MANAGING COMPETING WATER DEMANDS THROUGH A PARTNERSHIP APPROACH IN NORTHERN VICTORIA, AUSTRALIA

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ABSTRACT

Landowners in northern Victoria, Australia have undertaken large-scale changes to their farm irrigation systems to use the improved service available as a result of massive changes to the publically-owned irrigation delivery systems in the region. The delivery system changes include works to upgrade infrastructure to minimise inefficiencies, removal of assets no longer required, and modernisation of the system with automated remote-controlled structures. This AU$2 billion investment has resulted in improved delivery of reliable and consistent larger flows of irrigation available to landowners with water delivered almost on-demand.

Many landowners have taken advantage of funding available through Australian and Victorian Government programs to assist the landowners to modernise their farm irrigation systems to increase water productivity on their properties. These programs have been part of the Australian and Victorian Governments' actions to meet the challenges of competing demands for water across the Murray-Darling Basin of eastern Australia.

The changes landowners have made to their farm irrigation systems include improving existing systems and the introduction of new technologies and practices, which have resulted in landowners generating water savings. As part of the government programs, the savings are shared between the landowners and the environment, with at least half the water saved being transferred to the Australian Government for use down rivers and in wetlands to maintain waterway health. The remaining water savings are retained for productive use on farms in the region.

In response to the Australian and Victorian Government programs, the Farm Water Program was developed by a consortium of Victorian Government and regional partners to work with landowners in the Goulburn Murray Irrigation District of northern Victoria to undertake works to improve farm water productivity. The Program has expended over AU$170 million of Australian and Victorian Governments' investment and has delivered farm irrigation upgrades to 622 projects, resulting in more than 81,000 megalitres in water savings from changes across more than 37,000 hectares of irrigated land.

The Farm Water Program uses a partnership approach to deliver benefits to landowners and the broad range of consortium partners allows for policy and program design input, farm extension and education. This ensures the Program achieves catchment, regional, state and national water and environmental policy objectives. This model has resulted in a win-win for managing the competing demands for water for both landowners and the environment. At the farm level, upgraded irrigation practices minimise the impact on the environment by reducing the risk of salinity, waterlogging, and improving drainage water quality. The improvements also increase the resilience of farm businesses as landowners deal with the pressures of operating with less irrigation water available and a more variable supply of water.

A review of the effectiveness of the partnership approach and the success of the Farm Water Program has been conducted by interviewing representatives of the partner organisations using the Goal Attainment Scaling method of evaluation. They assessed the Program as more than meeting their organisations' expectations of providing farm benefits for participating landowners, improved regional outcomes, and environmental benefits on-farm and within the region. The partners considered that the use of the Partnership Approach has resulted in a broadening of the focus on improving irrigation efficiency, to create water savings with part to be used for environmental purposes, to a more comprehensive Program more aligned to the partner organisations' strategies and programs, and more appropriate to meet the needs of the Goulburn Murray Irrigation District.

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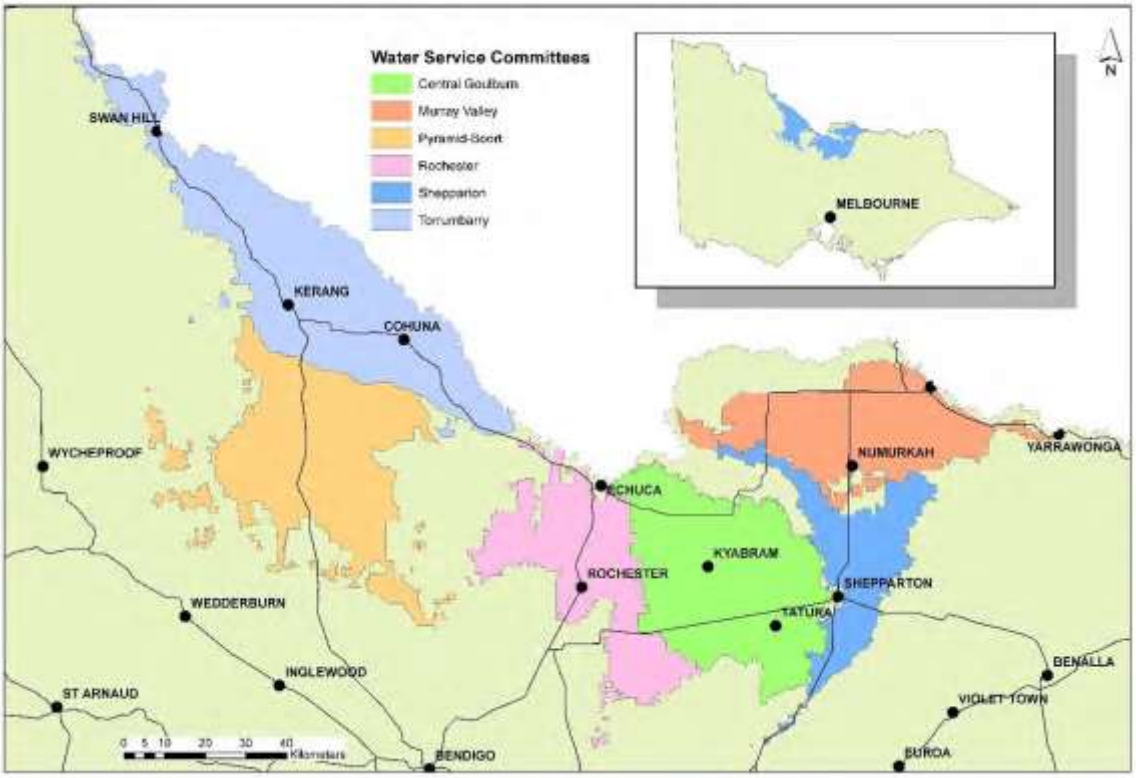
INTRODUCTION

