

## **Suggested SEGRA Walks the Talk and Communique Item**

### ***The Challenge of Secure and Safe Domestic Water for Rural and Remote Australia: A reality check for sustainable regional development***

#### ***Setting the Scene***

Constitutionally, water resources management in Australia belongs to the states and territories. Currently, there is no National Water Plan and the water resources plans for each jurisdiction are in different states of completion. To a degree, the Murray Darling Basin is an exception as allocations and environmental flows are managed pursuant to the Commonwealth Water Act 2007. That said, the release of water from impoundments is controlled by the States as directed by their water plans. And this process does not encompass domestic water supplies.

Australia wide it is difficult to develop and appreciation of the scope of issues confronting the provision of domestic water supplies in rural and remote regions. Recognition of the importance of 'secure and safe domestic water' as a key area of issue for sustainable regional development needs to be underpinned by sound qualitative and quantitative information. For example, in Northern Australia this encompasses three jurisdictions each with their policy settings and management regimes. As well, Northern Australia is characterised by its geographically diverse biophysical and socio-economic regional conditions. And domestic water is drawn primarily from groundwater systems and is of a highly variable quality.

Information on the sources and quality of water for domestic purposes in rural and remote regions is spread across a range of governmental reports and papers in the technical and scientific literature. Arguably, information on the provision of domestic water across these regions needs to be collated at three scales: jurisdictional, regional and local. In this context, regional could be on either a river basin or catchment basis or governmentally delineated administrative regions. These would have an underlay of the underground resources that do not fit either catchment or administrative boundaries.

Ensuring sustainable supplies of secure and safe domestic water is crucial for sustainable regional development. Australia wide the social and economic viability of many small towns and isolated communities in rural and remote regions is threatened by the inadequacy of domestic water supplies. Often, the limited quantity of poor quality water that is available for human consumption is an environmental threat to population health.

Maintaining and expanding populations is central to the development of rural and remote regions in Australia. Without affordable secure and safe potable water, many existing towns will not be able to expand and the development of new settlements to support emerging regional enterprises could be seriously constrained. Arguably, this is an 'inter-jurisdiction' challenge that must be addressed as a matter of urgency if the vision for the development of Northern Australia (as an example) is to be realised.

#### ***Secure and Safe Domestic Water and SEGRA 2015***

Water was a topical theme through conference presentations, spotlight sessions and workshop activities at SEGRA 2015. Specifically, the issue of the provision of secure and safe potable water was:

- raised in the *Rural and Remote Regions Research Agenda*,
- focused in *Sustainability Best Practice*, with a presentation on a simple method for disinfecting domestic water supplies
- appreciated in *Spotlight Session 6* in the context of *Production and Conservation Landscapes*
- endorsed by delegates as being crucial to sustainable regional development following the presentation at the *SEGRA 2015-16 Challenge*
- converged at the *Murray Darling Basin Round Table* as a critical issue requiring on-the-ground attention

With respect to the Murray Darling Basin (MDB) convergence was from two fronts. First, as a matter needing an urgent response in areas in the Basin where drought is expected to impact on water supplies in the coming months. Second, with respect to the situation that domestic water supplies are not addressed in the statutory framework of the Basin Plan.

### ***The 2015-16 SEGRA Challenge***

*How might we Provide Secure and Safe Domestic Water for Rural and Remote Regions?* was voted the 'Delegates' winner of the SEGRA 2015-16 Challenge. The pitch to the whole of the conference was made by the Challenge Champions Michael Kitzelmann CEO and Lara Wilde Project Director Northern Agricultural Development Scheme, from Etheridge Shire Council (ESC) in the Gulf-Savannah region of Far North Queensland. Michael and Lara presented a compelling case as to why and how this issue must be addressed as a matter of urgency. Not just for their region but for all of Australia.

When making the 'challenge pitch' Michael and Lara highlighted the importance of the provisions of adequate supplies of potable water as a key area of issue facing rural and remote regions. Specifically, to small towns, settlements and Aboriginal communities where inadequate supplies of poor water quality are a threat to human and environmental health. Michael and Lara provided compelling pictorial evidence of the local situation being confronted by many people in the Gulf-Savannah Region. Michael emphasised that across regional Australia many people are dependent on water supplies such as would normally be found in Third World countries. And Lara pointed out that unfortunately many Australians are not aware of this situation and the inherent risks that it poses for sustainable lifestyles, livelihoods and regional development.

