

BENCHMARKING OF AUSTRALIAN IRRIGATION WATER PROVIDER BUSINESSES

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Abstract

Australia is recognised internationally as one of the leaders in irrigation and drainage service provider business benchmarking. The credit for this mandate lies with the Australian National Committee on Irrigation and Drainage (ANCID), which took the initiative and commenced benchmarking its irrigation water provider businesses in 1998. Since 1998, ANCID has prepared six annual benchmarking reports which have received national and international acclaim. The preparation of each report has seen the refinement of the benchmarking process and the indicators used as well as an increased ownership of the data and process by those that supply and use the data.

The ANCID benchmarking process focuses on three reporting categories (or Tiers). Each reporting Tier has been established to address a specific benchmarking need identified by Australia's irrigation industry and is supported by a series of clearly defined objectives. This paper will detail each reporting category, explaining why it was established, its audience, its participants, and its indicators, descriptors and data needs.

The paper will also address the reasons why Australia is currently not using the IWMI benchmarking tool.

1. History of Water Provider Benchmarking in Australia

In 1998, in recognition of the importance of benchmarking for the irrigation industry in Australia and, the lack of readily available information on the performance of the industry, the Australian National Committee on Irrigation and Drainage (ANCID) initiated a project to benchmark Australia's irrigation water providers. ANCID is the peak organisation to which most irrigation water providers in Australia belong. It is also Australia's representative on the International Commission on Irrigation and Drainage (ICID).

Over the past seven years ANCID has managed the data collection, storage, analysis and reporting on a range of benchmarking indicators relevant to the key business performance areas of Australia's irrigation water providers.

In Australia, 'Irrigation Water Providers' are broadly defined as organisations that undertake the retail distribution and delivery of irrigation water in rural areas (i.e. delivery of water from natural waterways or local storages to the farm gate). These businesses may be privately owned and operated, government owned and operated or semi-government owned and operated (i.e. managed by a statutory authority).

The key objective of Australia's irrigation water provider businesses is to manage their businesses in a sustainable manner. They do this by ensuring:

- the financial and economic performance of their businesses are well managed
- their businesses support the service requirements of the businesses of their customers
- compliance with statutory requirements and community standards relating to heritage, environmental, social, health and safety issues affecting their businesses
- customer service levels are cooperatively developed and agreed
- agreed customer service levels are achieved through the appropriate operation and maintenance of their supply systems
- sustainable asset and resource usage
- appropriate community service obligations are provided by their businesses
- a whole of catchment approach is adopted in the management of water resources
- preservation and enhancement of environmental resources
- water conveyance and delivery efficiency to the farm gate is maximised
- that customers have the capacity to adopt improved irrigation management practices, maximising on-farm water use efficiency (ANCID, 2002).

There are approximately 30 irrigation water provider businesses spread across all States and Territories of Australia. Combined, these provider businesses distribute over 18,000 GL of water, which is used to irrigate around 2 million hectares of land annually. The Australian Water Provider businesses have a combined turnover in excess of A\$200 million/yr and support an annual gross value of production of around A\$7 billion (ANCID, 2002).

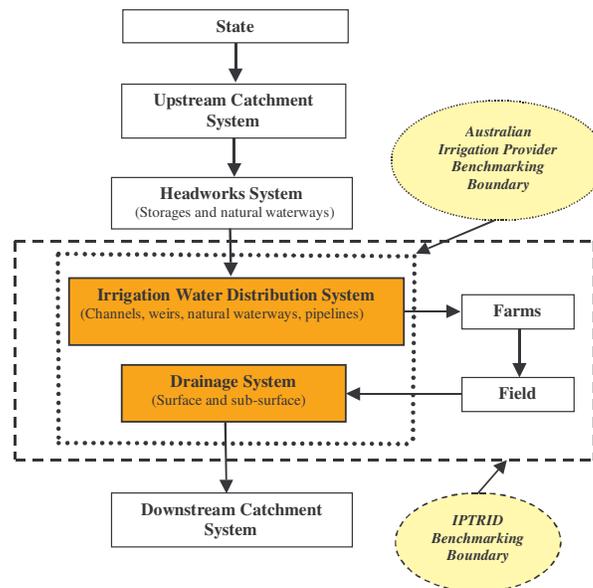
The first comprehensive benchmarking report, which contained data for the 1997/98 irrigation season, was published in January 1999 (ANCID, 1999). ANCID (1999) reported on 15 performance indicators across 33 separate irrigation water provider systems. By comparison the 2005 benchmarking report, for the 2003/04 financial year, presents key statistics and business performance indicators for 67 separate irrigation water provider systems.