From 1997 to 2009 the south-east of Australia experienced the worst drought on record with below-average rainfall and above-average temperatures – a period now known as the Millennium Drought. Irrigated agricultural production in northern Victoria was severely affected during this time with low inflows into the irrigation storages including the lowest annual inflow recorded in 2006/07, resulting in low allocations of irrigation water for the Goulburn Murray Irrigation District (GMID) for the period 2006/07 to 2009/10 (Goulburn-Murray Water (GMW) 2010).

The GMID is a significant irrigation region within the Murray Darling Basin of Australia with 830,000 hectares (ha) classified as irrigation properties. In 2015/16 the land identified as being actively irrigated amounted to 258,117 ha of irrigated land (Goulburn Broken Catchment Management Authority (GB CMA), 2017).

Figure 1. The Goulburn Murray Irrigation District (GMID) of northern Victoria.



(GB CMA, 2017)

The Millennium Drought highlighted the inefficiency of the ageing infrastructure of the publically owned irrigation system in the GMID. In the years when the full water allocation could be supplied,

an estimated 900 gigalitres (GL) of water was wasted each year to leakage, seepage and evaporation. In 2008/09, 578 GL were delivered and with 378 GL in losses, the system operated at 60 per cent efficiency for the lowest delivery on record (GMW, 2010).

In 2008 the Victorian Government committed AU$1 billion in funding to the Northern Victorian Irrigation Renewal Project (NVIRP) to upgrade the irrigation infrastructure and modernise the GMID delivery system. In 2011 the Victorian and Australian Governments committed to a Stage 2 of the project with a further AU$1 billion in funding.

The modernisation of the GMID irrigation system is being undertaken as part of the Australian and Victorian Governments' commitments to the Murray-Darling Basin Plan. This plan was developed in response to the Millennium Drought, by the Australian and relevant state governments to restore the Murray-Darling Basin's rivers and wetlands to health while supporting strong regional communities and sustainable food production. The funding is being made available in return for some of the water savings achieved through modernisation being returned to the Australian Government for environmental use.

The initial works undertaken by NVIRP to modernise the delivery system in the GMID was to upgrade canal regulators and delivery meters including remote control and automation of these structures. These changes provided a more accurate determination of water usage and losses throughout the delivery system and allowed NVIRP to identify high loss sections of the delivery system and then develop works programs to target the high loss parts of the delivery system.

The remedial works include rebuilding sections of earthen canals where suitable material is available, plastic lining of canals where suitable material is not available, and piping of some sections. Sections of canals and structures that are no longer required are being removed as part of the modernisation of the delivery system. In 2012, NVIRP became part of GMW and these works are now part of the GMW Connections Program. When the delivery system modernisation works are completed and redundant assets are removed, an estimated average annual water savings of 429 GL is expected to be achieved and irrigation system efficiency is expected to be increased from about 70 per cent to at least 85 per cent (GMW, 2015).

The modernisation works, particularly the automation and remote control of the delivery system, has resulted in a higher service of delivery of water to landowners' properties with higher flow rates and more consistent flows of water delivered. Landowners are now able to use the internet to plan the delivery of irrigation water to better meet the plant needs of the pastures and crops being irrigated. Previously landowners were required to order water four days in advance of intended water delivery.

This improved service has encouraged landowners to seek ways to improve their farm irrigation systems in order to take full advantage of the improved service delivery. Landowners and the irrigation industry in the GMID were keen have government funding made available to assist landowners. The Goulburn Broken Catchment Management Authority (GB CMA) commenced work in 2007 to identify sources of funding to develop a program to support landowners to make these improvements.

In 2009 the Australian Government announced an AU$300 million On-Farm Irrigation Efficiency Program and called for bids from potential delivery partners. This program was developed as part of the Australian Government's actions towards meeting the Murray-Darling Basin Plan.

