

Water Trigger Review
GPO Box 787
Canberra ACT 2601
via email: wtreview@environment.gov.au

29th January 2016

Dear Mr Hunter,

Re: Water Trigger Review

Cotton Australia welcomes the opportunity to comment on the Water Trigger Review.

Cotton Australia is the key representative body for Australia's cotton growing industry. The cotton industry is an integral part of the Australian economy, worth over \$1.25 billion in export earnings in the 2014–15 season, and employing on average 10,000 people. The industry's vision is: *Australian cotton, carefully grown, naturally world's best.*

Cotton Australia has been actively involved in making submissions regarding the 'one stop shop' reform agenda that is being pursued by the Australian Government. Cotton Australia is in general supportive of this approach, as it reduces unnecessary duplication from the approvals process ensuring that current State based policies and regulation are recognised within the development approvals process. However, it is our position that in the determination of a project approval, it is the scientific understanding and data that should ultimately be the measure under which a project is assessed to evaluate its likely impact.

Within the 'one stop shop' reforms we are supportive of an approvals based procedure where the Commonwealth decision maker will retain the power under the EPBC Act to add or vary the conditions of approval in particular circumstances. This provides a mechanism whereby the Commonwealth is able to apply conditions of approval to protect matters of national environmental significance such as a water resource. We are firmly committed to the Federal Department and Minister maintaining the right of approval under the water trigger with no devolvement of this legislative instrument to the states.

1. What impacts of coal seam gas and large coal mining development on water resources was the water trigger legislation intended to address?

While groundwater forms less than one-fifth of the total accessible freshwater resource it provides approximately a third of water that is consumed. It is vital for many regional communities, providing the only source of drinking water. Groundwater supports irrigated

agricultural production, and is the ‘reason’ for Australia’s highly productive agricultural valleys that produce above average levels of food and fibre. As stated at the *Soil, Big Data and the Future of Agriculture* conference (June 2015) water is the single greatest predictor of agricultural productivity. Given the critical importance of water in regional communities, it is no surprise that concerns have arisen with the increasing presence of extractive industries. Due to the very nature of groundwater, the scientific understanding of this resource, and its interconnection with other water sources, is considerably less than with surface water, and therefore there is a strong case to adopt a precautionary approach.

In NSW water valleys considerable efforts have been undertaken to develop Water Sharing Plans to ensure that harvesting of water fits within the sustainable yield limits. In many cases this has involved water licence holders relinquishing some of their existing water rights in order to meet these sustainable limits. As a result of the structural adjustments that have been required from significant reductions to water allocations, it is understandable that landholders are keen to maintain water access; to avoid any further insecurity. In NSW it is a requirement that extractive industries hold licences for their water take – a measure that is not currently enacted in Queensland. This legislation provides, to some extent, a level of protection for landholders in regards to volumetric licencing. However it does not account for or remove risks associated with depressurisation of aquifers, changes to groundwater quality or interception of water by generated voids.

The Department of Environment has highlighted the following as factors that may directly or indirectly lead to a ‘significant impact’:

- A change to the quantity, quality or availability of surface or groundwater
- Alteration to groundwater pressure and / or water table levels
- Alteration to drainage water patterns, or
- Substantially increasing demand for, or reducing the availability of water for the environment.

The Environmental Protection and Biodiversity Conservation Act 1999 (EPBC Act) provides a legal framework for the management and protection of defined matters of national environmental significance. The Amendment Bill 2013 introduced water resources as a new matter of national environmental significance. This overcame the challenges posed by the legislative instruments in place. Prior to the water trigger the Minister could only consider the advice from the Independent Expert Scientific Committee (IESC) in approval processes where it was shown that there were flow on impacts to matters of environmental significance such as a threatened species or Ramsar listed wetland.

The Great Artesian Basin (GAB) underlies one-fifth of Australia’s land surface, and is one of the world’s largest confined groundwater systems, containing aquifers that span the Triassic, Jurassic and Cretaceous eras (Figure 1; Blewett, 2012). The GAB as such is an example of a national resource, which services and is indeed the lifeblood of many regional communities.

