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

Question No: 148

Hearing: Supplementary Budget Estimates

Outcome: Outcome 2

Programme: Science

Topic: BIOREGIONAL ASSESSMENTS TIME LINE

Hansard Page: 82

Question Date: 20 October 2014

Question Type: Spoken

Senator Singh asked:

Senator SINGH: Can you outline the time line for the remaining product release of bioregional assessments?
Dr Kennedy: I do not have that in front of me but I would be very happy to take that on notice; it will not take me long to provide that to you.

Answer:

Bioregional assessment products are expected to be released as and when they are finalised during the programme duration so as to provide public access to information as it becomes available. The schedule of expected product release dates as at 14 November 2014 is at **Attachment A** but is subject to change in response to the availability of new knowledge or changes in priorities.

As at 14 November 2014, seven context statements (Galilee, Maranoa-Balonne-Condamine, Gwydir, Namoi, Central West and Gloucester subregions and Clarence-Moreton bioregion) and six coal and coal seam gas resource assessments (Galilee, Maranoa-Balonne-Condamine, Gwydir, Namoi, Central West and Gloucester subregions) had been released.

In addition, the Methodology for bioregional assessments (*Methodology for bioregional assessments of the impacts of coal seam gas and coal mining development on water resources)* and the first submethodology (*Developing a coal resource development pathway*) had been released.

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ATTACHMENT A

Bioregional Assessment Programme schedule of expected product release dates – 11 November 2014

			Northern Inland Catchments				Lake Eyre Basin				Clarence - Moreton	Northern Sydney		Sydney Basin	Gippsland
			Namoi	Central West	Gwydir	Maranoa-Balonne-Condamine	Galilee	Cooper	Arckaringa	Pedirka	Clarence - Moreton	Gloucester	Hunter	Sydney Basin	Gippsland
1	Contextual information														
1.1	Context statement	The context statement summarises the current extent of knowledge about relevant characteristics of the subregion or bioregion: the geography, geology, hydrogeology, hydrology and ecology.	Released	Released	Released	Released	Released	Apr-15	Dec-14	Dec-14	Released	Released	Feb-15	Jul-15	Mar-15
1.2	Resource assessment	The resource assessment summarises what is known about coal and coal seam gas resources, and developments both now and (potentially) in the future.	Released	Released	Released	Released	Released	Jun-15	Jun-15	Jun-15	Dec-14	Released	Jun-15	Feb-16	Aug-15
1.3	Water-dependent asset register	The water-dependent asset register broadly describes and lists the water-dependent assets identified in the bioregional assessment.	Mar-15	Jul-15	Jul-15	Jun-15	Mar-15	Jul-15	May-15	May-15	Jun-15	Dec-14	Jun-15	Sep-15	Apr-15
1.4	Receptor register	A receptor is a point in the landscape, associated with a water-dependent asset, for which impacts from hydrological change caused by coal seam gas or coal resource development can be modelled and assessed. The receptor register broadly describes and lists the receptors and impact variables for which direct, indirect and cumulative impacts are assessed in the bioregional assessment.	Sep-15	Aug-15	Aug-15	Sep-15	Jul-15	Sep-15	Aug-15	Aug-15	Jul-15	Jul-15	Dec-15	Feb-16	Nov-15
1.5	Current water accounts and water quality	The water accounts include information about water stores, flows, allocations and use. Information about surface water and groundwater quality is also included.	Aug-15	Apr-15	Apr-15	Jun-15	Mar-15	Jul-15	May-15	Aug-15	Jul-15	Apr-15	Nov-15	Jan-16	Nov-15
1.6	Data register	The data register lists and broadly describes datasets used in the bioregional assessment. Detailed information about the provenance and metadata is provided.	Apr-15	Dec-14	Dec-14	Apr-15	Jan-15	Jun-15	May-15	May-15	Jan-15	Jan-15	Mar-15	Aug-15	May-15
2	Model-data analysis														
2.1	Observations analysis	The observations analysis includes an assessment of data availability, spatial and temporal resolution, and errors and uncertainties. Initial advice about data gaps is included.	Sep-15	Aug-15	Aug-15	Sep-15	Jul-15	Sep-15	Aug-15	Aug-15	Jul-15	Jul-15	Dec-15	Feb-16	Nov-15
2.2	Statistical analysis and interpolation	The statistical analysis and interpolation provides a quantitative understanding of the subregion or bioregion by analysing the observed data and providing additional derived products (e.g. interpolated data). While used throughout the bioregional assessment, these data are particularly useful for the conceptual, surface water and groundwater modelling.	Sep-15	Aug-15	Aug-15	Sep-15	Jul-15	Sep-15	Aug-15	Aug-15	Jul-15	Jul-15	Dec-15	Feb-16	Nov-15
2.3	Conceptual modelling	The water balance estimates the flow of water in and out of a subregion or bioregion. Two time periods are covered: (i) current resource development (generally commenced prior to December 2012) and (ii) most likely future resource development (as specified by the coal resource development pathway).	Sep-15	Aug-15	Aug-15	Sep-15	Jul-15	Sep-15	Aug-15	Aug-15	Jul-15	Jul-15	Dec-15	Feb-16	Nov-15