The On-Farm Irrigation Efficiency Program was aimed at assisting landowners in the southern part of the Murray-Darling Basin to modernise their farm irrigation systems. The program proposed making

funding available to landowners to do works on their farm irrigation systems and in return, share the water savings generated by the improvements. At least half of the water savings were required to be transferred to the Australian Government for use to maintain the health of rivers and wetlands. The remaining savings were to be retained for productive use on properties across the GMID (Australian Government, 2015).

The GB CMA submitted a bid for the On-Farm Irrigation Efficiency Program on behalf of a range of regional and state groups involved in irrigated agriculture. These groups agreed to work together in a partnership to develop and implement a program of improving farm irrigation systems across the GMID.

The partner groups were:

- Goulburn Broken Catchment Management Authority (GB CMA).
- North Central Catchment Management Authority (NCCMA).
- Northern Victoria Irrigation Renewal Project (NVIRP).
- Goulburn-Murray Water (GMW).
- Northern Victorian Irrigators Inc. (NVI).
- Department of Sustainability and Environment (DSE).
- Dairy Australia (DA).

The partnership formed the Farm Water Program (FWP) to deliver the funding made available through the Australian Government's On-Farm Irrigation Efficiency Program and subsequent Australian and Victorian Governments' programs. The FWP decided not to include any for-profit companies such as irrigation equipment suppliers in the partnership due to there being a real and perceived conflict of interest. The FWP considered it important that the partners be seen as independent and impartial.

The Partnership Approach adopted by the FWP was considered appropriate to ensure a consistent program across the GMID to operate in conjunction with the NVIRP works. The FWP partners were expected to provide a broad range of input into developing policies, program design and farm extension activities, ensuring the FWP included a range of catchment, regional, state and national water and environmental policy objectives. The partner organisations have similar objectives for the region including:

- The sustainable management of the natural resources of the region.
- Increasing productivity of irrigation water.
- Improving the economic prosperity for the region.
- Improving the resilience of the regional community.

After the initial funding bid was successful, the partnership developed the FWP structure including a Project Advisory Committee (PAC) established by the GB CMA Board with members from the partnership organisations to:

- Oversee the implementation of the FWP.
- Ensure that the Program fulfils its commitments in an efficient and effective manner.
- Integrate other investment with the FWP to achieve multiple benefits.
- Maintain and enhance where needed the positive working relationship between partner organisations by providing a forum for communication and dispute resolution.
- Ensure partners commit their organisation to the agreed roles and meet their responsibilities under these roles.
- Identify strategic options and potential funding sources.

The role of the PAC is to make recommendations for the GB CMA Board for the implementation of the FWP.

The PAC is supported by the FWP Working Group (WG) which includes representatives of the partnership organisations. The WG makes recommendations of a more technical nature to:

- Set standards (using relevant existing standards whenever possible).
- Review allocation of resources.
- Provision of technical and operational input as required.
- Assess new technologies (eg. standards for irrigation scheduling).

The PAC and WG developed the FWP objective as:

- *Creating water savings by funding on-farm projects that support the development of productive, profitable and water-efficient farms in the long term.*
- *The FWP will be consistent with other government initiatives and will create net benefits in addition to water savings, including:*
  - *On-farm benefits for participating landowners.*
  - *Improved regional outcomes.*
  - *Environmental benefits on-farm and within the region, including through alignment of program actions with strategies in the Regional Catchment Strategies.*

The FWP partnership organisations have evolved through changes in government agencies and now include:

- Goulburn Broken Catchment Management Authority.
- North Central Catchment Management Authority.
- North East Catchment Management Authority (NECMA).
- Goulburn-Murray Water.
- Department of Environment, Land, Water and Planning (DELWP).
- Department of Economic Development, Jobs, Transport and Resources (DEDJTR).
- Dairy Australia.
- Independent northern Victoria irrigator representatives.

Since the successful funding bid in 2009, the FWP has implemented farm irrigation system upgrades across the GMID with five rounds of funding, with AU$170 million of funding from various sources committed to 622 FWP projects. These projects will save over 81 GL in water savings and over half of the water savings transferred for environmental purposes, with the remaining water savings retained for productive use on farms in the region. The final Round 5 FWP projects were completed in April 2018. Table 1 shows the various areas of activities for the completed projects.

Table 1: Farm Water Program project activities by area.

FWP Project Activities	Activities	Area (ha)
Improved Surface Irrigation Systems	Laser Grading	17,574
	Drainage Reuse	14,821
	Gravity Channel	14648
	Pipe and Risers	15,530
	Automation	2,467
Improved Pressurised Irrigation Systems	Sprinklers	3,457
	Micro/Drip	937
Irrigation Scheduling		1,469

Table 2 shows the water savings generated by the projects across the various enterprises.

Table 2: Farm Water Program projects and water savings by enterprise.

