

Watershed Torbay – Demonstrating Best Practice Community Change in River Restoration

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Background

Watershed Torbay was established in 2001 as a national demonstration catchment to undertake whole of catchment waterways restoration. Funded by Land and Water Australia through the former National Rivers Consortium, and the Department of Water, the aim was to further develop and test approaches to waterways management at a whole catchment scale, rather than a river reach scale, and to share the learnings and successes throughout Australia. In particular, Watershed Torbay demonstrated what it takes to achieve the scale of change required – at a community and technical level – to address waterways at a whole catchment scale.

The two major themes influencing the approach to this project were: best practice community involvement, leading to change and successful adoption; and a strong science to ensure adoption of effective actions and good outcomes.

Learnings were documented throughout the project through a learning log (Duxbury, 2006), and a draft technical report on successes and learnings has been submitted to Land and Water Australia (Arrowsmith and Duxbury, 2006).

The primary output of Watershed Torbay has been the Catchment Restoration Plan (Department of Water, 2006), and with it comes the current and challenging stage of implementing the plan. Funding has been secured from the National Action Plan for Salinity and Water Quality to implement 70% of the full cost of the restoration plan over a three year period.

About Torbay

Torbay is a small (300km²) catchment to the west of Albany on the South Coast of Western Australia. Not only does it provide important ecosystem services to the neighbouring City of Albany – fresh water supplies, and sewerage disposal – it also has many of its own issues including the most frequent toxic blue-green algae booms in any waterway in Western Australia, significant riparian degradation, acid sulphate soils, deep drainage impacts and management conflicts, issues associated with water availability for wetlands, rivers and the estuary, and concerns about freshwater habitat and biodiversity.

From a community perspective, Torbay had very low landcare adoption rates, small farm size and low income levels, and this made community capacity building and change essential to achieve adoption.

Project Principles

Watershed Torbay adopted a number of new approaches to ensure the successful development and implementation of the restoration plan, and to ensure the learnings were shared around Australia. These included:

- Best practice community participation and change program, guided by parallel PhD studies on best practice community change, by communications coordinator Louise Duxbury;
- A research and science program based on a civic science approach, to fill knowledge gaps for the catchment which were essential in understanding possible management responses;
- Use of a planning framework which accounted for science input to ensure the efficacy of actions, and community input to ensure the acceptability of actions;
- Adoption of social marketing strategies to ensure widespread behavioural change leading to adoption, not just awareness raising;
- Development and reporting of catchment health indicators for the community, based on community perceptions about what it important to measure and their interpretation of success; and
- Maintenance of a learning log throughout the project, with input from researchers, community, and project officers, in order to reflect on actions, ensure an adaptive approach, and share learnings within the catchment and around Australia.

Project Approach and Learnings – Communications

At the outset, it was recognised that significant levels of “change” were required if the project was to lead to successful (high level) adoption. Change was considered necessary in the following areas:

- Increased awareness of the values of the catchment and development of a shared vision of a desirable future state;
- Awareness of environment problems in the catchment, particularly the algae blooms experienced in the lower catchment; and
- Increased willingness and capacity to undertake changes in farming practice.

A communication strategy to guide communications and community involvement was prepared at the project commencement and as the project evolved, research undertaken by communications coordinator Louise Duxbury as part of a PhD was incorporated into the approach and tools used. Louise’s PhD topic was ‘*Managing Change: Watershed Torbay as a focus project*’ (Duxbury, in prep). A focus of the communication strategy was the development of long term partnerships between key players.

An essential documentation of the learning process was made through the Communications Learning Log, which summarises the key tasks undertaken, the approach, and the successes and difficulties encountered. This demonstrates the adaptive management undertaken during the project.

Change Process

A review of literature on the international and Australian landcare movements, and extension and change research, indicated that projects such as Watershed Torbay need to focus on more than awareness levels and attitudes. High levels of awareness are not necessarily sufficient to change behaviour. The framework for change (figure 1), based on a classic model from organisational theory, was proposed by the communications coordinator and adopted by the project. This ensured that the project included strategies that addressed all essential change components.

