

# River Health in the Lake Eyre Basin — Design, collection, analysis and interpretation of river health data.

## Formation of a Lake Eyre Basin Rivers Assessment Consortium

December 2011

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### Invitation

Expressions of interest are invited from interested research institutions, regional organisations, non-government organisations and industry players to form a Consortium, in partnership with the Australian, Queensland, South Australian and Northern Territory Governments, for the purpose of refining and implementing the Lake Eyre Basin Rivers Assessment (LEBRA) over a period of a minimum of three years.

The task of the Consortium will be to carry out the *design, collection, analysis and interpretation of river health data for the Lake Eyre Basin*, initially for three years, as a core component of a ten-year LEBRA cycle (2009 to 2018). The consortium aims to build further funding opportunities to enhance the LEBRA through partnership arrangements.

Consortium members are expected to contribute to the costs of the project and will be required to identify the resources they can contribute. The Australian, NT, Qld and SA Governments have also made an in principle agreement to contribute to the project costs.

### Management context

#### *Lake Eyre Basin Intergovernmental Agreement*

Signatory governments to the Lake Eyre Basin Intergovernmental Agreement (the LEB Agreement) – the Australian, Queensland, South Australian and Northern Territory Governments – are committed to reviewing the condition of all watercourses and catchments within the Lake Eyre Basin Agreement Area on a ten-yearly basis, in order to achieve the following purposes:

- **underpin responses to condition** – including on-ground management, government and industry policy, enterprise and personal decision-making and local and regional resource planning;
- **form consistent messages** about Basin condition, outlook and appropriate responses; and
- **guide ongoing research, investigation and monitoring** to form a reliable basis for evidence-based response.

## ***Strategic Adaptive Management***

The LEB Agreement signatory governments are committed to carrying out this review and assessment within a Strategic Adaptive Management (SAM) framework, in which ***monitoring*** is strongly linked to ***management***, and in which the multiple, key players across the Basin are closely engaged.

The SAM framework is centred on:

- strategic and value-based planning founded on scientific and societal needs and values;
- a learning-by-doing approach to management planning;
- participatory engagement of all stakeholders to serve their needs, access their inputs and secure their cooperation.

The ***design, collection, analysis and interpretation of river health data for the Lake Eyre Basin*** described in this brief will form the central, data-gathering component of the SAM approach. Current planning time frames for the SAM approach are:

- interim reporting every 5 years; and
- full reporting every 10 years.

## ***Thresholds of Potential Concern***

A key mechanism to ensure that ***monitoring*** is closely linked to ***management*** for LEBRA will be the determination and use of Thresholds of Potential Concern (TPCs) for monitoring indicators. The Consortium will work in partnership with the Australian, Queensland, South Australian and Northern Territory Governments and with a range of other LEB stakeholders in order to:

- posit, trial and review appropriate TPCs for monitoring indicators; and
- analyse and interpret the information gained from the monitoring in close reference to TPCs.

The Consortium, where appropriate, will also support and assist in the process of planning appropriate management actions in response to knowledge gained from the monitoring.

## **Principles and guidelines**

### ***Seeking best expertise available***

In seeking a consortium approach to this monitoring, the main goal is to achieve a cost-effective implementation approach for LEBRA that brings together the best people to do the job. Expertise and capability for such monitoring is scarce in Australia, and is scattered among a range of organisations and institutions. A collaborative approach among these people, organisations and institutions is the most effective implementation model for a monitoring and assessment program on such a scale.

## ***Scientific independence***

A consortium approach to LEBRA monitoring will provide a level of independence that will generate greater stakeholder confidence in the information gathered and the assessments made.

## ***Cost recovery and in-kind support***

LEBRA monitoring will provide important opportunities for research organisations and others to generate new knowledge in a range of areas, including monitoring biophysical systems of extreme variability, and remote area governance and collaboration. As indicated above, it is our intention that the monitoring work done under LEBRA will be performed on a cost-recovery basis only. Tendering organisations are also invited to build in-kind support from their own organisations into their expressions of interest.

## ***Partnering and governance***

Interested organisations must be prepared to partner closely and effectively with relevant Australian, South Australian, Queensland and Northern Territory government agencies, as well as with the LEB Regional NRM bodies.

The current governance for the 2010-11 LEB Rivers Assessment work is a streamlined version of the indicative governance model proposed in the 'Lake Eyre Basin Rivers Assessment Implementation Plan' (the Implementation Plan) at Attachment A.

A variety of governance and leadership arrangements are possible for the effective and efficient operation of the Consortium. All possibilities, including the governance model in Attachment A and the current, modified governance arrangements, will be considered when the Consortium partners have been identified.