FWP Activities	Number of Projects	Water Savings (ML)	Water Savings (%)
Dairy	322	45,032	54.9
Grains	126	19,200	23.4
Mixed Farming	126	15,377	18.8
Beef	28	1,990	2.4
Horticulture	10	373	0.5
Total	**622**	**81,972**	**100.0**

In 2017 concerns across the region about the amount of water being removed from the consumptive pool and therefore available for irrigators in Victoria prompted several reviews at the regional and state levels. These reviews looked at the water recovery progress and the cumulative impacts at the socio-economic level from those areas where water availability has been reduced. There are also a number of other socio-economic reviews underway at the Murray-Darling Basin Authority level. As a result of the concerns and the information from these reviews, in 2017 the Victorian Minister for Water put a hold on programs that reduce the overall consumptive pool for irrigators, including the FWP.

In November 2017 a review of the effectiveness of the Partnership Approach used in the delivery of the FWP was conducted as part of the Program's evaluation and review processes. The purpose of the review was to assess the health of the FWP partnership and to provide learnings for the FWP and future programs.

METHOD

The FWP partnership review was conducted using semi-structured interviews with PAC and WG members as representatives of the partner organisations. The interviews were conducted in two parts with the first part aimed at obtaining an assessment from the representatives of the success of the FWP. This included an appraisal of how well their organisation's initial expectations from being involved in the FWP have been met. The second part explored the representatives' opinions of how well the FWP partnership has worked in delivering the program.

The review used the Goal Attainment Scaling (GAS) technique described by Kiresuk, Smith & Cardillo (1994). GAS have been regularly used to assess the progress of mental health patients through a treatment plan. A GAS is prepared by the therapist, often with patient and family involvement, and includes the development of an outcome scale to measure the patient's progress towards achieving identified goals. During the course of the treatment, the GAS is completed regularly by the therapist or staff based on their observations and provides a longitudinal assessment of the patient's progress.

The GAS is prepared specifically for each patient and usually describes five levels of outcome (behaviour) expected to be exhibited by the individual for each of the goals included in the GAS. This includes the expected level of outcome (the middle of the scale), together with two higher levels and two lower levels for each of the goals. All these levels are based on the individual's current condition. The GAS is scored with 0 for the *expected level*, +1 for the *more than expected level* and +2 for the *much more than expected level*. The *less than expected level* scores -1 and the *much less than level* -2. The Goal Attainment Score is calculated as the average of the outcome scores for each of the goals using the method described by Kiresuk & Lund (1978).

While this technique has mostly been used in the health and education areas, it has been used as an evaluation tool by *Primary Industries and Resources South Australia* to assess the visual impact of restoration of abandoned well sites in Cooper Basin, South Australia (Primary Industries and Resources South Australia 1998).

The GAS method has been used to evaluate GB CMA projects including an assessment of landowners towards making informed decisions on irrigation modernisation activities (Maskey, Lawler, Batey

2010), assessing the impact of Beyond Soilcare project (Maskey, Murdoch, Pike, O'Halloran, 2017) and assessing the effectiveness of partnership health (Maskey, Lawler, Cumming, Sampson, 2008).

Two GASs were developed for use in this review to obtain the representatives' assessments of the success of the FWP (Figure: 2) and their rating of the effectiveness of the FWP partnership health (Figure: 3).

Maskey, Lawler, Cumming, Sampson (2008) describes the process used by the Department of Primary Industries, Sustainable Irrigated Landscapes Team, Tatura, to develop a GAS for partnership health based on their experience of partnerships in the GB CMA. This GAS has been used regularly by the GB CMA to assess the partnership health of the GB CMA Partnership Team. The FWP – Effective Partnership Health GAS was based on the earlier GAS and includes eight sub-goals directed at evaluating the values of the partnership.

The FWP – Success Across All Rounds GAS was developed for this review using a similar process to that used by Maskey, Lawler, Cumming, Sampson (2008). The FWP objectives were used to prepare the GAS with nine sub-goals and included aspects of the delivery, governance and outcomes of the Program.

During the review interviews copies of the GASs were provided and the representatives were asked to indicate which of the sub-goal statements best described their assessment for each of the GAS sub-goals and thus the level of attainment for each sub-goal. The validity of the GAS is considered to be improved when the representatives are used as the source of the rating (Willer & Miller 1976; Turner-Stokes 2009). During the interviews the representatives were encouraged to discuss the reasons for their assessments.