### ***Northern Australia and Local Perspectives***

Michael Kitzelmann pointed out that the 2014 report of the Joint Select Committee on Northern Australia (JSCNA 2014) outlined and made recommendations with respect to a range of large water management projects for the irrigated agriculture sector. The need to jurisdictionally align water sector management policy and practices was highlighted.

On the domestic water front, Michael noted that the Joint Select Committee stated that there were: *ongoing water supply challenges in many areas and that the seasonality of water availability was considered a 'limitation specific to the region'*. However, the report did not dimension this area of issue and only indicated that 'water supply' was one social and economy infrastructure constraint along with education, health, energy provision and roads. No specific recommendations were made in Joint Select Committee Report for the provision of secure and safe potable water at either jurisdictional or regional scales. And, in concluding Michael, viewed this situation as a major deficiency because secure and safe domestic water is crucial to Northern development.

### ***Underpinning the Challenge Pitch***

The challenge of secure and safe domestic water as a potential impediment to sustainable regional development in rural and remote Australia had its genesis as an issue raised in the SEGRA 2014 Challenge. This was done in the context of the question: How might we best support single industry towns? This was also an area of concern raised at the Etheridge Shire Council (ESC) Economic Development Forum held in late February 2015 that was a product of the SERA Challenge process.

For SEGRA 2015-16, the pitch for the recognition of the importance of 'secure and safe domestic water' as a key area of issue for sustainable regional development was underpinned by two joint authored papers. The first titled *Providing Secure and Safe Domestic Water for Rural and Remote Regions: An Overview* was prepared by Jay Rajapakse and Peter Waterman from QUT and Lara Wilde, Michael Kitzelmann and Rohana Samarasekera from Etheridge Shire Council (ESC). This provided a context by outlining the rural and remote regional development context in terms of aridity, remoteness and knowledge of existing conditions. A geographical framework was provided by looking at Northern Australia and the Gulf-Savannah Region as potential development zones. ESC provided a local case study on how secure and safe water could be delivered to remote towns.

Ken Varcoe, Jay Rajapakse and Peter Waterman prepared a paper titled: *Safe Water from Common Salt? A sustainability technology reality for regional Australia and beyond*. This paper was presented by Ken in the *Sustainability Best Practice* session and supports the 'secure and safe domestic water' pitch. The presentation introduced a simple cost effective and workplace safe technology for disinfecting domestic water supplies. The low cost benign technology is ideal for application in rural and remote regional locations and provides 'disinfection' as the most fundamental and essential component to ensure that domestic water is safe.

Additionally, Professor Max Finlayson from ILWS at USC proposed a vision for water for Australia a lead into Spotlight Session 6. A key conclusion drawn by participants in the session was that: *adequate and safe water is far too often taken for granted in rural and remote Australia and there is abundant evidence that this is not the case.*

These papers and presentations can be accessed on the SEGRA website from the 2015 Conference Proceedings.

To be submitted

### ***Moving Forward***

The deficiency in knowledge of the situation with respect to available water resources and management to ensure that supplies are secure and safe could adversely affect the implementation of major development initiatives in Northern Australia in general and the Gulf region in particular. Adequate domestic water is an essential component sustainable regional development and it would appear that Australia wide it is understated as an area of issue.

Funding will be needed for the provision of essential services infrastructure to ensure that enlarged towns and new settlements are not lagging as regional enterprises are rolled out. As indicated earlier, this can be done at regional/local scales and then aggregated to build a bigger picture. One start point for commencing the process of improving the knowledge base could be by an independent institution undertaking a 'conditions survey' and accompanying discussions to amplify key initial findings. The product would provide input to the strategic regional and local planning to underpin the feasibility and biophysical and socio-economic environmental assessments of development proposals. This could be piloted with LGAs in the Gulf region and then rolled out to other priority rural and remote regions.

### ***Summing up***

The lack of secure and safe water is a challenge in many parts of rural and remote regional Australia that needs to be addressed urgently.

Potential regional development constraints arising from the lack of secure and safe water need to be broadly identified and dimensioned spatially and quantitatively as a contribution to the regional strategic planning necessary to underpin agricultural, pastoral, tourism, mining and related initiatives across rural and remote Australia. Specifically, to determine how such constraints may impact on population growth and the socio-economic viability of existing and new regional settlements. At the same time, the potential to maximise the opportunities offered by 'sustainability technologies' to overcome constraints due to the quantity and quality of surface and ground water that is available for domestic use needs to be explored and the benefits highlighted.

### ***Reference***

Joint Select Committee on Northern Australia (2014) *Pivot North: Inquiry into the Development of Northern Australia*. The Parliament of the Commonwealth of Australia, Canberra, September.