Given its unique character which makes it both nationally and globally significant, it is a minor progression to see this resource recognised in legislation as a matter of national environmental significance. This recognition then ensures that the Minister can consider the advice of the IESC and the direct impacts of mining and coal seam gas on the water resource itself. While we have focused on the unique nature of Australia's groundwater systems, Cotton Australia is acutely aware of the very real risks placed on surface water resources by large coal mines and coal seam gas (CSG) development. The definition of a water resource was not amended under the changes to the water trigger and is broadly defined under the EPBC Act as:

- Surface water or groundwater, or
- A watercourse, lake, wetland or aquifer (whether or not it currently has water in it), and
- Includes all aspects of the water resource (including water, organisms and other components and ecosystems that contribute to the physical state and environmental value of the water resource).

Figure 1 – Australian groundwater aquifers



Source : Blewett, R.S. (ed.) 2012

2. What previous policy or regulation had failed to address impacts of coal seam gas and large coal mining development on water resources?

Cotton Australia wishes to indicate its support of the IESC, which we believe has highlighted the importance of scientific understanding and knowledge to guide and inform assessment and approval of large coal mines and CSG development.

The review of the National Partnership Agreement (NPA) (Hunter, 2015) highlighted previous policy failures in consideration of impacts of large coal mines and CSG, and how the formation of the IESC has overcome some of these initial challenges. The improvements brought about through the IESC include:

- Prior to the establishment of the IESC there were limited options to seek scientific advice relating to groundwater or surface water issues
- There is evidence that the IESC has influenced the quality of application of science to the regulation of large coal mining and CSG development

Prior to the interventions undertaken by the Federal Government there was only one 'step' in the assessment of impacts of large coal mining and CSG development. This involved referral of a project to the IESC to consider the impacts of a proposal, and delivery of advice to the Minister. However, the operation of this process indicated the gaps in the receipt and actioning of IESC advice by the Minister, whereby Federal legislation only permitted introduction of conditions where there were downstream impacts on 'other' matters of national environmental significance e.g. threatened species. The closing of the legislative gap was addressed throughout the introduction of the EPBC Amendment Bill 2013 and is discussed in detail in response to Question 1 above.

3. Why was Australian Government action needed?

Cotton Australia believes that State and locally based planning and legislative arrangements should provide the necessary frameworks for protection of agricultural land and water resources. However as former Minister Burke stated at the time of the passing of the Amendment *'there was no point in delegating any of the CSG water safeguards to the States given the point of the legislation was to act on problems in State safeguards'* (McCormick, St John, A. and Tomaras, J., 2013).

Cotton Australia has observed this failure of State planning processes first hand through our engagement on the Watermark Coal Project. Cotton Australia has been involved throughout the approvals process for the Watermark project and as such has a strong understanding of the NSW system including the gateway process. While we do not typically become involved in locally based issues, as we advocate on behalf of the broad concerns of all our growers, in the case of the Watermark project we see this as having much broader implications for all growers. NSW planning processes are intended to protect high value agricultural lands through its policy frameworks such as the Strategic Regional Land Use policy and the identification of Biophysical Strategic Agricultural Land. The Liverpool Plains has unparalleled access to high quality

groundwater and surface water which when combined with the black soils results in the consistent delivery of high agricultural productivity. We would have expected that planning processes would have protected this highly strategic and valuable agricultural land and water resource.

Through our examination of the Environmental Impact Statements (EIS), presentations to the Planning Assessment Committee and responses to the IESC advice we have continued to hold significant concerns regarding irreversible impacts that will occur as a result of the Watermark coal project. We highlight our concerns in relation to the groundwater modelling as a means to illustrate the significant shortcomings of the NSW planning processes, which without further consideration by the Federal Minister through specific requests for IESC advice, would not have been addressed by the State based planning agencies. It should be noted that we also have significant and ongoing concerns in relation to ongoing monitoring of the Watermark project, adaptive management arrangements in place and the cumulative impacts of the mine. We wish to highlight that adaptive management is in direct conflict with the precautionary approach advocated for under the EPBC Act.

Concerns regarding groundwater modelling

The Watermark Coal groundwater model was built to focus on regionally based impacts. As acknowledged in the IESC advice provided to the Minister, the UNSW study, and as documented in available peer reviewed literature this fails to capture the impact of the mine on a local scale. The nature of the regional model developed by the proponent oversimplifies the localised geology on the impact area and, as a consequence, any associated broader implications.

The localised geology which is characterised by gravel and sand lenses highlights issues in relation to connectivity and recharge pathways of the aquifers from the Permian outcrops to the Namoi Alluvium. Without sufficient information, the significance of the recharge source to regional supply pathways is unclear. Through the State based approvals process it was clear that the NSW Office of Water and the proponent failed to quantitatively address this matter and we would expect that this would have been a requirement prior to approval of the project. The disregard of localised geology has the potential to generate significant groundwater impacts and significant implications for property and water rights of landholders.

