

Discussion Summary for Nov 2 2011 “Whose Bang for Whose Buck” Workshop

The presentations from the day are also on the website.

Cost Benefit Analysis (CBA)

1. Cost benefit analysis was done for 5 different actions as per the handouts provided. Participants agreed costs from the Waikato study were acceptable to use. The difference in capital costs would be insignificant though the Manawatu region is possibly more sophisticated in pond storage.
2. Reduced water treatment costs would benefit places that extract water from the river and are required to treat this to drinking water standard.
3. If we can determine where the cost and benefits fall for the catchment and allocate funding accordingly this may make more sense than individual local initiatives.
4. Waikato study showed that some farmers didn't have enough income to pay for the actions but benefits to the wider community justified these actions. Focus in the study on how to make the mitigation strategy work *and* protect people's livelihoods. Farmers were involved in the process.
5. For the Waste Water Treatment Plants (WWTP) options looked at in the CBA. The PNCC \$20m budget is thought to be mainly dedicated to asset renewal rather than improvements. Not all investments listed will improve water quality to the river. IFS team need to put some effort into establishing what proposed investment benefits will be. The benefits of improvements in WWTP are difficult to quantify. Some of the percentages can be obtained, e.g. phosphorus 95% under certain conditions – but you need to know the relativity of numbers. Dannevirke as an example would give us more recent numbers but this is one data point not cumulative information.
6. Asset value of wastewater provided by a Lincoln study. The point was made that you also need a market for wastewater.

Economic Impact Assessment (EIA)

1. This analysis shows the impacts on the different bundles of actions on value added and employment from an economy wide perspective. Linkages within the economy and the multiplier effects are analysed. As an illustration; if logs are exported there are few added benefits for the national economy whereas sheep and beef farming or dairying with the processing component done in New Zealand have a significant value added component.
2. EIA does not look at debt and foreign investment. It does not measure the value of change in Balance of Trade from primary production for the NZ economy.
3. The financial ability to pay is not analysed. This is a separate process. EIA does show how the money in the economy is reallocated as a result of the 5 different options worked through but does not analyse where the money comes from to get outcomes.
4. In the Waikato non-market benefits (social, cultural) were not included. There is no exactness in numbers but always a range. The selection of activities should be based on cost abatement curve showing what gives the best bang for buck.

Cost of Actions

1. The costs of the actions required are much greater than funds available.
2. The cost of doing nothing has to also be measured/determined as it could be much greater than anticipated.
3. People need to be made aware of the benefits of better water quality and support the reprioritising of expenditure. For example, paving stones and clock towers dropped for better water quality.

Manawatu River Leaders Forum (MRLF) process

1. The Draft application to MFE freshwater fresh start fund circulated did not include a project with cultural significance to iwi.
2. The river clean up pressure in Waikato was from tangata whenua. Two participants who had been involved in the Waikato project felt the MRLF/IFS approach was better than the Waikato process. While there were more resources available in the Waikato, agreement was still not achieved on what the specific actions should be done. The Waikato tribes want to be in harmony with natural environment which developments such as hydro dams etc do not allow. The goals for the Waikato River are drinkable and swimmable water, similar to the goals for the Manawatu.

Interesting Ideas Generated

1. Subsidising a local detergent that is Phosphorus (P) free may be cheaper option than improving the WWTP. For most communities in NZP is not a problem as it is not the limiting nutrient in coastal environments. Using P free detergents would produce a behaviour change at the start of the process rather than a need to clean up pollution at the end of the process. Participant would like to see is a gift package that is MR friendly. Ideally, it would be best if a company like Unilever would make cheap P free detergent. If the detergent was to be subsidised by PNCC, the council would have to increase rates to pay for this. However, there may be considerable savings from not having to run the P removal plant at a cost of \$0.5m for 4 months of the year.
2. Local currencies to keep money in the community (Note: Ashhurst have already set up such a system).
3. Turn town waste water into an asset. Irrigating wastewater to retain nutrients. Anticipate peak phosphate. Note: MAF study in Wairarapa see <http://maxa.maf.govt.nz/sff/about-projects/search/10-110/index.htm>
4. Carbon trading was seen as a risk at the moment with the economic crisis in Europe (Note: Australia have just brought in a carbon tax of \$23/tonne)

Flood protection

To provide flood control and drainage there is a Horizons budget of \$110m for the 2009-2019 period. While there is an economic benefit from preventing flooding there is also an ecosystem services cost. There is a need to reinstate some of the natural river system including water pools to improve river health. Horizons are part of the Green Tiki movement in the Rangitikei which is a move in this direction.

