

MMCP Collaboration

The potential impacts of climate change on water quality in the southern Murray–Darling Basin

This synthesis paper is a response to a question posed by the Murray-Darling Basin Officials Committee (BOC) 2016, in relation to water quality. The objectives of this theme within the MMCP is to help the BOC address specific questions as they arise. These question will have relevance to the on-going management of Basin Assets.

Climate change:

- Is driven by the buildup of a number of greenhouse gases (such as carbon dioxide and methane) in the atmosphere:
 - ⇒ Greenhouse gases stop heat radiated from the earth from leaving the atmosphere, leading to an overall increase in world temperatures.
- For the Southern Murray-Darling Basin this will lead to hotter and drier conditions.
- Some permanently flowing streams and rivers will have periods where they cease to flow or even completely dry out.
- It has been estimated that up to 28.7 million tonnes of sediment enters the river network of the Murray-Darling Basin annually.

Potential impacts

Increases in:

- Water temperature.
- Ephemerality.
- Bushfire occurrence and intensity.
- Storm intensity.
- Dust storms.
- Blue-green algae.
- Acidification.
- Mobilisation of sediments.
- Salinisation.
- Eutrophication.
- Heavy metals and metalloids.
- Hypoxia.

Further information

MMCP Collaboration (MMCP) is a project supported by the Joint State Governments and the Murray-Darling Basin Authority to generate and adopt freshwater ecological knowledge through collaboration, to maintain research capability and contribute supporting science to underpin the Basin-Wide Watering Strategy.

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