formal response to the submission.

Yours Sincerely

Shelley Scoullar
On behalf of the
Speak Up campaign