

CRC for Irrigation Futures Research Plan Mark II 2006 - 2010

Overview

After two years of operation the CRC for Irrigation Futures (CRC IF) has reviewed its progress towards its mission of:

“Facilitate cooperative research networks and programs which continuously improve irrigation policy, tools, practices and processes to:

- **double irrigation water use productivity;**
- **improve profitability for commercial irrigation enterprises; and**
- **protect and enhance landscapes and the environment.”**

In the first half of 2005, CRC IF members consulted widely throughout its Zones and Partner organisations about perceptions of progress and improvements needed to achieve the CRC’s objectives.

The need to focus the CRC’s areas of research and knowledge exchange activity was clearly indicated. As a result, the CRC IF’s research will be directed towards addressing the mission in a more concerted way. The process of refining this direction has involved our stakeholders, partners, our Board, the Senior Management Group and our staff.

In mid-2005 the CRC IF Board confirmed four key Strategic Intents of the CRC:

1. Optimising irrigation practice;
2. Measuring landscape impacts of irrigation;
3. Promoting options for community and river catchment futures; and
4. Influencing community, industry and government.

Within the Strategic Intent Framework a CRC IF workshop in April 2005 (<http://www.irrigationfutures.org.au/news.asp?catID=4>) involving a wide range of CRCIF personnel identified two research themes of critical importance in achieving our mission:

- Tools to support optimised irrigation practice at the enterprise level;
- The delivery of improved productive and environmental performance through system wide harmonisation.

These themes will form the basis of the next phase of research within the CRC IF from July 1st 2006 until completion in June 2010 – a phase which has been dubbed RP2 or Research Plan Mark II.

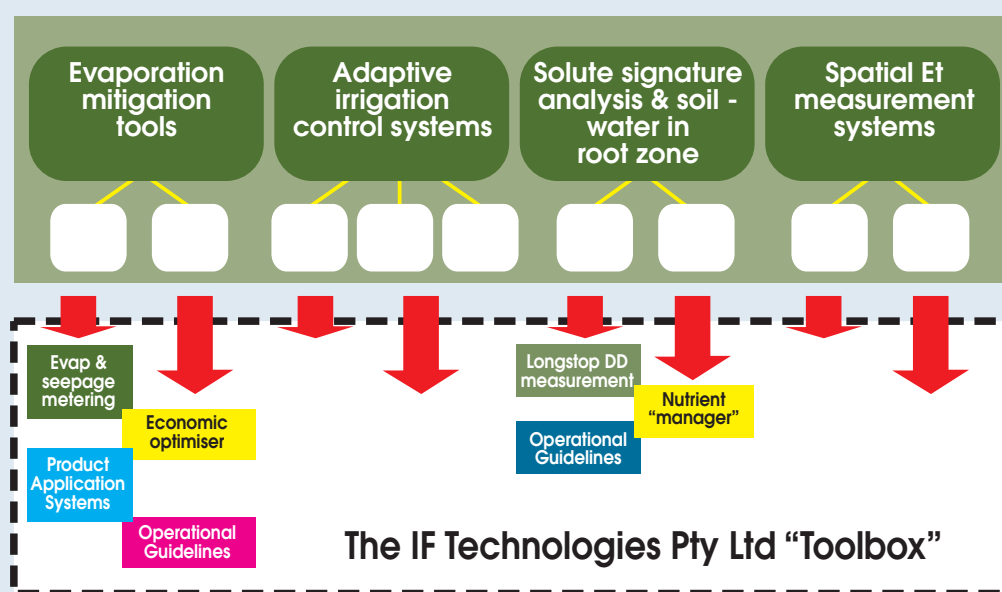




Focus area 1: Tools to support optimised irrigation practice at the enterprise level

The objective of this research theme is to:

- Develop and distribute “Tool Kits” to improve irrigation enterprise performance, using Intellectual Property (IP) management and commercialisation/utilisation processes to their fullest extent.



