No involvement, no commitment, no change! - Involving the community in watercourse management

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ABSTRACT: *A plethora of natural resource management plans exist that have failed to achieve any change in on-the-ground management because of poor community involvement. A project funded by the National Landcare Program in the Mt. Lofty Ranges (S.A.), is developing management plans for watercourses in four catchments, by actively involving rural landholders. Establishing meaningful landholder participation, has been a key driver behind the project design, including the manner of data collection and use of geographical information systems. A collaborative, community participation process was used, where landholders developed community goals and used these to evaluate watercourse problems in a structured, equitable and effective manner. The outcome was a plan of priorities for watercourse works, which was used to allocate project funds and provide long-term community direction.*

1.0 BACKGROUND

The Mt. Lofty Ranges, covering around 3500 km^2, lie immediately to the east of Adelaide. They contain a great variety of land uses; are a major tourist destination; produce, on average, about 60% of Adelaide's water and over $200 million annually in farm-gate agriculture income (Anon, 1993).

In 1993 the National Landcare Program funded the "Mt. Lofty Ranges Healthy Catchments Program" for three years, with the aim of implementing actions to achieve integrated natural resource management and sustainable development in the Mt. Lofty Ranges. This program consists of seven major projects, one of which is the Riparian Zone Management Project (RZMP).

This project aims to improve water quality and ecological health in the watercourses of four Mt. Lofty Ranges catchments - Inman, Torrens, Onkaparinga and Tookayerta. Watercourses that are unfenced, infested with woody and annual weeds, actively eroding and have poor habitat value are the rule, not the exception, in the Mt. Lofty Ranges.

The project brief was to:

- survey the current condition of these watercourses
- prepare plans for improved watercourse management
- assist the community to improve watercourse management by providing technical advice and financial assistance.

2.0 COMMUNITY INVOLVEMENT IN THE RZMP

Involvement of the rural community in this project has been a very high priority and has driven many of the decisions taken in formulating the direction of the project.

2.1 Science or Art ? - Getting Change On The Ground

There is a plethora of natural resource management plans in South Australia, and probably elsewhere) that failed to achieve any change in on-the-ground management because of a failure to involve the local community. If change on the ground, in this case, improved watercourse management, is the desired outcome, then the "science" of watercourse management is of less importance than the "art" of working with the watercourse managers.

In the Mt. Lofty Ranges, the vast majority of watercourses flow through freehold agricultural land. If agency staff do not work with these landholders in a way that is meaningful for the landholders, to produce improved management practices, then little or nothing will change on the ground - the ground they own! In South Australia there are no Crown frontages (or similar) as in Victoria. Most land titles show a total disregard for land capability classes. Property boundaries and internal fencing are commonly placed so that riparian zones are managed by landholders as part of the whole paddock, ignoring their special ecological functions.

The authors have a strong belief that only by working with landholders and taking a collaborative problem-solving approach, will management really be improved. This is not without its risks - things can

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go "off the rails". Our observation is that this means that the objectives of agencies and landholders are often not the same, and the landholders are saying so! Agency staff have less control of the process and risk uncertain outcomes. Resource management agency staff typically have a science background. The chaos of subjective, interrelated and "fuzzy" community information and interactions is not always a comfortable place for those wanting hard scientific answers.

2.2 So Why Involve The Community?

Firstly and most importantly, the community have a right to have input into decisions that could effect them, now or in the future.

Second, nothing will change on the ground unless the process involves landholders. In South Australia there are no clear legislative mechanisms to force landholders to improve their watercourse management. We believe that a regulatory approach would fail and engender community hostility. It is no good enforcing watercourse fencing if the landholder leaves open the gates!

Thirdly, watercourse management involves value-driven subjective decision-making, especially when done on a catchment wide basis. For these types of decisions, it should be those who will have to live with the consequences, that make the decisions.

Fourthly, the project collected information about properties that could portray poor management in the eyes of "outsiders". This is a particular issue when the data will be stored on a geographic information system (GIS). There is considerable potential for future misunderstandings and misuse of GIS data, when the original project staff have moved on. It is important for landholders to have a clear idea of what data will be collected, why and how it will be used. To do otherwise is to invite suspicion, mistrust and lessen the chance of the adoption of improved management practices.