The need for further information and groundwater modelling to occur on a finer scale is universally acknowledged by the IESC - to name but a few examples of where this is stated within the current IESC advice issued is 1a, 2d, 3b, 17, 20.

Without the involvement of the Federal Government, as brought about through the water trigger, the project would have proceeded without consideration of how to monitor impacts to local water sources, wider cumulative impacts and 'stop work' triggers that enforce compliance actions where impacts to water resources are observed beyond EIS predictions. While Cotton Australia

still views the approval of the mine as a major failing of both the State and Federal Governments we believe that without the water trigger, no conditions would have been placed on the development approval. The conditions enacted on the Watermark project were stated by Minister Hunt to be “18 of the strictest conditions in Australian history”. However as these conditions are not yet in place, it remains to be seen how compliance and enforcement of these ‘safeguards’ will be met and whether the triggers in place will halt impacts prior to the occurrence of irreversible changes to water resources.

4. Was there evidence that a regulatory approach would be effective in addressing the problem?

Cotton Australia supports a regulatory approach for the assessment of impacts associated with large coal mines and CSG. We have observed that without a regulatory framework in place, impacts to water resources were not appropriately considered. Generation of a regulatory approach has been responsible for the establishment of the IESC, research and the consolidation of existing knowledge through the Bioregional Assessment Program, and a focus on water resources when assessing development proposals.

In our assessment, the establishment of appropriately located groundwater monitoring sites, consideration of cumulative impacts, and additional resources to expand the existing knowledge base on risks and impacts of CSG and mining would not have occurred without the introduction and expansion of the regulatory framework.

5. What evidence suggested that the market would not resolve the problem over time?

See response to Question 4.

As highlighted by the Hawke Review (2009), market based mechanisms often fail to deliver environmental outcomes. While water, through reforms has achieved a price through a system that allows the trading of water rights, we believe that a market based mechanism would fail to deliver the necessary changes required in order to manage impacts associated with depressurisation, loss of water quality and impacts generated through water interception.

As mentioned previously, NSW has existing policy measures in place that account for water take by extractive industries however these policies fail to cover other impacts generated by large coal mines and CSG industries. It should be noted that volumetric take regulatory instruments are not in place in the other States.

6. Was there, and does there remain, significant likelihood of substantial negative environmental impact of coal seam gas and large coal mining development on water resources in the absence of regulation?

See response to Question 1, 2 and 3.

7. Were alternative viable policy options (including non-regulatory approaches) considered at the time the water trigger legislation was being developed?

The outcomes from the Hawke Review (2009) indicated alternative regulatory amendments to the EPBC Act. Suggestions made under the review included adding ecosystems of national significance, which would allow the Minister to consider the 'downstream' impacts on water resources through their effects on listed ecosystems. It is anticipated that this would have involved a lengthy process to list new ecosystems and would have failed to capture projects currently undergoing approval processes.

Cotton Australia believes that the Hawke Review (2009) focuses on impacts that are considered as volumetric focused or 'water take' related. The review states that *'setting a threshold for a nationally significant level of extraction would be very difficult'*. However as noted by the National Water Commission (NWC) the water markets are formed, and indeed trading is conducted around the establishment of an overall cap. Therefore this 'cap' or 'level of extraction' is already established through other existing State and Federally based mechanisms.

We believe that the establishment of the water trigger enables the IESC, and in the subsequent advice delivered to the Minister, the consideration of broader impacts of large coal mines and CSG on water resources. Cotton Australia believes that it was the need to account for a broader range of issues that enabled broad bipartisan support and passage of the Water Trigger legislation amendment on the 19 June 2013 through the Federal Parliament.

Additional safeguards that have been generated through the introduction of the water trigger legislation include:

- Assessment of projects will apply a precautionary principle in relation to development approval and require the Minister to consider the potential for irreversible damage to water resources
- Greater clarity and a more direct role for IESC research and advice
- Projects are required to be assessed on a cumulative basis to determine the aggregate impacts where a proposed development is located in a well-developed area with multiple water users.

8. If so why were these alternatives not adopted?

See response to Question 7.

9. Has the water trigger legislation been effective in protecting water resources potentially and actually affected by relevant developments?

See response to Question 3 and 7.

10. Are there gaps in the scope of the water trigger legislation that reduce its effectiveness in protecting water resources from relevant developments?