2. Focus of Irrigation Water Provider Business

In Australia, the primary focus of the irrigation water provider business is the off-farm 'Irrigation Water Distribution System' and 'Drainage System', which together comprise the bulk of the regional infrastructure assets across the system. Although the irrigation water providers have an interest in how the water is used on the farm, they have little, if any, control over the use of this water once it passes the farm gate. For Australian benchmarking purposes, the business and asset boundary has therefore been restricted to the regional off-farm systems, where the irrigation water providers have both the information and the ability to manage and control performance in the future.

Figure 1 diagrammatically shows the extent of the Australian irrigation provider benchmarking study.

Figure 1 – Extent of Australian Irrigation Water Provider Benchmarking



3. ANCID's Benchmarking Framework

3.1 Overview

The ANCID benchmarking framework comprises three reporting categories (or Tiers). Each reporting Tier has been established to address a specific benchmarking need identified by Australia's irrigation industry and is supported by a series of clearly defined objectives.

The three reporting Tiers are:

- Tier 1 – General Irrigation Water Provider Statistics
- Tier 2 – Irrigation Industry Performance Reporting
- Tier 3 – Confidential Internal Business Performance Benchmarking.

Combined the three reporting Tiers provide insight to the key aspects of Australia's Irrigation Industry, from a national, State and irrigation provider perspective.

Benchmarking data relating to each reporting Tier is collected and reported on an annual basis.

Tier 1 and Tier 2 data is published in publicly available in two volumes namely the summary report and the data report. The reports which are published around April each year, present benchmarking data relating to the previous irrigation season (financial year). For example, the 2005 ANCID Irrigation Water Provider Benchmarking Report for 2003-04, was published in April of this year (2005). A copy of this benchmarking report, along with the previous benchmarking reports, is available on the ANCID website: <http://www.ancid.org.au>.

From a reporting perspective, the key difference between Tier 3 and the other reporting Tiers, is that the Tier 3 data and report is not publicly available. In recognition of the complexity and confidential nature of the benchmarking data collected, data reporting and discussion on the Tier 3 data and benchmarking results is limited to those irrigation water providers that have agreed to participate in the Tier 3 benchmarking process.

As participation in Australia's irrigation benchmarking process is currently not compulsory and is funded on a user pays basis, the number of irrigation water provider businesses participating is different for each of ANCID's reporting Tiers. Sixty-seven (67) supply systems are captured under Tier 1 and of these 67 systems, 28 are reported under Tier 2. Of the 28 systems reported in Tier 2, 19 are also reported under Tier 3.

The ANCID benchmarking process is now fully funded by the participating water provider businesses. In light of the funding arrangements, the current high level of participation, which includes all of the major irrigation water providers in Australia and accounts for about 60% of the irrigation water use in Australia, is pleasing for ANCID.

Each year ANCID continues to invest considerable time and resources into promoting its benchmarking project and encouraging increased participation by its irrigation water provider members.

The three reporting Tiers are further described in the following sections of this paper.

3.2 Tier 1 – General Irrigation Water Provider Statistics

In recognition of the importance of the benchmarking report both as a resource tool and management tool, key statistics relating to Australia's Irrigation Industry are collected across 67 separate supply systems.

In total, data is collected for 79 separate statistics. Thirty-two (32) of these statistics have no direct linkages with the other reporting Tiers, while 47 of the statistics directly feed into the Tier 2 benchmarking performance indicators reported. The type of statistics collected include the volume of water delivered, area watered, number of irrigation customers, source of water supply, area served by surface and sub-surface drainage and total number of people engaged in their businesses.

