

WHAT ARE THE CARP VIRUS
BIOCONTROL RISKS AND HOW
CAN THEY BE MANAGED?

NATIONAL CARP CONTROL PLAN

The socio-economic impact assessment and stakeholder engagement

APPENDIX 2: Findings of community attitude surveys



This suite of documents contains those listed below.

NCCP TECHNICAL PAPERS

1. Carp biocontrol background
2. Epidemiology and release strategies
3. Carp biocontrol and water quality
4. Carp virus species specificity
5. Potential socio-economic impacts of carp biocontrol
6. NCCP implementation
7. NCCP engagement report
8. NCCP Murray and Murrumbidgee case study
9. NCCP Lachlan case study

NCCP RESEARCH (peer reviewed)

Will carp virus biocontrol be effective?

1. 2016-153: Preparing for Cyprinid herpesvirus 3: A carp biomass estimate for eastern Australia
2. 2018-120: Population dynamics and carp biomass estimates for Australia
3. 2017-148: Exploring genetic biocontrol options that could work synergistically with the carp virus
4. 2016-170: Development of hydrological, ecological and epidemiological modelling
5. 2017-135: Essential studies on Cyprinid herpesvirus 3 (CyHV-3) prior to release of the virus in Australian waters
6. 2020-104: Evaluating the role of direct fish-to-fish contact on horizontal transmission of koi herpesvirus
7. 2019-163 Understanding the genetics and genomics of carp strains and susceptibility to CyHV-3
8. 2017-094: Review of carp control via commercial exploitation

What are the carp virus biocontrol risks and how can they be managed?

9. 2017-055 and 2017-056: Water-quality risk assessment of carp biocontrol for Australian waterways
10. 2016-183: Cyprinid herpesvirus 3 and its relevance to humans
11. 2017-127: Defining best practice for viral susceptibility testing of non-target species to Cyprinid herpesvirus 3
12. 2019-176: Determination of the susceptibility of Silver Perch, Murray Cod and Rainbow Trout to infection with CyHV-3
13. 2016-152 and 2018-189: The socio-economic impact assessment and stakeholder engagement
Appendix 1: Getting the National Carp Control Plan right: Ensuring the plan addresses community and stakeholder needs, interests and concerns
Appendix 2: Findings of community attitude surveys
Appendix 3: Socio-economic impact assessment – commercial carp fishers
Appendix 4: Socio-economic impact assessment – tourism sector
Appendix 5: Stakeholder interviews
Appendix 6: Socio-economic impact assessment – native fish breeders and growers
Appendix 7: Socio-economic impact assessment – recreational fishing sector
Appendix 8: Socio-economic impact assessment – koi hobbyists and businesses
Appendix 9: Engaging with the NCCP: Summary of a stakeholder workshop
14. 2017-237: Risks, costs and water industry response
15. 2017-054: Social, economic and ecological risk assessment for use of Cyprinid herpesvirus 3 (CyHV-3) for carp biocontrol in Australia
Volume 1: Review of the literature, outbreak scenarios, exposure pathways and case studies
Volume 2: Assessment of risks to Matters of National Environmental Significance
Volume 3: Assessment of social risks
16. 2016-158: Development of strategies to optimise release and clean-up strategies
17. 2016-180: Assessment of options for utilisation of virus-infected carp
18. 2017-104: The likely medium- to long-term ecological outcomes of major carp population reductions
19. 2016-132: Expected benefits and costs associated with carp control in the Murray-Darling Basin

NCCP PLANNING INVESTIGATIONS

1. 2018-112: Carp questionnaire survey and community mapping tool
2. 2018-190: Biosecurity strategy for the koi (*Cyprinus carpio*) industry
3. 2017-222: Engineering options for the NCCP
4. NCCP Lachlan case study (in house) (refer to Technical Paper 9)
5. 2018-209: Various NCCP operations case studies for the Murray and Murrumbidgee river systems (refer to Technical Paper 8)

Appendix 2: Findings of community attitude surveys

This Appendix provides the presentations given on findings of tracking data on community attitudes. These results were presented to NCCP principal investigator meetings and to NCCP staff on an ongoing basis to enable this information to be rapidly disseminated and used as part of the NCCP.