			Northern Inland Catchments				Lake Eyre Basin				Clarence - Moreton	Northern Sydney		Sydney Basin	Gippsland
			Namoi	Central West	Gwydir	Maranoa-Balonne-Condamine	Galilee	Cooper	Arckaringa	Pedirka	Clarence - Moreton	Gloucester	Hunter	Sydney Basin	Gippsland
2.5	Water balance assessment	The water balance estimates the flow of water in and out of a subregion or bioregion. Two time periods are covered: (i) current resource development (generally commenced prior to December 2012) and (ii) most likely future resource development (as specified by the coal resource development pathway).	Sep-15	Aug-15	Aug-15	Sep-15	Jul-15	Sep-15	Aug-15	Aug-15	Jul-15	Jul-15	Dec-15	Feb-16	Nov-15
2.6	Surface water and groundwater numerical modelling	Surface water modelling provides surface water hydrological response information that is used to estimate the likely hydrological impacts on receptors (both negative and positive) in the bioregional assessment. Groundwater modelling provides groundwater hydrological response information that is used to estimate the likely hydrological impacts on receptors (both negative and positive) in the bioregional assessment.	Sep-15	Aug-15	Aug-15	Sep-15	Jul-15	Sep-15	Aug-15	Aug-15	Jul-15	Jul-15	Dec-15	Feb-16	Nov-15
2.7	Receptor impact modelling	Receptors are the points at which the impacts of hydrological change are modelled. Receptor impact models describe the relationships between impact variables and hydrological changes at receptor locations.	Nov-15	Aug-15	Aug-15	Nov-15	Oct-15	Dec-15	Oct-15	Aug-15	Dec-15	Oct-15	Apr-16	May-16	Jun-16
3	Impact analysis	The impact analysis reports the direct, indirect and cumulative impacts, and their associated uncertainties, for the receptors and impact variables in the receptor register.	Nov-15	Aug-15	Aug-15	Nov-15	Oct-15	Dec-15	Oct-15	Aug-15	Dec-15	Oct-15	Apr-16	May-16	Jun-16
4	Risk analysis	The risk analysis presents information about risk, identifying and characterising risks from coal seam gas and coal mining developments, listing those risks in a risk register, and quantitatively assessing the likelihood of impacts to receptors contained within identified water-dependent assets. The risk analysis integrates the surface water, groundwater and receptor impact modelling and impact analysis, and uses rigorous uncertainty analysis and propagation to estimate those likelihoods.	Nov-15	Aug-15	Aug-15	Nov-15	Oct-15	Dec-15	Oct-15	Aug-15	Dec-15	Oct-15	Apr-16	May-16	Jun-16
5	Outcome summary	The synthesis of outcomes describes impacts and risks of coal seam gas and coal mining development on water-dependent assets. It summarises the outcomes from products generated by the previous components.	Apr-16	Apr-16	Apr-16	Apr-16	Feb-16	Feb-16	Feb-16	Feb-16	Mar-16	Jun-16	Jun-16	Jun-16	Jun-16

Please note: Not all technical products will be developed for each subregion, either because it is anticipated there will be a lower level of coal and coal seam gas development in a particular subregion or because there are other processes underway undertaking equivalent scientific analysis. The effort within the Bioregional Assessment Programme is concentrated on providing the greatest value of new science.