In the concept diagram above, four research areas will form the core foci to deliver enterprise level improvements in irrigation practice:

1. **Evaporation mitigation tools:** Develop and refine equipment to measure free water evaporation and identify physical and chemical evaporation suppression techniques;
2. **Adaptive irrigation control systems:** Methods of real time monitoring of plant water status with direct control of water application at sub paddock level;
3. **Solute signature analysis and soil water in the root zone:** Monitoring and interpreting salt and nitrogen distributions for precision irrigation decision making; and
4. **Spatial Evapotranspiration (Et) measurement systems:** Measure soil and plant evaporation from paddock to region and incorporate into web-available decision aids for irrigators and water managers.

It is envisaged that the development of the tool and information packages will be closely linked to the commercialisation arrangements that are part of the business plan to be progressed through our commercial entity IF Technologies Pty Ltd.



Focus area 2: The delivery of improved productive and environmental performance through system wide harmonisation

System wide harmonisation has a working definition of:

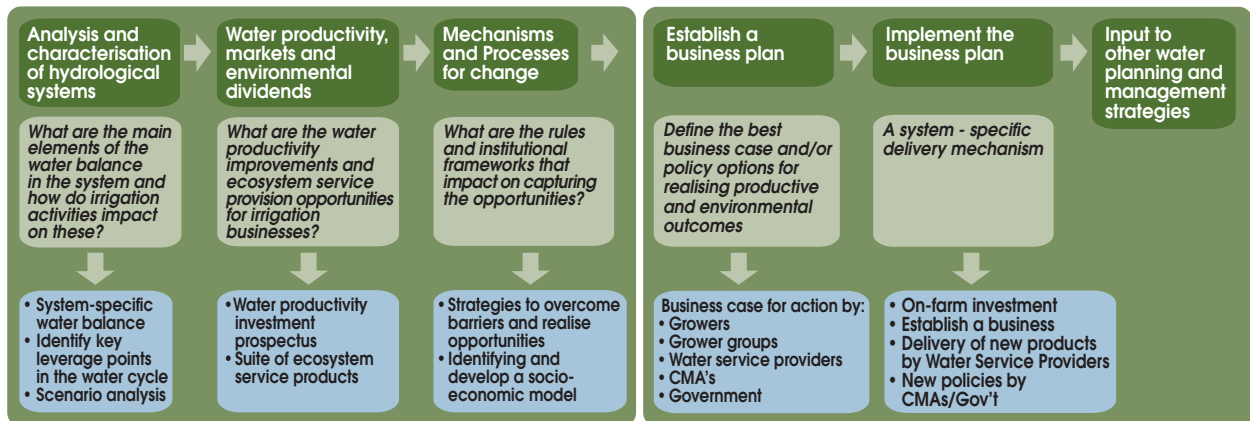
“A strategy to improve cross-organisational communication and system-wide management and improve production and environmental outcomes.”

The objective of this research program is to:

- Establish Regional Irrigation Business Partnerships to capture the production and environmental gains from research improving regional irrigation systems management and to market these benefits through a regional business plan or investment prospectus.

New science for synchronising irrigation systems with their operating environments and providing ecosystem services

Business cases and delivery templates



The figure above is a diagrammatic representation of a five step feasibility approach to harmonising irrigation systems with their environment.

The purpose of this arrangement is to provide a strong direction to the research effort by placing it in a business context associated with regional irrigation communities.

The two theme areas will be inextricably linked to the Commercialisation and Utilisation Plan and the Knowledge Exchange Program.

Detailed projects and investment plans will be developed in late 2005. This process will provide opportunities to influence the choice and emphasis of specific projects within the research plan and their interface with the knowledge exchange and commercialisation program.

As a result of the above decisions the CRC now has a second stage research plan which delivers:

- A set of highly focused technical research questions;
- A novel and ambitious industry engagement process; and
- A strongly embedded culture of commercialisation and utilization.



Further Information

Contact Details

Information on members of the Board and CRC Partners can be viewed at

<http://www.irrigationfutures.org.au/contacts.asp?typeID=Board>, and <http://www.irrigationfutures.org.au/partners.asp>, respectively.

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