

## **Water project researches economic, social and recreation effects**

Economic growth, social change and recreation effects and opportunities have been identified in preliminary studies of some of the likely effects of new water schemes and increased irrigation proposed for Wairarapa.

The three studies are part of pre-feasibility investigations into the viability of water scheme options that aim to provide water for a variety of economic and community uses in an environmentally sustainable way.

Wairarapa Water Use Project director, Michael Bassett-Foss, said the research was part of much wider investigations into the viability of five scheme options. "These latest studies show some significant benefits for the entire region along with a range of challenges which need to be looked at more closely once the number of scheme options is reduced in the second quarter of next year."

The studies, done at a broad level, add to the engineering, financial and environmental knowledge being gathered to determine the suitability and value of a water scheme to the region.

Economic and business research consultants Butcher Partners considered the likely economic effects irrigating an extra 10,000 hectares and 30,000 hectares of farmland respectively, based on an assumed mix of land uses.

Under the 10,000 hectare scenario, increased farm production would add value of \$52 million per year to the greater Wellington regional economy and create 400 new jobs. If 30,000 additional hectares were irrigated, value added would be \$157 million per year, including \$55 million in household income, and 1,200 new jobs would result. These figures would be reached once full uptake of available water by farmers was achieved.

In addition, for every 10,000 new hectares of land irrigated, as a one-off result of farmers converting to irrigation, \$30 million of value added and 390 new jobs for one year would be created.

Overall, more than half of the new jobs and increased household income in Wairarapa would occur on farms where three quarters of the added value would be generated. Other industries to benefit would be agricultural contracting, wholesale and retail trade, services and transport and communications.

The study did not include the one-off effects of constructing water storage and off-farm distribution infrastructure or any spin-off from increased primary product processing. Nor did it address the commercial viability of developing the scheme or of conversion to irrigation by farmers.

Mr Bassett-Foss said the economic study was not a cost-benefit analysis because it did not include the cost of the schemes and therefore the cost of water. “There is a lot of work still to be done on costs, along with environmental, social and cultural aspects.”

Closely linked to the economic study, a social impact assessment by social and natural resource consultants Taylor Baines and Associates outlined the Wairarapa-wide social impacts of increased irrigation. The desk-based study used experience from other parts of New Zealand to consider the likely effects at a broad level, compared with the current situation.

It found that there would be a net positive outcome for Wairarapa people and communities. Future land use change would likely result from a combination of irrigation and rural subdivision – both of which would drive social changes.

Irrigation and associated land use changes and intensification, would boost Wairarapa’s employment and population, with the scale of change depending on the total area irrigated. New residents would bring social change that should generally be positive for the people and communities of the area, especially if the change was supported by social change management.

Farm sizes would continue to increase with more employees per hectare and fewer employers. An expected increase in migrant workers for dairy and horticulture industries would bring greater cultural diversity to rural communities which may need support in managing change.

Increased employment and household incomes should flow into demand for community services which was likely to be offset by high population numbers. Overall, a population increase would assist in the retention of health services, schools, sports clubs, organisations and community facilities across Wairarapa. Issues with availability and affordability of housing were possible and this should be considered further if a viable scheme is identified.

A separate desk-top study by Opus International Consultants looked at current recreation activities undertaken around the five potential water storage sites being considered, and the project’s potential implications for them.

Effects on activities such as angling, tramping, swimming, bird watching, hunting, and in each area ranged between neutral to minor, with some unknown effects around angling where more work was needed.

Opportunities on all sites included flat water activities such as waka ama, dragon boating, rowing, canoeing and sailing, and white-water activities and swimming when water levels allowed. Others were improved or increased tracks for tramping, hiking, running and mountain biking. Reservoir-side

activities such as picnicking, walking and biking, if permitted, were other opportunities for further consideration.

The Opus report made recommendations for further research on a site-by-site basis. Mr Bassett-Foss said this would be done as part of the project's full-feasibility study which was expected to begin in mid-2015.

