

NATIONAL PROGRAM FOR SUSTAINABLE IRRIGATION

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The National Program for Sustainable Irrigation's mission is to provide Australia with leadership through collaborative investment in research and its adoption to improve the productivity and sustainability of irrigation in Australia. It aims to achieve this mission by defining, commissioning and managing research and development projects that produce new information of national importance and facilitate its adoption.

The National Program for Sustainable Irrigation (NPSI) brings together investors from government, commodities and water providers. NPSI has now commenced a Phase 2 three year program which aims to collaborate with irrigation research investors Australia wide to provide benefits to a broad range of commodities facing shared irrigation issues. The planned outcome is a substantial improvement in the environmental, economic and social performance of irrigation industries around Australia.

Research and Development is critical for water reform, sustainability and irrigation modernisation. NPSI intends to work closely with the National Plan for Water Security, National Water Commission, Irrigation Australia and other R&D providers such as the CRCs.

INTRODUCTION

The National Program for Sustainable Irrigation's mission is to provide Australia with leadership through collaborative investment in research and its adoption to improve the productivity and sustainability of irrigation in Australia. It aims to achieve this mission by defining, commissioning and managing research and development projects that produce new information of national importance and facilitate its adoption.

The National Program for Sustainable Irrigation (NPSI) brings together investors from government, commodities and water providers. The Program provides leadership to identify scope, purchase and manage research useful to the industry and all its stakeholders to build on and improve the sustainability of irrigation.

Coordinated investment in irrigation research and development first commenced through the National Program for Irrigation Research and Development (NPIRD) in 1993. In June 2002, the National Program for Sustainable Irrigation (NPSI) Phase 1 was born and had a strong focus on addressing critical environmental issues affecting the sustainability of irrigation. NPSI successfully strengthened collaboration with industry and government by focusing on the planned outcome of 'substantial improvement in the environmental and productive performance of irrigated agriculture and horticulture in Australia.

The objectives of the National program for Sustainable Irrigation include;

- To provide national leadership for irrigation research and innovation
- To generate new knowledge and promote its adoption
- To contribute high quality science to the modernising of irrigation and its sustainability

- To contribute to the capacity of people to adapt, innovate and make better decisions
- To invest in skills and knowledge of the irrigation community
- To enhance collaboration between industry, research and government and provide a forum to exchange information and establish R&D priorities.
- To influence policy development and implementation with high quality science
- To enhance the global competitiveness and natural resource management of irrigation

The National Program for Sustainable Irrigation is collaboration between 16 investment partners (Table 1). The Program is managed by Land and Water Australia under the guidance of a program management committee made up of its partners.

Table 1: National Program of Sustainable Irrigation Investor Partners.

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| <ul style="list-style-type: none"> ▪ Australian Government Department of Environment and Water Resources ▪ Cotton Research & Development Corporation ▪ Gascoyne Water Co-operative ▪ Gascoyne Water Asset Mutual Co-operative ▪ Goulburn-Murray Rural Water Corporation ▪ Grains Research & Development Corporation ▪ Harvey Water ▪ Horticulture Australia Limited ▪ Land & Water Australia ▪ Lower Murray Water ▪ Ord Irrigation Asset Mutual Co-operative ▪ Ord Irrigation Co-operative ▪ South Australian Research and Development Institute ▪ Sugar Research & Development Corporation ▪ SunWater ▪ Western Australia Department of Water |
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The Program has four goals and planned outcomes (Table 2).

Table 2: National Program of Sustainable Irrigation Goal and Planned Outcome.

Goal	Outcome
Sustainable production in a water scarce environment	Improvement in water use efficiency and ability to respond to changing levels of resource availability.
Sustainable Futures and the Environment	Irrigation industry contributes to sustainable ecosystems and reduced environmental impacts and prosperous communities.
Knowledge into practice	Improving skills, knowledge and decision making of end users which leads to practise change and more efficient use of water.
Research & Development Leadership	A national approach to irrigation related R& D in Australia, which includes a strong focus on a skilled human resource base and enhanced R&D capacity and collaboration.

DISCUSSION

Water scarcity is a significant sustainability issue for Australian Irrigation now and into the future. Research is needed to assist irrigation industries to adapt to increasing variability of supply, increasing competition, and reduced allocations and increasing pressure on water quality so that they can modernise their practices in a way that is environmentally, socially and economically sustainable.

Sustainable water use in Australia must encompass economic, environmental and community needs. Water supplies have to cope with change, ranging from drought to flooding rains. Changes to irrigation systems will also have environmental implications. These need to be understood. Research to reduce environmental impacts is needed as is a framework to establish priorities.

Research and development projects do not serve their purpose unless their findings are delivered to end users and put into action. In many cases the research has been done and technical options have been developed, but they have not been adopted by end users. In other cases, the R&D environment provides a non threatening process and the facts to accelerate implementation of on ground change.

The irrigation industry has many diverse organisations and interest groups from the public and private sectors. National leadership for irrigation research and development that leads to accelerated and efficient implementation is required. A 10 year vision for irrigation research and development is needed so that all stakeholders know where the journey is headed. Our national capacity to do the job needs to be enhanced with an education, training and extension national strategy.

CONCLUSION

NPSI has now commenced a Phase 2 three year program which aims to collaborate with irrigation research investors Australia wide to define, commission and manage research projects that provide benefits to a broad range of commodities facing shared irrigation issues.

The planned outcome is a substantial improvement in the environmental, economic and social performance of irrigation industries around Australia.

NPSI intends to work closely with the National Plan for Water Security, National Water Commission, Irrigation Australia and other key R&D providers such as the CRCs. An open call for new R&D projects was made earlier in 2008 and these projects will be outlined. Further information can be found on www.npsi.gov.au.

REFERENCES

National Program Sustainable Irrigation (2008), National Program for Sustainable Irrigation Strategic Plan 2008 -2010. www.npsi.gov.au.