Figure 2: FWP – Success Across All Rounds GAS

SUB-GOAL AREAS	PROGRAM FUNDING	NUMBER OF PROJECTS PROPOSED	PROGRAM MANAGEMENT			PROGRAM CONSISTENT WITH OTHER GOVERNMENT INITIATIVES	BENEFITS OTHER THAN WATER SAVINGS		
AIM:	***Program identifies and successfully attracts funding***	***Landowners are attracted to propose projects***	***Program is well governed with documented processes ensuring:***			***Program has links with NVIRP/Connections/WFP programs***	***Program has a wide range of expected benefits***		
			Projects completed on time	***Program well managed***	***Program takes into account actual/potential risks***		***Landowner benefits***	***Environmental benefits***	***Regional benefits***
Much more than expected	Funders proactively seeking opportunities to fund projects	Additional funding obtained to meet oversubscribed projects	100% projects completed on time, meeting budget with higher than expected quality of works	Program identifying opportunities to realise unexpected benefits for partners	Innovative processes to identify future Program risks and treatments	Projects realising unexpected benefits of system harmonisation	Landowners realising unexpected benefits	Environmental benefits realised	Unexpected regional benefits identified and realised
More than expected	Additional/further funding identified and obtained	Number of projects proposed more than funding - ballot, waiting list	100% projects completed on time, meeting budget and works quality expectations	Program meeting budgets, timelines and exceeding partners' expectations	Future Program risks and treatment identified	Projects realising more than expected benefits of system harmonisation	Landowners realising more than expected water savings/labour/ productivity benefits	Environmental benefits identified, protection/enhancement undertaken	
Expected Value	Funding opportunities identified and funding obtained	Number of projects proposed equal to 100% of funding available	90% projects completed on time, meeting budget and works quality expectations	Program meeting budgets, timelines, partners' expectations	Program risks identified - treatment enacted	All projects harmonised with delivery system modernisation	Landowners realising expected water savings/labour/ productivity benefits	Environmental benefits identified, protection/enhancement proposed	Project works/services purchased within region, productivity benefits being realised
Less than expected	Part funding obtained	Number of projects proposed less than funding available	75 - 90% projects completed on time, meeting budget and works quality expectations	Program not meeting budgets and creating some risks for partners	Program risks identified - no treatment enacted	Some projects harmonised with delivery system modernisation	Landowners seeing limited water savings/labour/ productivity benefits	Environmental issues not included in planning/works	Project works/services mostly purchased in region, some productivity benefits
Much less than expected	No Funding obtained	No projects proposed	<75% projects completed on time, meeting budget and works quality expectations	Poorly run Program creating reputational, legal problems for partners	No Program risk assessment	Projects inconsistent with delivery system modernisation	Landowners not seeing any water savings/labour/ productivity benefits	Environmental degradation occurs	Project works/services purchased out of region, no productivity benefits

Figure 3: FWP – Effective Partnership Health GAS

SUB-GOAL AREAS	MUTUAL BENEFITS	COLLABORATION	GOOD GOVERNANCE	ACKNOWLEDGMENT AND RESPECT	ROLES AND RESPONSIBILITIES	DIFFERENCES	COMMITMENT	COMMUNICATION
AIM	***All parties benefit from their dealings with each other***	***Cooperation is used instead of competition***	***We make good decisions and manage processes well***	***We recognise and advocate for our partners (events and documents)***	***Our boundaries are clear and understood by each other***	***We identify and resolve our negative differences early***	***We have a shared long-term vision, dedication and trust***	***Communication is open, honest, ongoing, formal and informal***
***Much more* than expected**	Benefits always flow for all parties from all interactions	Parties pro-actively provide contributions and ideas for each other to secure funds, information and opportunities	Range of regular and effective decision making processes based on data and are community driven achieving transparent, open, honest management of programs	At all opportunities we acknowledge, are positive about, and show respect for our partners, leading to credible and better service delivery	Parties identify and act on opportunities to refer to other agencies/ clients and take opportunities to describe roles and responsibilities for each other and focus on improving understanding of roles and responsibilities	Synergies achieved: differences in perspective are sought and worked through informally - Staff meetings and formally - Technical groups	Each organisation has a business plan which demonstrates commitment to the Farm Water Program, and encourages and supports devolution of decision making to catchment level	All observations show best possible partnership communication
***More than* expected**	Benefits usually flow for all parties from all interactions	Parties sometimes provide contributions and ideas for each other to secure funds, information and opportunities	Less regular decision making processes based on inconsistent data and are community driven	At most opportunities we acknowledge, are positive about, and show respect for our partners	Parties identify and act on opportunities to refer to other agencies/ clients and take opportunities to describe roles and responsibilities for each	There are some learnings or changes coming from discussion of differences. We do not often seek different perspectives	Each organisation has a business plan which clearly documents commitment to the Farm Water Program and is regularly demonstrated	Positive language predominates all communications; consistent with our mutually agreed goals; includes formal and informal; and is jointly understood
Expected Value	Some interactions benefit all parties	Parties do not actively consider the issues of collaboration and competition	Some effective decision making processes, with some community involvement, with inconsistent and limited data	Positive acknowledgment of other parties is inconsistent	Parties understand each other's roles and responsibilities	There are processes to discuss differences but there are no collective learning or actions/ changes resulting	Each organisation has a business plan which acknowledges commitment to the Farm Water Program, but demonstration is inconsistent	Positive language mostly used on a regular basis, but not completely open and consistent with our mutually agreed goals
***Less* than expected**	Some interactions benefit some parties.	Parties sometimes compete for funds and resources	Inconsistent processes for decision making based on little data	Positive acknowledgment of other parties is uncommon	Parties understand our own roles and responsibilities	Ad hoc processes/ not embedded in everyday behaviours	Each organisation acknowledges commitment to the Farm Water Program and provides little demonstration	Parties sometimes meet regularly, and communications are often antagonistic or publicly critical
***Much less* than expected**	Dealings between parties never benefit both	Parties compete vigorously for funds and resources	We have no regular or effective processes for decision making	Positive acknowledgment of other parties is rare	There is no understanding or description of respective roles and responsibilities	There is no process or forum to identify or resolve negative differences	Farm Water Program goals and aims are incompatible and not jointly agreed	Parties do not meet regularly and communications are often antagonistic or publicly critical