Fifthly, landholders have a wealth of observations about their watercourses. Older landholders, needless to say, have a great deal to offer. It is possible, indeed sometimes likely, that landholders will misinterpret these observations and have misunderstandings about watercourse processes and the importance of the riparian zone. However, to assume that their "fuzzy" information is of no value does them and ourselves a disservice. Two way information flow is critical to achieving better on-ground management.

2.3 What Type of Community Involvement?

The "con" in community consultation is an old joke but sadly, is sometimes a reasonably accurate description of the process. It begs the question "What does community involvement mean?". We take a public participation approach. "*Public participation is a two-way process of communication between planners and the community which promotes the exchange of information and encourages problem solving and the resolution of conflict in order to produce plans and policies which are acceptable to the community and which can be effectively implemented*" (Dugdale and West, 1991).

One of the most important points that Dugdale and West (1991) make is that the level of power that the community is being offered must be clear to both the community and the agency staff. We have taken an approach that gives the landholders a direct input into the creation of a plan of on-ground works in their catchments.

Part of effective community involvement is listening to landholders' concerns, fears, aspirations and ideas and not being locked into only seeing the agency's objectives. A recent attitudinal survey of a diverse range of stakeholders within the Mt. Lofty Ranges, showed that although all groups ranked poor landcare practices as the biggest barrier to natural resource management, producer groups ranked streambank erosion as the least important of eight landcare issues considered (AACM, 1994). Government agencies, however, ranked it second highest. Only by looking for the common links in the right manner, it is often possible to move forward toward some common goals.

2.4 What Community?

One of the critical issues is to define the community that needs to be involved in the process. For this project, the community of concern was defined by their ownership of watercourses of interest. It was decided to only survey and prepare management ideas for streams of third order and greater (as defined by Strahlers method on 1:50000 scale maps). This was done for two reasons. Firstly and most importantly, any attempt to improve the management of the first and second order watercourses (many of which are seasonal in the Mt. Lofty Ranges) needs to be dealt with through a property management planning approach. Without this property level integrated approach any changes to the management of these small watercourses may either not be implemented, or if they are, they may lead to frustration and difficulties with farm management.

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Secondly, the sheer logistics of surveying more than 700 kilometres of watercourses was beyond the scope of the project.

2.5 Community Participation Objectives & Evaluation

Five key objectives for community participation were established:

- to provide an opportunity for landholders to have direct input into the production of a table of priorities for watercourse works for their catchments.
- to give the local community as much ownership of the project as possible.
- to provide project staff with an understanding of landholder knowledge of watercourse processes and the role of riparian zones.
- to facilitate two-way sharing of information useful to each party.
- to improve landholder awareness and understanding of watercourse processes and the role of riparian zones.

Evaluation of community participation projects must be considered from the start. To do otherwise, is to, assume that what you are doing is adequate. Flexibility and an openness to change is essential.

2.6 Outcomes and Purpose of Community Participation Process

The production of a plan of prioritised watercourse works for each catchment is the key outcome of the process. This serves two purposes. Firstly it is a mechanism for equitable and effective allocation of the project funds available for that purpose to landholders in each catchment. These funds will only address the most significant issues in each catchment. Secondly, these plans will provide catchment groups, landcare groups, local government and Catchment Water Management Boards with a long-term, comprehensive plan to be used in accessing other funding sources in order to continue future works.

The role of Catchment Water Management Boards may be significant in the near future. Under the Catchment Water Management Act (1995), these Boards must produce and implement catchment plans to improve the management of the water resource in each catchment. To fund the implementation of works under these plans the Boards will raise a levy from all ratepayers. This may provide considerable funds for future watercourse works.

2.7 Design of Survey Methods

Most riparian survey methods seem to favour a stratified sampling approach where small reaches are surveyed. However, for the purposes of the project, it was essential to have detailed information, recorded continuously, along watercourses because:

- of the need to implement management changes with all landholders along these larger watercourses. It has been our experience that landholders are not particularly receptive to generalised information. This is especially so when they are being asked to take part in a process that may ultimately involve them changing the layout or management of their property.
- the vast majority of the watercourses flow through many properties with different landuse (historically and current) which has resulted in different current watercourse condition. A common sight in the Mt. Lofty Ranges is adjoining properties with watercourses in very different condition.