Creative solutions for sediment targets:

- Decrease focus on land engineering as the fix is not whole of system approach (LT)
- Increase soft engineering (ST) solutions, such as reinstating meanders and loops, erosion buffers through wetlands, riparian planting and enhance SLUI. Such options are more sustainable and provide better aesthetics.
- Decrease of funding for SLUI means it will now be over 10-15 years period rather than 10 years. This will have a potential impact on flood protection costs.

Setting Targets for the Cost Effectiveness Analysis Approach

1. There are no targets set in the Action Plan. These are important to measure if achieving desired outcomes.
2. It was felt that the environmental limits in the One Plan were acceptable. If these limits are not enough they can be reset. One Plan has N and P targets for each subcatchment (N levels are in One Plan Section D). RC staff would need to translate One Plan targets into model targets.
3. What percentage of streams in region need to be fenced to meet targets?
4. The Freshwater NPS has a different set of definitions and no agreed targets yet.

Ecosystem Services presentation discussion

1. Not only environmental statisticians poorly represented at Statistics New Zealand. There are no environmental health statisticians.
2. Biodiversity is not really bad in urban areas. There are lots of non- natives but these still provide biodiversity. The issue is more about the large impervious areas.
3. One participant thought that there is a breakdown in the loop between 'Evaluation ->Policy and Management' rather than 'Policy and Management -> Natural Capital'. The short-term political cycle is divorced from the long-term adaptive management cycle. The public needs to be informed as politicians reflect what the public wants.
4. Public ownership of ecosystem services can result in a 'Tragedy of the Commons' situation. Under the current system payment is for the allocation process not the water itself. Power of a Common Asset Trust framework is the reinforcing loop that goes back to enhance the river system. Currently there is no reinvestments as ownership is not determined. Iwi have different ideas on ownership of water and movement of water.

Where do you want to go with the IFS project?

This section is more detailed to guide the project going forward.

Firstly, should we pursue the model? If yes should it be as an academic exercise? For story telling? Or engaging with stakeholders? Secondly, do you want us to come back to you with a polished product? Overall the model structure is there. It needs more refining to tell a story and answer questions but is there a need for a model to do this? The MM process is not to build a model and then convince people to use it. No clear answer was given to whether the model should be a desktop academic model or a stakeholders participatory model.

Possible uses suggested by participants:

1. Mediated modelling could be used by the Manawatu River Leaders Forum (MRLF) to provide an adaptive approach and follow through on actions. The first step is to know if MRLF wants the model to help inform them. Should we promote the model at the MRLF meeting 16/12?
2. From an RMA approach the model could be used to communicate science but commissioners would need to be prepared to learn how it worked. Currently the Environment Court system is not flexible enough to use MM but the process is getting better.
3. Test out the effects of reducing cow numbers.
4. There have always been two parallel processes with the MRLF and IFS coming together for only as long as beneficial. What is needed is to see the bigger picture. Will the actions get to where we want to go? Will the costs be much higher than budgeted for? If so how do we communicate this message?
5. If we could answer questions such as “Is it better to put dollars into WWTP upgrades or riparian planting upstream?” this would be a good use of the model. [Note: Is this more specific than a catchment level model can deal with?]
6. MDC, TDC and Horizons could use the model to look at what plants to build for point source discharge.
7. Can we get the most impact for the river by pooling available funding/resources in the region and applying them to the solution with the greatest impact?
8. The model could be used for target setting and how to reach them. If we don't have targets how do we know when we are successful?
9. Most solutions are about treating rather than prevention.
10. A prioritised list of actions is required. The model could be used to detail the actions, show the synergies between solutions, capture feedbacks and evaluate options. When people stop reacting we have the final list.

Actions for the Day:

M. McCartney to provide the final MFE Freshstart for Freshwater application to workshop participants.