RESULTS AND DISCUSSION

The GAS scores were analysed using an equal weighting to the sub-goals of both GASs using the method described by Kiresuk & Lund (1978). The GAS scores calculated using this method means that a GAS score of 50 indicates that the goals on average have reached the expected level. A score of less than 50 indicates that the assessment has been that the attainment has been below the expected level and a score of more than 50 indicates that the attainment has been greater than the expected level.

FWP – Success Across All Rounds GAS

Interviews were conducted with partner representatives and a total of 14 GASs completed during the interviews with Table 3 showing the results from the FWP – Success Across All Rounds GAS. These results show that all representatives have assessed this GAS to be above the expected level of attainment.

Table 3: Scores for FWP – Success Across All Rounds GAS

REPRESENTATIVE	FWP - EFFECTIVE PARTNERSHIP HEALTH GAS SCORE
1	64.47
2	62.66
3	60.85
4	68.08
5	71.70
6	69.89
7	60.85
8	64.47
9	59.04
10	57.20
11	68.08
12	73.51
13	59.04
14	53.60
Mean	**63.82**
Max	**73.51**
Min	**53.60**
Std Dev	**5.84**
Min GAS Score	**17.44**
Max GAS Score	**80.75**

The Min GAS Score shown in Table 3 refers to a possible lowest GAS score of 17.44 for this GAS and the Max GAS Score shows the highest possible score of 80.75. This range is determined by the number of sub-goals and levels of attainment used in the GAS and the range will be greater with an increase in the number of sub-goals included in a GAS. Table 3 shows that all representatives have scored this GAS to be above the expected level with a mean of 63.82. The scores from this GAS provide evidence of the positive assessments expressed by the representatives regarding the success of the FWP.

Table 4 shows the results when their assessments have been further analysed for each of the sub-goals in the FWP - Success Across All Rounds GAS. This data shows the number of representatives who have assessed the GAS at the different levels of attainment for each of the sub-goals. The scores have been totalled and the average for the 14 GASs completed has been shown for the nine sub-goals. An average sub-goal score of 0 indicates the sub-goal has been assessed as meeting the expected level. Scores above 0 show the sub-goal has exceeded the expected level and below 0 less than the expected level. The potential range for these average scores is -2 to +2.

Table 4: Sub-goal GAS scores for FWP - Success Across All Rounds GAS

SUB-GOAL AREAS	PROGRAM FUNDING	NUMBER OF PROJECTS PROPOSED	PROGRAM MANAGEMENT			PROGRAM CONSISTENT WITH OTHER GOVERNMENT INITIATIVES	BENEFITS OTHER THAN WATER SAVINGS		
SUB-GOAL GAS SCORES									
Much more (+2)	0	3	2	3	4	1	2	1	-
More than (+1)	12	8	9	10	8	6	7	6	9
Expected (0)	2	3	3	1	2	6	5	7	5
Less than (-1)	0	0	0	0	0	1	0	0	0
Much less (-2)	0	0	0	0	0	0	0	0	0
TOTAL SCORE	**12**	**14**	**13**	**16**	**16**	**7**	**11**	**8**	**9**
AVERAGE	**0.86**	**1.00**	**0.93**	**1.14**	**1.14**	**0.50**	**0.79**	**0.57**	**0.64**

n = 14

Table 4 shows that the representatives scored all of the sub-goals for FWP - Success Across All Rounds GAS as exceeding the expected level of attainment. The sub-goals *Program Funding*, *Number of Projects Proposed* and *Program Management* were scored at the highest levels of attainment in this section of the review and these sub-goals are all involved in the delivery of the FWP.

The sub-goal *Program Consistent with other Government Inititatives* scored the lowest at 0.5 and while this score shows that the attainment was above the expected level, many representatives commented that their assessment of this sub-goal was also influenced by factors outside the control of the FWP.

In particular, the representatives commented on the relationship between NVIRP and more recently GMW Connections Program with the FWP and expressed their disappointment that the FWP had not been able to build more closer relationships with the NVIRP and GMW Connections Programs. The representatives acknowledged that the NVIRP and GMW Connections Programs were dealing with complex and often complicated changes and the programs were driven by their own deadlines, targets and funding requirements.