The statistics are grouped into the following six categories:

- Business overview
- Overview of water supply systems
- Overview of irrigation drainage systems
- Use of Water
- Environmental and Social
- Financial.

ANCID commenced the reporting of Tier 1 statistics in recognition that there was no other reporting vehicle currently available across the industry for such information. The commencement of the Tier 1 reporting also served to increase the level of participation in the benchmarking project, with irrigation water provider businesses more willing to

provide key statistical information on the supply systems they manage, than to participate in the Tier 2 performance reporting process.

Data collected as part of the Tier 1 reporting process is presented in ANCID's annual benchmarking report.

3.3 Tier 2 – Irrigation Industry Performance Reporting

The 2005 ANCID Irrigation Water Provider Benchmarking report presents data relating to 69 irrigation industry performance indicators. The performance indicators broadly address the following six business activity areas:

1. Environmental aspects (28 indicators addressing 4 questions)
2. Operational aspects (9 indicators addressing 4 questions)
3. Financial aspects (9 indicators addressing 2 questions)
4. Water access arrangements (8 indicators addressing 4 questions)
5. Customers (9 indicators addressing 3 questions)
6. Social aspects (6 indicators addressing 2 questions).

The development of the performance indicators has been an evolving process, which has been driven by the participating irrigation water provider businesses. Each of the performance indicators refer back to an aspect of the irrigation water providers business.

The ANCID Tier 2 benchmarking indicators are selected such that they address 19 specific questions which are believed to be important to the future of the water delivery businesses. These 19 questions are spread across the six reporting categories as indicated above. As an example, two of the indicators used to determine the performance of an irrigation water provider in the area of "Water Delivery Performance" are:

1. The percentage of orders actually delivered on or before the ordered start date
2. The minimum number of days in advance of requiring water that a customer must place an order.

Together the above indicators assist in conveying the performance of an irrigation water provider business with respect to water delivery.

The wide scope and number of indicators reported by ANCID is a reflection of the:

- complexity of the irrigation water provider businesses in Australia
- uniqueness of each of the delivery, infrastructure and expectations of the businesses
- diversity of stakeholders with an interest in the benchmarking outputs.

3.4 Tier 3 – Confidential Internal Business Performance Benchmarking

The Tier 3 reporting process was developed by ANCID in recognition that there were some aspects of an irrigation water provider businesses that were important to benchmark but were too commercially sensitive, or confidential, to report publicly. Two examples of this sensitivity are financial details and level of customer satisfaction.

4. How is the Benchmarking Data being used?

The benchmarking data is being used by Australian irrigation water provider businesses in a number of different ways. These include:

- tracking changes in their own performance over time
- comparing their performance with that of like systems
- setting business priorities and goals
- identifying where further investment should be directed within their businesses
- assisting in responding to customer enquires
- learning from the experiences of others
- providing data to Government and other decision-makers
- supporting consultants and other data analysts.

Key achievements resulting from ANCID's benchmarking include:

- greater focus on continuous improvement within the irrigation water provider businesses
- better networking and communication between businesses
- ready access to better information on irrigation in Australia
- more consistent and objective information being available on the various irrigation supply systems
- improved internal focus on data collection and total business performance benchmarking
- the development of expanded formal internal benchmarking by some data providers (including segmenting their businesses)
- clearer understanding of the performance of water delivery efficiency and workplace safety
- water providers reflecting on the expectations of their businesses with respect to:
 - » technology adoption and
 - » a balanced performance in the areas of economic, environmental and social measures.

5. Use of IWMI Benchmarking Tool

In May 2002, ANCID provided its 2000/2001 benchmarking data for the agreed information required to report on the International Programme for Technology and Research in Irrigation and Drainage (IPTRID) international irrigation and drainage sector performance indicators. These indicators and their required data are detailed in the IPTRID publication dated August 2001 and titled "Guidelines for Benchmarking Performance in the Irrigation and Drainage Sector".