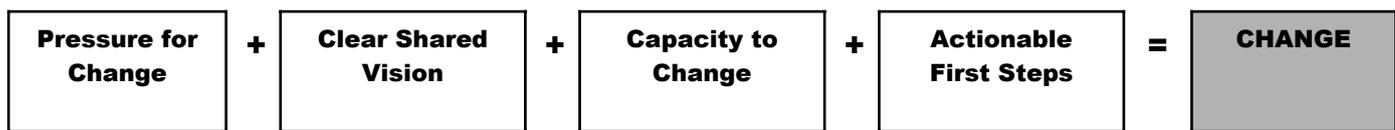


Figure 1 – Key Elements of Change

Communication Activities

A wide range of communications and community involvement activities were held during the project, with the aim of achieving a variety of outcomes. While the activities are too numerous to cite in full, some examples, and the outcomes to which they contributed are:

- Community visioning workshops, photo competition: to elicit the community's values, identify issues and develop a collective vision (PRESSURE FOR CHANGE, SHARED VISION);
- Web page, newsletters, pamphlets, email network, updates to catchment group meetings: to ensure comprehensive dissemination of information about all aspects of the catchment and project (PRESSURE FOR CHANGE, SHARED VISION);
- Formal community steering committee and involvement in other working and technical groups: to formally involve the community in decision making (CAPACITY TO CHANGE);
- Planning workshops and meetings: to ensure community input into the Plan to develop practical and acceptable targets and actions (PRESSURE FOR CHANGE, CAPACITY TO CHANGE, ACTIONABLE FIRST STEPS);
- Research open days, community participation in field work, community participation in technical working group: to gain community input into projects, and knowledge exchange about the catchment between scientists and the community (PRESSURE TO CHANGE, CAPACITY TO CHANGE);
- Bus tours, demonstration sites, workshops and field days: to expose the community to alternative management approaches and promote understanding (CAPACITY TO CHANGE);
- School participation, celebration BBQs and events, photo competitions: to build a community spirit and widespread participation in the project (CLEAR SHARED VISION);
- Focus groups: to fully understand barriers to adoption and to assist formulation of the approach and funding formula for on-ground works (ACTIONABLE FIRST STEPS).
- Subsidising significant landcare work: riparian, wetland and vegetation fencing and revegetation, installing stock crossings and off site watering points, creating demonstration wetland and perennial pasture sites (ACTIONABLE FIRST STEPS).

Learnings

The mentoring and community change process used has assisted the project to be managed in a more thorough and reflective way, assisting in the development of vision and capacity to drive an ambitious restoration plan with a much higher chance of success.

The communication learning log shows how important it is to actively manage change. There were many changes in processes used across all aspects of the project to build trust between partners and to maintain the momentum of the project. The feedback from various participants

directly quoted in the log indicates that without this regular reflection and responsiveness, the project could have hit major obstacles.

This approach had very positive outcomes. The focus on building relationships and maximising the involvement of the community and key players in the catchment led to a building of trust that made the task of jointly deciding on restoration plan actions and priorities relatively straightforward. The community members wanted and appreciated the active involvement of agency staff in meetings and preferred when agency roles, responsibilities and capacity were clearly articulated.

The participatory philosophy used in this project is accepted practice within the Australian landcare movement and community development literature. Where Watershed Torbay differed was in the clear articulation and implementation of a change framework. It was important because it provided a clearer understanding of the significant challenge in bringing about change in behaviour.

The clear learnings for the community change element of the project are;

- Clearly outline a philosophy of change for a project or catchment group;
- Adopt a change framework to held guide implementation and work on all elements of change;
- Reflection is critical to active change management. Reflection needs to be built into the project of catchment processes (eg. annual reviews, evaluation at end of every event, open door policy to positive and negative feedback, use learning log approach);
- Adaptive management means taking the feedback that comes from the reflection processes and responding with a problem solving attitude, and reporting back on actions taken;
- Maximise opportunities for all key players to be involved in projects, and make events enjoyable;
- Be explicit and specific about the agenda of different partners for involvement in the project – have it state up front and written down. Communities can accept a particular agenda beyond the health of the community, provided it is clearly spoken;
- Conflicts between the interests of different players should be anticipated. Some issues are very intractable, but it is critical that they are discussed and solutions identified that deal effectively with the issues, while resolving how players that stand to lose from change will be treated fairly;
- Social marketing is an important communication tool recognising that landcare is about changing behaviour.