The governance and leadership structure for the Consortium will be consistent with the following core principles:

- **Transparent** – methods and governance arrangements should be open to scrutiny
- **Efficient** - roles, responsibilities, relationships and timelines must be very clearly defined
- **Clear definition of responsibilities (and rights)** - clear delineation of responsibilities must take into account separation of oversight, performance and review
- **Responsive** – processes should be adaptive and be aimed at driving effective responses
- **Accountable** - clear lines of delegation, authority and reporting must exist
- **Inclusive** – those expected to respond should have the opportunity to participate and influence
- **Persistent (relevant and accepted)** –ongoing certainty should underpin community confidence

- **Respectful** – trust and respect must be the hallmarks of collaboration.

Interested organisations are invited to include in their Expressions of Interest comments, recommendations, and preferences for governance and funding arrangements for the Consortium.

### ***Aboriginal and other community participation***

The LEB Agreement parties are committed to ensuring the involvement and participation of Aboriginal and other community members in the monitoring program carried out for LEBRA. The Consortium will be required to adopt an Aboriginal engagement strategy, to be discussed and developed in conjunction with other mechanisms for Aboriginal participation in the LEB Agreement, including regular LEB Aboriginal Forums.

## **Background information**

This section provides brief background on recent and current work. The Consortium will be required to build upon and integrate its work closely with these existing monitoring methodologies and with current monitoring work.

### ***Existing monitoring methodologies***

The methodologies for LEBRA have been developed in several phases since the LEB Intergovernmental Agreement was signed in 2000, culminating in the Implementation Plan finalised in December 2009 ([Attachment A](#)).

The Implementation Plan provides background to the SAM approach, and records current thinking among the LEB jurisdictions and the LEB Scientific Advisory Panel about the scope and choice of major monitoring indicators. The Consortium will be expected to use this Implementation Plan as a starting point and a foundation for the design, collection, analysis and interpretation of river health data for the Lake Eyre Basin. More detailed methodologies for several indicators in the Implementation Plan have been further developed for the 2010-11 monitoring program (see below), and these will also form a basis for Consortium activity.

### ***Current monitoring program***

In April 2010, the LEB Ministerial Forum approved a monitoring program for the initial year of LEBRA implementation (2011), with the ‘no regrets’ condition indicators selected being hydrology, fish and water quality. These indicators are being monitored with the following objectives:

- Establish a representative monitoring network for the fish assemblage diversity indicator that is distributed across the whole LEB and commence sampling based on consistent sampling methods. This will include sampling at representative reaches covering the whole basin.
- Install or reinstall waterlogger depth recorders (including some depth/EC) at permanent monitoring sites. This includes installing a few new telemetered stations and maintenance of existing telemetered stations and gauging stations.
- Commence sampling of the first component of the water quality monitoring program as recommended in the Implementation Plan, which is to sample water quality in conjunction with fish sampling during each survey time.

- Consider how to incorporate community/Aboriginal participation and engagement in the 2011 LEBRA sampling program, take any initial steps, and make recommendations to LEB Rivers Assessment Oversight Group for future participation and engagement.
- Propose preliminary hypotheses and possible Thresholds of Potential Concern.

The Consortium will be expected to utilise and build upon this initial monitoring.

## **Expression of interest requirements**

This call for Expressions of Interest is the first stage in developing a Consortium for the design, collection, analysis and interpretation of river health data for LEBRA.

Key information and commitments required in Expressions of Interest at this initial stage are:

- an indication of technical and scientific expertise available relevant to the monitoring indicators and methodologies set out in Attachment A, in particular, an indication of experience and expertise available in monitoring arid and semi-arid environments;
- demonstration of an understanding of, and commitment to, a SAM approach to LEBRA;
- preparedness to operate on a cost-recovery basis, and if possible to offer in-kind support;
- demonstration of preparedness and capability of partnering closely and effectively with the relevant Australian, SA, Qld and NT government agencies, and with the LEB Regional NRM bodies;
- comments, recommendations, and preferences for Consortium governance and funding arrangements; and
- demonstration of preparedness and capability of ensuring the involvement and participation of Aboriginal and other community members in the monitoring work carried out for the LEB Rivers Assessment.

Interested parties may submit expressions of interest for sub-components of LEBRA that may match their particular expertise, as well as for the whole LEBRA program.

## **Further information**

Enquiries in regard to this call for Expressions of Interest should be directed to the LEBRA Coordinator:

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**ATTACHMENT A – Implementation Plan (Kiri-ganai report)**

**ATTACHMENT B – LEBRA Methodology 2010-11**