This 2000/2001 ANCID data was subsequently loaded to the International Water Management Institution (IWMI) web based benchmarking site: www.iki.iwmi.org:82/oibs/loadbench.htm. The website displays the data in the form of the series of indicators specified in the above 2001 IPTRID publication.

For privacy reasons the IWMI website only displays the relative difference and not the absolute value of each indicator.

For the following reasons, although it continues to collect data to support the IWMI website, ANCID and its members, have not provided subsequent sets of data to IWMI, nor used the IWMI website:

- (i) The IPTRID indicators do not suit the Australian businesses and appear to be more suited to developing rather than mature well run irrigation systems wishing to improve their business and operational performance
- (ii) The display of relative performance and not displaying the names of systems corresponding to each indicator reduces the usefulness and possible application of the information
- (iii) The IPTRID indicators are not relevant to, or related to, the primary business drivers of irrigation water provider businesses in Australia
- (iv) Loading data is laborious and inefficient because there is not a simple way of loading data in bulk from the ANCID database to the IWMI website
- (v) Errors in the data uploaded by IWMI has reduced the credibility of the results
- (vi) There is not a champion (driver) of international benchmarking who is coordinating, facilitating, prompting and providing feedback on the collection, storage analysis and presentation of the data
- (vii) There is not an international network of coordinators to analyse, discuss, facilitate and promote national and international benchmarking in each participating country which would help promote and improve the process
- (viii) The managers of the Australian Irrigation Water provider businesses do not believe there is any real benefit to be gained for their businesses by participating in the IWMI benchmarking in its current form.

7. What is needed for Benchmarking to be Successful

A successful benchmarking project does not just happen. It requires vision, commitment, drive, planning and tangible benefits from those managing and participating in the process. ANCID's experience shows that most of the following ingredients must be present for irrigation benchmarking to be a national success. We believe the same ingredients also apply in the international arena.

- (i) There must be a driver/champion of the overall benchmarking project at a project management level (i.e. ANCID) and at a project delivery level for each of the participating Irrigation Water Provider Businesses
- (ii) Participants in the benchmarking project must be acquainted with, and recognise the need for benchmarking and its potential benefits
- (iii) There must be a set of agreed vision, goals and purpose amongst the participants and financiers
- (iv) An adequate and secure long term funding strategy must be in place with a proportion of the funds being sourced from the participants in the longer term (ensure continuity and consistency)
- (v) There must be a strong commitment from the participating organisations either at a senior level, or at a level which is able to influence management within the organisation

- (vi) A set of relevant and useable Benchmarking Indicators (internal and external) must be agreed between the participants. These indicators should be designed to relate to the business drivers and to enable the business to grow. They must therefore reflect industry emerging issues and change over time
- (vii) A common set of unambiguous data capture questions and their relationship to the indicators to be reported must be clearly understood by all participants
- (viii) Data capture processes must be simple easily understood and not require highly skilled or significant labour input
- (ix) The data capture processes should use readily available user friendly software
- (x) A sound and consistent data analysis process must be used
- (xi) The data storage system must be simple robust and reliable
- (xii) Rigorous data and software version management protocols must be established
- (xiii) A rigorous auditing process must be established to ensure confidence in the data and the resultant indicators
- (xiv) The reporting medium and format must be stakeholder oriented, easily read and inexpensive
- (xv) The project manager and data providers in the participating organisations must be enthusiastic and committed
- (xvi) Participants must be prepared to be open, sharing and to learn from the experience of others
- (xvii) Participants and industry strategist must be realistic in their change expectation particularly with respect to the timing required to achieve that change.

8. Conclusion

To date, ANCID has succeeded in achieving some of the key qualities of running a successful benchmarking project for the irrigation water providers in Australia. If this success is to be maintained, the project must continue to be driven by ANCID and financed by the participating irrigation water provider businesses. Success will also rely on continued refinement of the benchmarking performance indicators over time to reflect industry change.

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