Cotton Australia believes that the water trigger could be improved through the application of the amendment to shale gas and tight gas industries.

While we have been encouraged by Minister Hunt's consideration of IESC advice in the development of Federal conditions of approval, we note that it is not a requirement of the EPBC Act for the Minister to be transparent around consideration of IESC recommendations. Cotton Australia would like to see this stated as a requirement within the legislative provisions.

While beyond the scope of this review Cotton Australia wishes to express that we hold concerns over the NSW gateway approvals process and would recommend 'closing the loop' within the approvals framework. We see that this could be achieved via Federal engagement through enabling the IESC to consider whether their advice has been taken into account by the mining proponent within both the State and Federal approval process. One example of where this will occur is observed in the case of the Watermark coal project where Minister Hunt has committed to referring the Water Management Plan to the IESC for consideration following submission by the proponent. Development of a Water Management Plan with staged water triggers was a condition of a approval on the Watermark project as recommend by advice from the IESC.

11. Are there improvements that could be made to the way in which advice is sought by the Australian Government from the IESC that could increase the efficiency of processes required as part of the water trigger, for example, when advice of the IESC is sought?

Cotton Australia believes that there are challenges posed by involving the IESC prematurely within the 'advice' process, when there is insufficient knowledge of the proponent's project to inform recommendations. While we understand that advice provided 'late' within a development assessment process may create challenges or delays towards the end of the project for the extractive industry proponent, we believe that the greater levels of knowledge at this stage will best inform advice in relation to cumulative impacts, identification of water resource impacts and issues that may be associated with ongoing monitoring and compliance.

As highlighted by proponents within the Hunter Review (2015) industry stated there were often difficulties associated with communication of the nature and execution of a proposed development which lead to adverse outcomes in relation to scientific differences. It is thought that there would be more significant issues communicating the intricacies of a project proposal where there is greater uncertainty around the proposed development and its associated environmental impacts. Cotton Australia believes that such levels of uncertainty regarding the nature of a project are more likely to occur in the early stages of EIS development.

12. Were stakeholders appropriately involved in implementation of the water trigger legislation?

Cotton Australia would like to indicate that there were opportunities for both formal consultations, written submissions as well as less formal input during the development of the water trigger legislation.

13. What have been the benefits of the water trigger for environmental outcomes, community confidence in the regulatory system of applying science to decision-making and management of environmental risk?

See response to Question 3.

During our discussions to improve regulation, reporting, monitoring and compliance associated with development activities it has become abundantly clear that there are major problems with the current State-based EIS process. The Federal Approval processes which are completed in addition to the EIS, through the IESC, are seen to provide extra scientific rigour to the development approvals process, which if not in place would have resulted in the 'unfettered' approval of extractive activities. As highlighted earlier in our response (see Question 3), while it remains to be seen whether these Federal conditions will halt the irreversible impacts to land and water resources, these conditions highlight the 'impact gaps' that are not currently being considered under the State based processes.

The lack of confidence in State approvals appears to occur on both sides with proponents, community interest groups and industry peak bodies commissioning expert reports to justify or contest findings of EIS development proposals. This results in high levels of expenditure by both parties and ongoing distrust in the decision making process. Cotton Australia believes that significant reforms to the EIS process are warranted and would be highly supportive of an overhaul of the assessment process as part of any future large coal mine or CSG review.

14. Has the regulation delivered an overall benefit when regulatory costs are compared to the environmental and other benefits?

Cotton Australia believes that the costs associated with the introduction of the water trigger are minimal in relation to the broader benefits derived through the protections to the water resource. The Senate Inquiry which assessed the likely associated costs indicated that *'any additional costs would be relatively small compared with the total cost of viable projects, and would be likely to dissuade any but the most marginal developers'* (Whitehead, 2013).

As highlighted by McGrath (2014), the EPBC Act captures only a fraction of projects which go through the planning processes, as while there are approximately 250,000 planning applications each year, there were only 400 that triggered an EPBC referral. Hunter (2015) further highlighted the actual numbers which are going through 'the full' water trigger assessment process, with only 84 requests from the Commonwealth and State government regulators considered by the IESC. Clearly only those proposals which have the potential for significant impact on water

resources are going through the assessment process. Cotton Australia believes that it is entirely necessary that full and complete consideration is given to these projects where there is the potential for significant impacts on water resources that may irreversible consequences for the environment and the water rights of landholders.

Should you have any questions regarding our submission please do not hesitate to contact me

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Kind regards,

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Policy Officer
Cotton Australia

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