

A List of Potential Values and Indicators for the Land Use and Water Quality Project Deliberation Matrix

This is a list of values and indicators provided by the project team to give you (the stakeholder groups) an idea of what sort of things are meant by values and indicators for use in the deliberation matrix. This is not a comprehensive list – it is a set of examples from which you can either choose as they are, or change and create new values and indicators which better suit what your group considers to be important. These have been provided in advance of workshop 2 to allow you time to think about what your groups' values and indicators might be.

Instructions for the groups:

For the deliberation matrix, you may choose 5 values, and 3 indicators for every value, from within each of the four areas;

Environment/natural – Yellow border
Economics – Blue border
Tangata Whenua – Red border
Social – Green border

Use this document to begin collecting your ideas and during workshop 2 your group will have the chance to discuss all the ideas and decide which sets of values and indicators best represent the things you collectively consider to be important.

Environment/Natural

Potential Values	Potential indicators (further division into upper middle and lower catchment are possible where necessary)
Air quality Odour Air quality Greenhouse gas emissions	Odour complaints % of incidence of exceeding national standards Total greenhouse gas emissions
Land & Soil Landscape aesthetics Soil erosion (erosion control) Land fragmentation Soil conservation and management	% of erosion prone land in catchment %. blocks of land less than a productive unit (or % of land as "life-style blocks) Use of soil conservation practices
Protect areas of conservation importance (i.e. Hurunui Mainland Island) Areas of significant natural character or use value protected Land use change Current and potential use and production Contaminated site/land Compatibility of land use and soil capacity Land use intensity Soil health	% of significant land areas which are unprotected/protected % of significant land areas which are unprotected/protected % of land area changing use each year % of land not meeting productive potential % land area unsafe due to contamination % of land use which matches with soil type and capacity Stocking rates Productive capacity of soils Nitrogen & carbon content Soil fertility % of soils compacted
Freshwater Viable communities of native birds/fish/plants/aquatic life Viable communities of recreational and commercial birds/fish/plants/game species Protect fish passage (then specify species) Protect fish spawning areas (then specify	No's of native fish, birds aquatic plant species etc Species diversity No's of whitebait, eels, trout, salmon game birds etc River connectivity (i.e, no barriers to fish passage) no. artificial barriers to fish passage % of potential spawning areas which are

species) Maintain natural river system	able to be used Natural flow regime Native riparian vegetation
Health of riparian zones Effective management of discharge to waterways - Sewerage - Point source - Non-point source	% of river with intact/diverse riparian vegetation Compliance with discharge rules
Maintains aesthetics/natural character Access to diverse range of recreational activities - Hunting - Fishing - Walking - Kayaking/jet boating - Picnicking - Swimming	Aesthetics No. access points/ quality of access points/ safety of the areas Diversity of recreation options
Water quality for contact recreation Water quality/clean rivers and streams	% algae rock coverage Bugs/bacteria Toxins % of the year local water quality standards are met Water temperature Dissolved oxygen Clarity/sedimentation Nutrients
Bank-side erosion Sufficient water for flora and fauna Water quality for ecological health	Species diversity
Biodiversity & Biosecurity Maintain a range of diverse ecological systems in the landscape - Wetlands/bogs/swamps - Forest remnants - Small lakes Maintenance of clean, rubbish-free community	% cover of each type of ecosystem
Local biodiversity - Freshwater - Terrestrial	
Effective pest/weed management Effective disease management	Incidence of pests Incidence of pests

Or – choose your own

Economics

Potential Values	Potential indicators (further division into upper middle and lower catchment are possible where necessary)
Adequate access to water	% of total water already allocated % of water available to new uses % of water allocated to each sector
Adequate access to <ul style="list-style-type: none"> - Agricultural services - Horticultural services Access to services which are essential to operate (i.e. energy)	% of services locally obtainable Energy security/reliability
Effective telecommunications networks Viable local economy	% of time phones are operable Regional GDP farm profitability
Freedom to operate	% of income taken by compliance costs Time taken on compliance issues
Local economic opportunities	
Local employment opportunities	No. local jobs available/year Level of local unemployment Level of local unemployment for young people
Effective management of the risk of local hazards (i.e. floods)	Potential damage due to natural hazard
Disease and pest/weed control	distribution of pests / impacts of pests/ no's pest species
Healthy stock	Incidence of stock disease
Diverse range of economic opportunities Household/ farm income	No. businesses in each area Cash surplus – farm expenses Debt ratio
Average local wage	% people earning above the national average
Local infrastructure investment	% Regional GDP spent on infrastructure projects
Contribution of different sectors to local economy (i.e, proportions of tourism, agriculture etc)	% contribution of each sector to regional GDP % of jobs in the region due to each sector No. visitors and visitor spending
Land values Efficient resource use	% change in local land values

