Senate Standing Committee on Environment and Communications
Legislation Committee
Answers to questions on notice
Environment portfolio

Question No: 186

Hearing: Budget Estimates

Outcome: Outcome 4

Programme: Science

Topic: Long term drawdown of groundwater

Hansard Page:

Question Date:

Question Type: Written

Senator Waters asked:

Lestar's concern was 1) seepage into the Condamine River, 2) draining of the Condamine River due to disruption of water flows 3) long term impact on South Australia (in 100 or 200 years) Below are some questions on 3).

1. There's a lot of concern about the long term (i.e. 20 years) drawdown in groundwater systems from the CSG industry. Can you tell me who if anyone in government is doing that work?

2.Can you tell me what the level of funding is for that work?

3. Have you got any staff looking at the long-term impacts "downstream" in the Great Artesian Basin, since the GAB drains partially into South Australia?

We understand that it takes over 100 years, or up to 200 years for the water under Roma and western in Queensland to reach South Australia . Is anyone investigating whether long term consequences on water flow in South Australia may occur in 100 or 200 years?

Please detail the funding and FTE associated with this work.

Answer:

1. Under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), coal seam gas and large coal mining development proposals require approval from the Commonwealth Environment Minister if they are likely to have a significant impact on a water resource.

   The Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development (the IESC) provides scientific advice to Australian governments on the impacts that coal seam gas and large coal mining developments may have on water resources, ensuring that decisions about coal seam gas and large coal mining developments are informed by the best available science. The IESC's advice is published on its website www.iesc.environment.gov.au

   Approval conditions applied to the major coal seam gas projects in Queensland's Surat and Bowen Basins have required the submission and approval of detailed *Water Monitoring and Management Plans* which incorporate, among other components, an extensive network of groundwater monitoring bores, monitoring frequencies, aquifers to be monitored, a method for analysing results, drawdown triggers and response actions. The approved *Water Monitoring and Management Plans* are available on the companies' websites.

The Australian Government is also funding bioregional assessments of the potential impacts on water resources from coal seam gas and large coal mining in areas across Queensland, New South Wales, Victoria and South Australia. These assessments will include potential long-term groundwater drawdown over time in regions where development of coal seam gas activity is considered likely to occur, including the Maranoa-Balonne-Condamine subregion. The assessments are being delivered through a collaboration between the Department of the Environment, the Bureau of Meteorology, CSIRO and Geoscience Australia, with input from state governments, natural resource management bodies and others. Further information is available on the bioregional assessments website: www.bioregionalassessments.gov.au.

2. The budget for the Australian Government's overarching Bioregional Assessment Programme is approximately $86 million.

3. The former Australian Government Department of Sustainability, Environment, Water, Population and Communities and the National Water Commission engaged CSIRO and Geoscience Australia to undertake a Great Artesian Basin Water Resource Assessment (GABWRA), which was delivered in March 2013. The assessment was undertaken over two and a half years and involved a basin-scale investigation of water resources and the potential impacts of climate change and groundwater development to 2070, including analysis of the impact of coal seam gas production on the Great Artesian Basin. This analysis used the Queensland Office of Groundwater Impact Assessment's numerical groundwater model.

   The GABWRA found that under the median and lower 95th percentile estimates, the impact of coal seam gas development in the Gubberamunda Sandstone in the Surat Basin and equivalents at 2075 is predicted to be less than 0.2 metres over more than three quarters of the model area. Under the upper 95th percentile, the predicted impact is less than 1 metre over most of the model area.

   At the western and southern edges of the model (several hundred kilometres from the South Australian border), the impact is predicted to be zero, indicating that there are no modelled downstream impacts for South Australia.

   Funding for the GABWRA (1 July 2010 – 15 Dec 2012) was $6.25 million. The work was contracted to CSIRO and Geoscience Australia on a 'fee for service' basis premised on the delivery of milestones, and therefore FTEs are not known to the Department of the Environment.

   Further information is available on CSIRO's website: www.csiro.au/en/Research/LWF/Areas/Water-resources/Assessing-water-resources/GABWRA.