As part of completing this GAS, the representatives were asked to discuss their organisation's expectations of the FWP and make an assessment of whether the expectations had been met, partly or fully. The representatives talked about their organisations' expectations as mostly being encompassed in the FWP objectives. Promoting the need to improve farm irrigation systems to take advantage of the modernised delivery system and the expectation that the landowners, the environment and the regional economy were seen as the major benefits from being involved in the FWP.

Some representatives were able to include specific expectations for their organisations. For example, GMW has responsibility for the operation of the regional delivery system and they have an interest in ensuring that when irrigators make changes to their farm irrigation systems, those changes are compatible with the delivery system and the farm changes do not have any detrimental impacts on any GMW assets. GMW's involvement in the FWP has been mostly to ensure that the FWP takes into account GMW requirements.

The DEDJTR representatives described their expectations around the irrigation system expertise, extension skills and links with many irrigators through their sustainable irrigation program projects particularly whole farm planning. Their expectations were to be able to use that experience to assist irrigators as they developed FWP projects.

Other representatives included an expectation that the FWP would be a more appropriate approach to returning irrigation water for environmental purposes rather than the untargeted buy-back processes used to purchase water by the Australian Government without any requirement to invest in improving farm irrigation systems. The expectation was that the FWP would provide better outcomes through investment in farm irrigation systems achieving social, environmental and regional benefits.

The representatives discussed their organisations' expectations while completing the FWP - Success Across All Rounds GAS and they were generally satisfied that the expectations of their organisation had been met.

FWP – Effective Partnership Health GAS

The second part of the interviews with the representatives involved the representatives completing the FWP - Effective Partnership Health GAS and discussing their reasons for the assessments made for each of the sub-goals. The GAS scores for the FWP - Effective Partnership Health GAS is provided in Table 5 and this result shows that all representatives have scored the GAS above the expected level of attainment.

Table 5: Scores for FWP – Effective Partnership Health GAS

REPRESENTATIVE	FWP - EFFECTIVE PARTNERSHIP HEALTH GAS SCORE
1	74.10
2	70.08
3	68.07
4	68.07
5	76.10
6	72.09
7	78.11
8	68.07
9	74.10
10	66.06
11	80.12
12	82.13
13	72.09
14	72.09
Mean	72.95
Max	82.13
Min	66.06
Std Dev	4.84
Min GAS Score	17.87
Max GAS Score	82.13

The results from the FWP – Effective Partnership Health GAS have been analysed to provide the details of the GAS scores for each of the sub-goals. Table 6 shows the number of representatives who have assessed each sub-goal at the various levels of attainment.

An average sub-goal score of 0 indicates the sub-goal has been assessed as meeting the expected level. Scores above 0 show the sub-goal has exceeded the expected level and below 0 less than the expected level. The potential range for these average scores is -2 to +2.

Table 6: Sub-goal GAS scores for FWP - Effective Partnership Health GAS

SUB-GOAL AREAS	MUTUAL BENEFITS	COLLAB-ORATION	GOOD GOVER-NANCE	ACKNOW-LEDGMENT AND RESPECT	ROLES AND RESPONS-IBILITIES	DIFF-ERENCES	COMMITT-MENT	COMM-UNICATIONS
SUB-GOAL GAS SCORES								
Much more (+2)	3	8	12	2	5	13	6	6
More than (+1)	11	6	2	10	7	1	4	8
Expected (0)	0	0	0	1	2	0	4	0
Less than (-1)	0	0	0	1	0	0	0	0
Much less (-2)	0	0	0	0	0	0	0	0
TOTAL SCORE	**17**	**22**	**26**	**13**	**17**	**27**	**16**	**20**
AVERAGE	**1.21**	**1.57**	**1.86**	**0.93**	**1.21**	**1.93**	**1.14**	**1.43**

n = 14

Table 6 shows that all representatives have assessed all of the sub-goals as exceeding the expected attainment level with the sub-goals *Differences* and *Good Governance* scoring the highest in this GAS.

Many representatives commented that the partnership values contained in the sub-goal *Differences* were regularly exhibited during PAC and WG meetings as the meetings provided a good opportunity to raise issues and discuss them and for the most part, reach a decision that representatives have accepted. Examples were raised where not all representatives were in full agreement but were able to accept that the decision had been made following discussion.

The sub-goal *Good Governance* also scored highly and many representatives commented on how well the structure of the FWP worked. Many observed that having the WG dealing with the more technical and delivery issues, the PAC with more strategic matters and the GB CMA Board acting on the recommendations from the PAC worked well and was seen as an appropriate structure for the FWP.

Many representatives talked about the high level of trust displayed in the FWP with representatives confident that they had access to the latest available information, they were confident the Program was being managed honestly, ethically, equitably and had no concerns that their organisations were exposed to governance issues.

Representatives also commented on the FWP use of science-based processes, particularly with water savings calculations and best practice irrigation management determinations, resulting in open and transparent processes that were consistent and repeatable across all projects.