Four surveys were conducted on community attitudes (the first was conducted prior to this project being funded; the subsequent surveys were conducted as part of this project). The findings for each are described in turn in this section, including identifying in which other reports produced from this project some of the findings are analysed in more detail. The findings section in the main body of this report summarises key findings about attitudes over time.

SURVEY 1: 2016 REGIONAL WELLBEING SURVEY (OCT-NOV 2016)

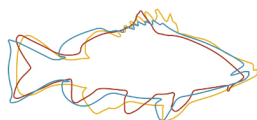
The methods and findings of this survey are reported in detail in Appendix 1, which should be referred to for these results.

SURVEY 2A: 2017 REGIONAL WELLBEING SURVEY (OCT-NOV 2017) AND SURVEY 2B (STAND-ALONE SURVEY DEC 2017)

This survey collected data in two separate surveys which asked the same questions, but used different methods to recruit participants to see how stable findings about acceptability of virus release and carp control more broadly were when using slightly varied methods to recruit participants. Overall results were highly consistent, confirming that findings of the Regional Wellbeing Survey – the main survey vehicle used to track community attitudes – could be relied on as they had very similar results to those obtained when recruiting participants through an online survey panel run by Qualtrics.

Findings were provided as updates to NCCP staff in presentations that summarised key outcomes. The focus was on descriptive analysis of results, with data from the Regional Wellbeing Survey weighted to be representative of the population using the methods described in Appendix 1, and the online sample survey requiring no weighting as it used quota sampling to obtain a sample representative of the Australian population by gender, age and geographic distribution, as well as obtaining specific additional samples of Aboriginal and Torres Strait Islander respondents, and people with diverse cultural and language backgrounds.

The key findings are provided in the embedded powerpoint presentation below. Double clicking on this file will run Microsoft Powerpoint and enable scrolling through the entire presentation.



NATIONAL CARP CONTROL PLAN
RESTORING NATIVE BIODIVERSITY



BUILDING COMMUNITY SUPPORT FOR CARP CONTROL

Understanding community and stakeholder attitudes and assessing social effects

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Embedded Presentation 1: Presentation given February 2018 on results of survey wave 2, with comparison to results of survey wave 1

Further analysis of data from this survey is also provided in Embedded Presentation 3 in Appendix 5, which identifies key implications for engagement.

SURVEY 3: 2018 REGIONAL WELLBEING SURVEY (NOV-DEC 2018)

This survey was a simple tracking survey of attitudes that only asked the item tracking views about acceptability of reducing carp populations using the carp herpes virus. This tracking data was included in the presentation given on early results of survey 4, and in the main body of this report, and confirmed there was no significant change in overall perceptions occurring over time.

SURVEY 4: STAND-ALONE SURVEY (APRIL-MAY 2019)

Key results of this survey were presented in the main body of this report, and in the assessment reports for specific groups for whom impacts of carp control were assessed. In addition, an update was provided to the NCCP in June 2019 using early results of the survey. This report is embedded below, but does contain initial analysis which in some cases differs slightly to the final results presented in the main body of this report, as data were not yet fully analysed. Where there are differences the data presented in the main body of the report, and in final editions of reports assessing impacts on specific groups, should be relied on.

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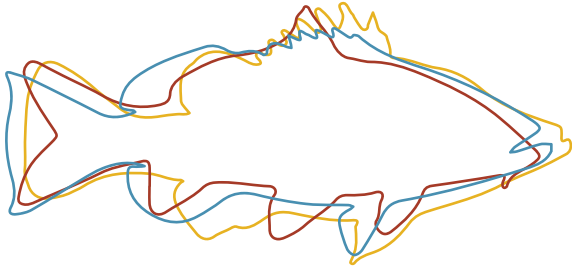
National Carp Control Plan

Building community support for carp control: understanding community and stakeholder attitudes and assessing socio-economic effects

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NATIONAL CARP CONTROL PLAN
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Embedded Presentation 2: Presentation given to Principal Investigator meeting, June 2019



NATIONAL CARP CONTROL PLAN

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