Project Approach and Learnings – Science Program

Watershed Torbay had a comprehensive science program aimed to directly support ongoing management for environmental outcomes. The clear approach was for researchers, agencies and community members to work collaboratively in an action learning environment, which recognised, documented and shared local community knowledge and specific expertise. The project team wanted an adaptive management approach to science as for all other program elements, and this was based on understanding issues identified by the community, and identifying potential solutions. The approach also sought to link and integrate the work of scientists on different management issues, where possible.

In particular, the development and implementation of the science projects was based on an approach that:

- Openly canvassed issues and knowledge gaps in the catchment;
- Sought and validated different kinds of knowledge – values, local community knowledge and specific expertise of landholders and agency staff;
- Was based on resolving the issues identified by the community;
- Established a multidisciplinary technical advisory group, with community participation and oversight;
- Used clear criteria to select appropriate science projects;
- Grouped science projects into five themes, around key management issues, to facilitate community understanding and identify potential linkages;
- Involved the community during the experimental work, where possible;
- Required scientists to present their findings in plain language directly to the community; and
- Involved scientists in the planning workshops to elicit direct input to the efficacy of management actions.

The selection of appropriate science projects included the following criteria:

- *The capacity of the research to answer the key community questions;*
- *The extent to which the research will provide information to influence the selection and implementation of actions;*
- *The urgency of the research in terms of influencing actions (immediate priority or long term issue);*
- *The potential for the research to give results that lead to low cost land-use management change and behavioural change;*
- *The extent to which the research may help answer issues in other catchments; and*
- *The cost-benefit of the research.*

The outcome of this approach and the selection criteria for the projects is what we would consider as a Civic Science approach to the research program.

The learnings for the science element of the project are:

- It is important to have robust selection criteria and objectives for a research program. This needs to be monitored, as even with clear criteria, research projects may not deliver outcomes for the project;
- Researchers relished clear opportunities for public involvement yet were reluctant to accept feedback about broader communication needs and styles. Foster opportunities for community involvement in research, and provide researchers with guidelines on communicating science to the community. In some cases, contractual arrangements which require community involvement and communication may be needed to drive some of the change;
- It can be very difficult to integrate science projects, particularly where they are cross-institutional. There are very large barriers to sharing of data, equipment, experimental sites etc;
- Provide opportunities for community scrutiny as it encourages accountability for the science program, and uptake of research results;
- Openly recognise where research does provide clear answers and where best bet judgements by researchers and the community may need to be jointly made;

- Where possible, use local researchers, as they are able to attend meetings, field trips, and undertake work on a more frequent basis that benefits the community and the project; and
- Community knowledge significantly added to the understanding of the catchment and informed science projects – both had preconceived ideas, which were very strongly and positively influenced by the others.

Project Approach and Learnings – Planning Framework

The planning framework used for the project is shown in Figure 2, and is an adaptation of a River Restoration Framework published by Land and Water Australia. Seven planning themes were identified, primarily relating to issues identified by the community:

1. Algal blooms and water quality;
2. Water quantity, including ecological water requirements;
3. Drainage management;
4. Habitat and biodiversity management;
5. Farming systems;
6. Land use planning; and
7. Community education and information.