All project reports can be found at [www.wairarapawater.org.nz](http://www.wairarapawater.org.nz)

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## **Key stats – Economic Impact Analysis (Butcher Partners)**

**Summary Table 1      Regional Economic Impacts of On-Farm Investment (one-off)**

	Output (\$m)		Jobs (job-years)		Value-added (\$m)		Household Income (\$m)	
	10,000	30,000	10,000	30,000	10,000	30,000	10,000	30,000
<b>Ha</b>								
Direct Impacts	155	465	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total impacts Wairarapa districts	180	550	360	1,070	25	76	19	57
Total impacts Wellington region	190	580	390	1,170	30	89	21	63

**Summary Table 2      District & Regional Economic Impacts of Wairarapa Irrigation Scheme at Full Development of 10,000ha & 30,000 ha (on-going)**

	Output (\$m/yr)		Jobs (FTEs)		Value-added (\$m/yr)		Household Income (\$m/yr)	
	10,000	30,000	10,000	30,000	10,000	30,000	10,000	30,000
<b>Ha</b>								
Dairy farming direct	38	114	90	270	21	63	4	12
Other pastoral & arable farming direct	10	29	-32	-95	7	21	-1	-2
Horticulture (or similar)	18	53	142	425	8	25	5	14
<b>Sub-Total – Direct Farming (rounded)</b>	<b>65</b>	<b>196</b>	<b>200</b>	<b>600</b>	<b>36</b>	<b>109</b>	<b>8</b>	<b>24</b>
Farm support effects in Wairarapa	23	68	169	510	13	37	9	27
<b>Total Wairarapa impacts (rounded)</b>	<b>88</b>	<b>264</b>	<b>369</b>	<b>1,110</b>	<b>49</b>	<b>146</b>	<b>17</b>	<b>51</b>
Farm support elsewhere in Wellington*	8	25	34	100	3	11	1	4
<b>Total Wellington impacts (rounded)</b>	<b>96</b>	<b>289</b>	<b>403</b>	<b>1,210</b>	<b>52</b>	<b>157</b>	<b>18</b>	<b>55</b>

**Table 1: Pre- and Post-Irrigation Land Uses**

	Existing Dry Land			Irrigated		
	%	10,000 Ha	30,000 Ha	%	10,000 Ha	30,000 Ha
Dairy	22 %	2,200	6,600	45 %	4,500	13,500
Arable & Mixed	40 %	4,000	12,000	30 %	3,000	9,000
Sheep & Beef	24 %	2,400	7,200	12 %	1,200	3,600
Dairy Support	14 %	1,400	4,200	10 %	1,000	3,000
Horticulture	0.0 %	0	0	3 %	300	900
<b>Total</b>	<b>100 %</b>	<b>10,000</b>	<b>30,000</b>	<b>100 %</b>	<b>10,000</b>	<b>30,000</b>

**Table 2: Scheme-dependent impacts as percentage of Wairarapa's Economic Activity**

	Employment (FTEs)				Value-Added*			
	Wairarapa 2013 census	Scheme Change (FTEs)	Change compared to base (%)		Wairarapa (\$m/yr) 2012-13	Scheme Change (\$m/yr)	Change compared to base (%)	
	A	B	C	D	E	F	G	H
Ha		10,000	10,000	30,000		10,000	10,000	30,000
All agriculture	2,376	200	8%	25%	207	36	18%	53%
All other sectors	16,536	169	1.0%	3.0%	1,432	125	1.1%	3.2%
<b>Total economy</b>	<b>18,912</b>	<b>369</b>	<b>1.9%</b>	<b>5.8%</b>	<b>1,639</b>	<b>49</b>	<b>2.9%</b>	<b>8.8%</b>

\* Includes value added (GDP) in supplying water to the farm gate.

**Table 3: Distribution of Net Total Farm & Farm Support Economic Impacts among sectors in Wairarapa**

Sector	Employment			Value Added			Household Income		
	Ha	10,000	30,000	10,000	30,000	10,000	30,000		
	%	FTEs		%	\$m/yr		%	\$m/yr	
Agriculture	54	201	603	75	36	109	48	24	24
Rural Contracting	3	9	28	1	0.5	1.6	3	1	1
All other manufacturing	2	7	21	1	0.6	1.7	2	1	1
Utilities* & construction	1	4	13	1	0.4	1.1	1	1	1
Wholesale & Retail Trade	13	47	142	5	2.5	7.5	12	6	6
Transport** & Comms	3	12	36	2	0.9	2.6	4	2	2
Finance & business services	4	14	41	6	3.0	9.0	5	3	3
Vet, health & education	3	13	39	1	0.7	2.1	4	2	2
Local & Central Govt	1	3	10	0	0.2	0.5	1	0	0
Repairs & maintenance	6	20	61	2	1.0	3.0	5	3	3
Packing & storage	10	38	113	5	2.5	7.4	15	7	7
<b>Total Net Impacts</b>	<b>100</b>	<b>370</b>	<b>1,100</b>	<b>100</b>	<b>48</b>	<b>145</b>	<b>100</b>	<b>51</b>	<b>51</b>

Source: Calculations of disaggregated multipliers from district input output model

Notes: Excludes impacts on processing industries

\* Includes all returns to the off-farm investment in irrigation

\*\* Includes coolstores