Table 6 also shows that the sub-goal *Acknowledgment and Respect* has attained the lowest assessment for this GAS. Some representatives expressed their disappointment that some of the partner organisations had not supported or advocated for the FWP more within their own organisations.

Some representatives acknowledged that their lower assessments for this sub-goal was a result of their own actions in not always acknowledging and advocating for each other's programs and projects. They commented that while they are conscious of the need to promote the partner organisations whenever possible, unfortunately it does not always occur.

The representatives were asked for their views on the role of the Partnership Approach in the success of the FWP and encouraged to talk about how effective the Partnership Approach has been in the performance of the FWP. Many of these aspects had been previously discussed while completing the GASs and this question provided an opportunity to reinforce the views expressed.

A general theme from many representatives was that the Partnership Approach has delivered a more effective and more efficient program across the GMID with outcomes at a higher standard, compared to a more fragmented approach if various programs had been delivered by individual organisations. In their view the FWP Partnership Approach had been an appropriate and effective method of delivering the Program.

LEARNINGS FROM THE FWP REVIEW

The use of a Partnership Approach to deliver the FWP across the GMID builds on the experience many of the partner organisations have gained from being in various natural resource management partnerships previously. Partnerships have been used to deliver many programs and projects across the GMID in recent times, commencing with the development of salinity management plans in the GMID during the 1980s. The successful development and implementation of these plans was largely as a result of partnerships formed with the regional community and agencies involved. These partnerships came about through community concerns of the impacts of high watertables and salinity across the region.

Through the use of these partnerships, the community was involved in forming the salinity management plans resulting in greater ownership of the plans, and higher acceptance of the implementation strategies. The subsequent formation of the CMAs was largely as a result of the success of those community-driven partnerships in undertaking natural resource management in the region.

Some FWP representatives have commented that the use of partnerships has been part of the culture of the CMAs in the irrigation areas and was accepted as an effective way to deliver programs. When the Partnership Approach was being proposed for the FWP, there was a high level of confidence and trust in the proposed partnership by the organisations based on their experiences and learnings from previous partnerships.

Many of the comments from the representatives were regarding the resilience of the partnership to be able to adapt to the many changes that have occurred during the life of the FWP. The representatives have included comments on the ongoing commitment to the Program shown by the partner organisations. While discussing the partnership resilience, many of the representatives talked about the importance of the Program to the irrigation industry, the timeliness of the Program allowing landowners to gain the benefits of the delivery system modernisation as it is being delivered, and the many benefits being delivered across the GMID by the FWP. The FWP is seen as a worthy activity with wide acceptance. The representatives are saying the worthiness of the FWP is an important reason the partner organisations stay committed to the Program.

The representatives have also talked about the many changes that have occurred in the partner organisations since the FWP was formed and the impacts those changes have had on the partners. As a result there have been changes in partner representatives on the FWP WG and PAC. These changes in partner representation has provided some benefits with new and different perspectives being brought into the partnership. Most of the partner organisation changes are likely to be out of the control of any partnership and the representatives talked about the need to minimise the impacts of changes by encouraging the partner organisations to replace representatives as soon as possible.

Other comments were made about the need to revisit the FWP objectives and the expectations of the partner organisations. This is particularly important when new representatives join the WG and PAC to allow them to develop an understanding of the FWP and their role in the partnership.

Another aspect of the partnership that was important to many was the opportunity to be part of discussions with other representatives about other programs and activities that the representatives were involved in. This includes both FWP meeting formal discussions and the informal conversations that

occur during meetings. This aspect of being part of a partnership needs to be recognised as an important benefit for some of the representatives.

Others have commented that they have gained personal satisfaction from being part of an important program that is meeting community needs, and it is this sense of achievement that drives them to be committed to the partnership.

CONCLUSION

This review has shown that the representatives of the FWP partner organisations have rated the Program as exceeding their expectations in meeting the FWP objective of creating water savings by funding on-farm projects that support the development of productive, profitable and water-efficient farms in the long term.

They have also assessed the Partnership Approach as an appropriate and effective method to successfully manage and deliver the FWP to bring about the widespread of benefits to the regional community across the GMID.

The FWP has successfully employed a Partnership Approach to broadening the scope of the Australian Government's On-Farm Irrigation Efficiency Program. This has changed the focus on improving irrigation efficiency to create water savings with part to be used for environmental purposes, to a more comprehensive program more aligned to the CMAs Regional Catchment Strategies and appropriate to the needs of the GMID.

Along with delivery of projects that improve farm irrigation systems and create water savings, the FWP also includes alignment with the modernisation of the regional delivery system to take advantage of the benefits being realised; builds on the existing CMAs Sustainable Irrigation Program activities; and ensures that landowner, environmental and regional benefits were included in the projects.

Achieving these social and environmental outcomes on many properties across the GMID is a result of the Partnership Approach being used successfully by the FWP.

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