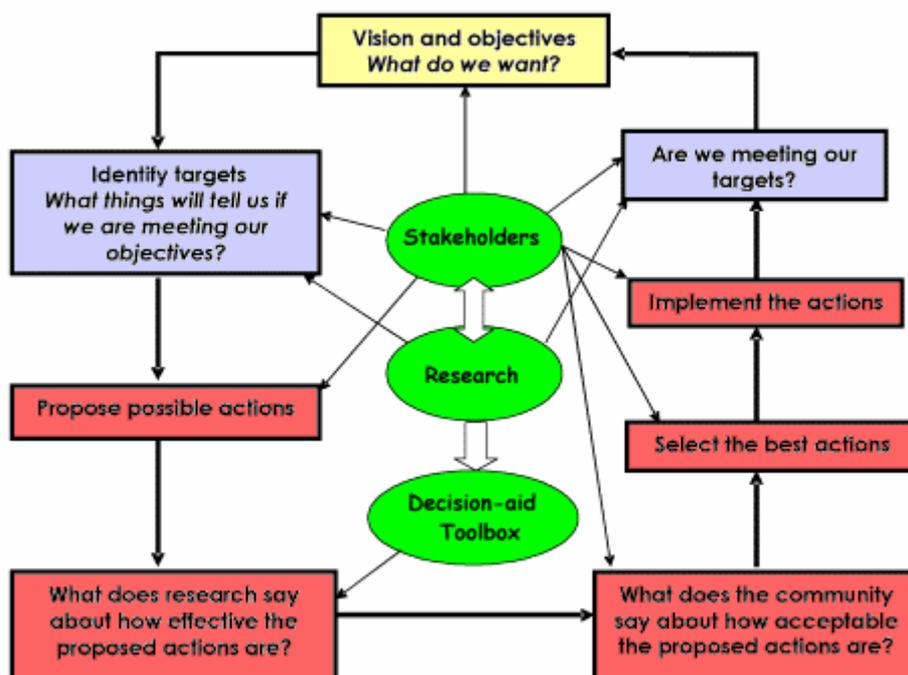


Figure 2 – Planning Framework

Steering committee working sessions were held for each of the seven planning themes to work through the key steps in the framework. The planning framework was important in that it:

- Allowed aspirations and objectives of the community to be documented, and for community targets to be set;
- Enabled the full range of options – including ‘wild’ community and researcher ideas and mainstream approaches – to be assessed;

- Enabled both technical efficacy and community acceptability to be explicitly assessed in the planning process;
- Provided a clear role and involvement for the community and for scientists;
- Enabled an iterative approach to setting targets – in some instances the level of change and investment required to achieve targets was considered unacceptable, and this led to more realistic targets being set; and
- Prioritised actions through involvement of all key stakeholders.

The restoration plan developed over the life of the project. Three versions of the plan were built through the process, each reflecting a higher level of technical understanding about the catchment as the science program delivered outcomes, and the community's understand and change progressed. This ensured that there was some guidance to on-ground work early in the project, and that implementation occurred in parallel with the science and planning process.

There was very comprehensive input from both the science and catchment community to the planning process, through expert panels, Steering Committee working sessions and whole of community workshops. These forums were held throughout the planning process – at the visioning and target setting stages, and at the options and actions development stages.

The collective outcome is that we now have a community with the understanding and drive to move into an ambitious implementation phase, supported by a plan which is accepted as a legitimate way forward that will work and for which there is capacity to implement.

The learnings for the planning element of the project are:

- Having clear and agreed community objectives was absolutely essential;
- Iterative approach to target setting and identifying associated actions was essential;
- Long and iterative process which required considerable dedicated time from the community;
- Dealing with all options transparently ensured no “come back”;
- In many cases science understanding was still not sufficiently robust to define the technical efficacy of many actions – used intuitive assessment through expert panels where necessary.

Final Remarks

Ultimately, the success of this project will not be fully demonstrated until the restoration plan has been implemented, and improvements are made in the state of the catchment. Nevertheless, Watershed Torbay has substantially equipped the community to embark on this ambitious restoration project.

The project has demonstrated that there are key processes that can be adopted to ensure such projects aim at significant behaviour change in waterways management and that all partners with a stake in the catchment are willing to contribute to change over the long term. Key processes include placing greater emphasis on adopting a framework for change and actively managing the processes of change, using a civic science approach to research, aiming for behaviour change and not just awareness raising, undertaking practical works on the ground as soon as possible, continuously reporting back on progress to the community

and partners and maintaining the commitment to implementation of restoration works through solid long term partnerships and dialogue.

The investment in communications and involvement in this project was substantial. About 50% of the total project funding was spent on communications activities, including employment of the coordinator, communications material, workshops, surveys and other activities. This was well beyond what was anticipated at the commencement of the project, and is certainly not the general proportion that would be dedicated in most natural resource management projects. This points to a need to review the value and investment in such work, and for funding bodies to more broadly recognised the capacity building elements of projects and be prepared to fund these appropriately.

Government agency project budgets generally provide for 'token' community engagement – public meetings, media released, and publishing of documents for community submissions etc- but rarely provide for full-scale community project participation. The reality is that it would be difficult to justify a Watershed Torbay style involvement and change process for all natural resource management projects. However, for high priority areas with important public assets, this style of involvement may be essential to achieve the environmental outcomes required, and should be fully considered in project design and budgeting.

References

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