

**From:**  
**To:** [Committee, MDBP \(SEN\)](#)  
**Subject:** Modelling and Bigmod  
**Date:** Tuesday, 15 September 2015 11:08:37 AM

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To the Senators and others,

Modelling forms the basis for all the calculations in the Murray Darling Basin plan.

The MDBA has managed to combine at least 24 models (called Bigmod) on the many rivers in the Murray Darling Basin. This is a world first and the MDBA and CSIRO are very proud of this achievement.

These models take into account a whole raft of factors and include water volume, velocity, turbidity, salt content, evaporation rate, over bank flow, environmental benefit, environmental damage, etc. and also, social and economic factors.

These models are run to determine a myriad of questions. These answers are then presented to the MDBA board and staff members for their determination. Policies and laws are then made, concerning all aspects of the MDBA plan.

Most of these models have been developed and paid for, out of the public purse. Access to these models is denied. Even a senior member of the MDBA staff could not get access to the workings of a model he was using, to determine why the outcomes were incorrect. He managed to work around the problem by some other means.

When one model in a combined modelling of 24 models is incorrect then it is safe to assume that the results will be incorrect. Then the question is how many other models in the 24 are incorrect? Would anyone have known at the time when using the models called Bigmod that it was producing incorrect answers and data?

The disclaimer used in a document titled "River system models used for the development of the basin plan" states that....This document has been prepared by the Murray-Darling Basin Authority for technical users with good understanding of strengths and limitations of mathematical modelling, hydrological data and its analysis and interpretation. The information in this report also uses software and/or data provided by other agencies. The Authority and these agencies give no warranty for the data or the software (including its ACCURACY, RELIABILITY, COMPLETENESS, CURRENCY OR SUITABILITY) and accept no liability for any loss, damage or costs (including consequential damage) incurred in any way (including but not limited to that arising from negligence) in connection with any use or reliance on the data.

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This absolves the MDBA and others from any responsibility. The rest of Australia cannot defend itself against a group you cannot land a blow on. This is unfair to the vast majority of people in the Murray-Darling Basin and Australia. It is a long way outside the public interest.

These models were developed from the public purse and it is in the public interest that they be opened to scrutiny to anyone. The benefit to the environment of the plan may be difficult to evaluate by the use of Bigmod. The cost to the Australian economy by the implementing the MDBA plan does not need any more help from Bigmod. The loss of

wealth to the Commonwealth is, and will be in the \$billions in export income and internal growth. The loss of jobs is estimated to be in excess of 15,000. These losses are happening right now.

It is in the public interest to open the models and all their internal components and calculations, to the public. The Australian public needs to be certain that models used in the implementation of the MDBA plan are correct.

Graeme Pyle