2.8 The Use of Geographic Information Systems (GIS)

The opportunity to utilise GIS for the storage of data was seized upon as much for its power in the community participation work as any other advantage. The greatest power of GIS in this project has been the ability to produce, in particular, maps (but also diagrams and statistics), of a variety of information for use in landholder meetings and field days.

One of the simple barriers to better watercourse management, for communities, is the lack of an easily understandable "picture" of watercourse condition at a catchment scale. The need for the community to work in a coordinated way on watercourse issues makes the maps an essential part of community planning.

3.0 CASE STUDY: THE INMAN RIVER CATCHMENT

We will now consider the application of this approach in the first catchment tackled in this project - the Inman River catchment .

The Inman River catchment is located in the southern Fleurieu Peninsula, approximately 70 kilometres south of Adelaide. It is an area of mixed landuse - predominantly grazing and dairying. Watercourse

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condition has been a community concern since last century.

A diverse mix of concerned residents formed the Inman River Catchment Group (IRCG) in mid 1993, with the aim of raising awareness of the catchments' health and improving its management. In July 1993, the IRCG surveyed all of the catchments' residents, and found that water quality and erosion were amongst the community's greatest concerns. Having experienced two 1-in-100 year floods in successive years (1992 and 1993), concern about the condition of watercourses was to be expected.

Against this background, the authors commenced the Mt. Lofty Ranges Riparian Zone Management Project with work in the Inman catchment, in June 1994.

3.1 Community Participation Process used in the Inman River Catchment

The community participation process was based around the use of a modified version of the model established by Craigie (1990). A three stage process was used to develop a plan of prioritised watercourse works for three sub-catchments, and ultimately the entire catchment. The model enabled landholders to evaluate all watercourse management issues against social, economic and environmental impacts, and then rank them in order of priority. The outcomes from the three sub-catchments were combined to produce a list of on-ground works for the entire catchment.

The Craigie model was chosen to build upon as it has the following positive characteristics:

- it does not rely on detailed financial assessments,
- it explicitly requires social, economic and environmental factors to be considered,
- it is consistent in its application to diverse problems,
- it takes into consideration what could happen in the future if no action is taken, and
- it assigns a numerical value to each watercourse management issue being assessed.
- it allows quite diverse management problems to be ranked
- it lessens the risk of vocal or influential individual landholders hijacking the process and hence biasing the outcomes.

It was important to have a consistent procedure so that at the end of the process the three sub-catchments' plans could be combined into an overall catchment plan of watercourse works.

Problems were treated on an issue-by-issue basis, rather than on a stream reach basis. This allowed the application of the Craigie model in prioritising watercourse remedial works. Dealing with problems on a reach basis would have inevitably lead to large landholders obtaining a large share of the funding, guaranteeing that large sections of the community would not be involved. Allocating funds on an issues basis ensures a greater spread of money throughout the sub-catchment (and catchment), thus facilitating greater involvement and activity by local landholders in the long term.

The community participation process (in chronological order) consisted of :

1) Build up contacts in the local community

Contact was made with all relevant local people - IRCG members; District Councillors and local government staff; Department of Primary Industries staff; the local Soil Board and landcare group members. This revealed information about the social networks and the way information moves in the district.

2) Identify all the landholders & their catchments

All landholders whose properties contain $\geq 3^{rd}$ order watercourses, were identified from local government records and the community network established in step 1. This revealed 124 landholders to try to involve in the process.

The Inman catchment was split into three smaller catchments on the basis of watershed and social networks. This was done for several reasons:

- working with smaller groups would promote greater local input,
- greater involvement of all landholders attending meetings, (people in the Mt. Lofty Ranges only really identify with small local catchments (AACM, 1994)),
- logistical ease in running smaller meetings.

3) Contact landholders

Contact was made by letter and telephone. Importantly all correspondence was jointly signed by the project leader and the chair of the IRCG. Also much of the telephone work involved members of the IRCG. This local input made a huge difference to the way landholders reacted to a project coming out of an agency that has not always had a good relationship with the rural community in South Australia.

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4) Media

During the early part of the Inman work radio and local press articles were used to try to raise local community awareness of the project and watercourse issues in general.

5) Each of the three sub-catchment groups then individually took part in a 4 part process.

5.1) Meeting 1

All meetings were opened and closed by an IRCG member. The first meeting was used to:

- identify landholders' concerns and visions for watercourse management,
- identify the extent of landholder knowledge pertaining to watercourses,
- illustrate that watercourse management should be viewed from both an individual and community perspective (ie some issues affect many people),
- illustrate that some problems can only be addressed on a reach basis, and this may involve two or more landholders,
- target information required in the management guidelines,
- develop an itinerary for field days,
- gain permission to enter properties.