Or – choose your own

Tangata Whenua

Potential Values	Potential indicators (further division into upper middle and lower catchment are possible where necessary)
Preserve, protect or improve Mauri	No. and type of discharges or pollutants entering the river
Preserve mahinga kai opportunities	Satisfaction with river condition/health no. water bodies where abundance and diversity of MK species has been protected or enhanced. Safety of food
Preservation of culturally significant sites	% of sites which are satisfactorily protected
Viable populations of culturally significant species	Size of population
Access to significant sites / resources	No. sites easily visited
Viable use of Maori-owned land	Ability to make an economic return
Recognition and ability to exercise kaitiakitanga - Tino Rangatiratanga	Inclusion in decision making process
Connectivity of the river system	Areas of modified river/stream
Observation of Tikanga	Protocols followed
Traditional knowledge retained and passed on	
Inclusion in decision making	No. plans which are consistent with iwi priorities
Integration of local water management	Comprehensiveness of local plans and policy
Wellbeing of whanau and wider hapu	
Cumulative impact on freshwater systems	No. cumulative impacts assessments produced
Thriving marae	

Or – choose your own

Social

Potential Values	Potential indicators (further division into upper middle and lower catchment are possible where necessary)
Well-maintained community facilities - Halls, toilets, library, info boards, playgrounds Vibrant local community/cohesiveness	Care/maintenance of local infra-structure Community events Presence of community leadership No. local volunteers No. of newcomers to community
Access to community services - Healthcare - Schools Access to clean drinking water	Services in the area Spending on infrastructure & services % of supply which meets WHO standards
Refuse and recycling facilities Safe community	Perceptions of community safely Level of crime Investment in law and order
Traffic safety Heritage protection	No traffic related accidents per year % of areas of historical significance which are protected
Effective management of the risks posed by natural hazards Opportunities to participate in local decision-making processes	No's group involved in decision making % of significant local decisions which involve consultation
Quality of experience for recreational activities and commercial tourism - Hunting - Fishing - Walking - Kayaking - Picnicking - Swimming Suitability for contact recreation	Investment in tourist facilities Tourist satisfaction Level of difficulty of the sport. Popularity of the area % algal cover Other water quality issues Odour Incidence of water borne illness Safety
Character of productive and natural landscapes Employment and education opportunities for young people	Aesthetics/beauty of the landscape % of young people staying in the area
Peaceful community Quality of life in rural community	Noise Satisfaction with life
Job satisfaction	

Local health issues	No. stress related illnesses Local life expectancy Suicide rate
Voluntary services/civic participation Job health and safety	No. work related accidents
Opportunities for participation in sport and active leisure Opportunities for community participation in culture and arts	Local sports teams leisure events Culture and arts events
Partners work opportunities matching skills Opportunities to participate in local decision making	No. unemployed partners Amount of consultation over decisions
Housing affordability Home ownership rate	% of those with their own home
Length of stay in the community Community identify and pride	Average no. years of residence in the area % proud to live here
Political trust	Levels of trust in local government representation.
Social equity Intergeneration sustainability	Levels of equality

Or – choose your own

Sources of values and indicators

Compiled using information and ideas from from:

Environmental Performance Index 2010. Available at: <http://epi.yale.edu/>

Ngai Tahu 1999: Te Runanga O Ngai Tahu Freshwater Policy

Ministry of Tourism 2010: The New Zealand Environmental Indicator Set for Tourism Baseline Report April 2010. Ministry of Tourism, Wellington. Available at:

<http://www.tourism.govt.nz/Documents/Policy%20Website/Documents/Environment/TMTEnvironmentalIndicatorsReport.pdf>

Ministry for the Environment: Environmental report cards for Land Use, Soil health, Air Quality, Conservation land

OECD Factbook 2010

Pohangina Community Development Research Project – Sustainable Farming Fund Community Development Project

Internal AgR work on indicators and values – FRST funded projects: Creating Regional Futures, Iwi Futures and Pastoral 21 Environment.

Waikato River pilot deliberation exercise – FRST funded project Pastoral 21 Environment.

Environment Canterbury documents including;

- Landuse and water quality working document 2: Managing the cumulative effects of land use on water quality