Report on Managing Water Quality and Salinity – Queensland

Queensland's annual report on the implementation of the water quality and salinity management plan (Schedule 12, Item 14)

Reporting context

The water quality and salinity management plan provides a Basin-wide framework of water quality objectives and targets for Basin water resources. The water quality and salinity management plan is set out in Chapter 9 of the Basin Plan and includes a list of the key causes of water quality degradation, water quality objectives for Basin water resources and water quality targets for long-term planning.

The purpose of this report is to monitor the extent to which the water quality and salinity management plan has been implemented. This report is a requirement of Chapter 13 of the Basin Plan and relates to Item 14 of Schedule 12.

Indicators for measuring success

Implementation of the water quality and salinity management plan is evaluated using the following five indicators:

- Recorded salinity at reporting sites is consistent with the salinity targets (**Indicator 14.1**)
- Adequacy of the flushing of salt from the River Murray System to the Southern Ocean (salt export) (**Indicator 14.2**)
- Governments are having regard to water quality and salinity targets when managing water flows (**Indicator 14.3**)
- Governments are having regard to water quality targets when making decisions about using environmental water (**Indicator 14.4**)
- Measures governments take to achieve end-of-valley salinity targets (**Indicator 14.5**)

Indicator 14.1: Salinity at reporting sites is consistent with the salinity targets in s9.14(5)

14.1.1. Proportion of days where measured salinity met the target EC at reporting sites

Response
No response required from Basin Governments or CEWH. MDBA report only.

Indicator 14.2: Adequacy of flushing to provide salt export (9.09)

14.2.1. Estimated Salt Export (Tonnes) from the River Murray System to the Southern Ocean

Response
No response required from Basin Governments or CEWH. MDBA report only.

14.2.2. Flushing Adequacy

Response
No response required from Basin Governments or CEWH, MDBA report only.

Indicator 14.3: Managing water flows with regard to water quality targets (s9.14)

14.3.1. What procedures and tools were in place to enable water quality targets (dissolved oxygen, recreational quality and salinity) to be met

Response
Due to the dominant unregulated nature of the majority of rivers in the Queensland Murray Darling Basin (QMDB) active management of unsupplemented flows is not possible. However there are a number of small to medium sized storages across the QMDB that supply water such as Leslie Dam, Beardmore Dam, Coolmunda Dam and Glenlyon Dam. The relevant targets in s 9.14(5) of the Basin Plan are: a) To maintain dissolved oxygen at the target value of at least 50% saturation b) The targets for recreational water quality ie that the values for cyanobacteria cell counts or biovolume meet the guideline values set out in the Guideline for Managing Risks in Recreational Water, and c) The levels of salinity at the Darling River downstream of Menindee Lakes should not exceed 830 EC 95% of the time. Queensland has no evidence that releases from any of these storages have the potential to contribute to a decrease of dissolved oxygen saturation to below 50% thus causing a blackwater event. Also Queensland has no evidence that releases from any of these storages have the potential to raise the values for cyanobacteria cell counts or biovolumes above the relevant guideline values. If cyanobacteria are present in storages, the mixing of water that happens when releases are made produces unfavourable conditions for cyanobacteria downstream of the release point. Similarly Queensland has no evidence that releases from any of these storages have the potential to alter the levels of salinity downstream of Menindee Lakes. Indeed the large body of salinity modelling activity that has been carried out over the years as part of informing the Basin Salinity Management Strategy indicates that flows emanating from Queensland, supplemented and unsupplemented, have little salinity impact when measured downstream of Menindee Lakes.

14.3.2. Statement of how procedures and tools were used to meet water quality targets

Response
N/A

14.3.3. Case study

Response
N/A

Indicator 14.4: How were the water quality targets taken into account when making decisions about using environmental water

14.4.1. Statement that procedures and tools were in place

Response
Due to the unregulated nature of the majority of rivers in the Queensland Murray Darling Basin (QMDB) active management of unsupplemented environmental water is not possible. Further decisions about the use of held environmental water made by CEWH in 2013/14 vis. the small release in the Border and to passively let unsupplemented held water in the Lower Balonne run naturally are not considered to have had a material impact on these targets.

14.4.2. Statement of how procedures and tools were used

Response
Not Applicable

14.4.3. Case study

Response
Not Applicable

Indicator 14.5: Implementation of measures to achieve end-of-valley salinity targets

No response required from Basin governments or CEWH. MDBA reports on this indicator on behalf of Basin governments, drawing on their Basin Salinity Management Strategy implementation reports against end-of-valley targets.

14.5.1: Types of measures implemented

Response
No response required from Basin Governments or CEWH. MDBA report only.

14.5.2: Summary of objectives, activities and achievements with regard to each measure implemented

Response
No response required from Basin Governments or CEWH. MDBA report only.