Small group discussions were conducted around four questions to achieve some of these outcomes. The information from the small groups was summarised and mailed to all target landholders. Providing prompt feedback allows everyone, including those who did not attend, to see the results of the meetings' efforts.

5.2) Field survey work

All watercourse management issues were identified by the field survey work. Some landholders participated in the survey work. This was encouraged, as it provides another opportunity for sharing of knowledge and building of understanding.

5.3) Field day

These were conducted on different properties in each sub-catchment. Properties were selected to illustrate a range of issues, and importantly where those landholders were happy to talk publicly about their ideas and the history and problems of their watercourses. The purpose of these days was two-fold. Firstly, to show landholders a range of issues and give them some understanding of the processes that have contributed to the current condition of watercourses and how they might be rehabilitated. This was a two-way process. Wherever possible landholders were encouraged to voice their management ideas. Secondly, to give landholders information and knowledge to prepare them for the process in the second meeting.

5.4) Meeting 2

This meeting was conducted in two parts. The first session used the landholders inputs from the first meeting to develop general "themes" of concern and then goals for each of those themes. The goals used in the original Craigie (1990) model were used as a starting point. The group (landholders and project staff) deleted some goals, added others and modified the wording as they saw fit until they were happy that the goals adequately addressed their concerns.

In the second part, small groups, prioritised watercourse management issues using the new **joint** goals in the modified Craigie tables. To assist them in this process every small group had GIS generated maps. Each small group was facilitated by someone involved in the survey which allowed for explanation of issues and maps. The process was considerably assisted by the local knowledge of landholders especially in regard to the rate of change of some processes.

6) Summary of information

All issues were then ranked by the numerical scores produced in the meeting. The three tables from each sub-catchment were combined into one for the entire catchment by the project staff using the modified Craigie tables and landholder goals that evolved throughout the process.

3.2 Outcomes

The material product of this process was a report containing:

- a detailed history of changes to watercourses of the catchment
- recommendations aimed at Local and State government; the IRCG and other community groups
- table of 185 watercourse management actions for the entire Inman catchment, ranked in order of priority by that catchments community.

A very tangible outcome was the handing over of $60,000 "action money" from the project to the IRCG. This money, to be administered by the IRCG, will address the highest priority actions identified by the project through the community participation process.

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3.3 Evaluation of Inman community participation process

Evaluation was done in several ways, during and at the end of the project work, to determine how well we had achieved our five community participation objectives. This included on-going reviews based on IRCG member feedback and landholder feedback; a "focus group" evaluation and a questionnaire of all landholders after the completion of the process. In summary these evaluations showed that landholders were broadly comfortable with the entire process; felt that strong efforts had been made to really involve all landholders; that the outcome (ie the table of prioritised watercourse works) were sensible and broadly representative of community opinion. The major concern was the difficulty of the voting process in the second round of meetings.

One of the most obvious measures of success is that approximately 50% of the overall target community took part in some or all of the process. This is a reasonable figure but importantly some very large landholders who own long stretches of watercourse and who are "influentials" in the district took part. This bodes well for future outcomes.

Perhaps the best evaluation was the attendance of approximately half the target landholders to the public handing over of the $60,000 "action money" from the project to the IRCG by the Minister for Environment and Natural Resources. This was on a bitterly cold, windy day when many would have had better things to do.

We believe we achieved all five community participation objectives.

4.0 CONCLUSION

Although there is a lot of science behind watercourse management it is insufficient and sometimes irrelevant in improving the management of watercourses. This is particularly so in catchments of agricultural landuse on freehold land.

Only by actively seeking community participation will effective long-lasting change be achieved on the ground. This means being open, really listening and looking for the common ground between the objectives of landholders and agencies.

Ultimately only by a personal commitment to change will landholders change their watercourse management. This commitment is only built if landholders gain an understanding of technical information and the importance of better watercourse management for themselves (as well as the wider community). This commitment is only achieved by the landholders having a real input into decision-making and by having a real ability to implement those decisions, which means access to resources.

All of these only occur by taking the considerable time and effort to work with landholders. No involvement, no commitment, no change !

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