Chapter 8

Discussion: social learning and participatory developmental evaluation

Assumptions attacked,
I can fasten myself to
a rock, or transform
(Zelman 1995 in Bray et al. 2000)

8.1   Introduction

This Chapter returns to the core enquiry of this thesis – what can be learnt about using participatory and developmental (P & D) evaluation techniques to build capacity for social learning in environmental management? In particular, it examines what has surfaced from the case stories presented in Chapters 4–7.

Chapter 2 outlined how social learning has emerged as a basis for understanding the social process demands inherent in the management of complex environmental issues. The framework I proposed draws attention to four interlinked areas for focusing awareness and developing practice in complex-problem-solving situations (Figure 2.1): These are**:**

1. How to manage group participation and interaction
2. How to work with and improve the social and institutional conditions for complex problem solving
3. How to improve the learning of individuals, groups and organisations
4. How to enable systems thinking and the integration of different information.

It is important to understand social learning not as a model for 'how things should be done' but rather as a set of premises or conditions – the management of which can affect the ability of groups of stakeholders to find a way through problems where each share some knowledge, and towards which each need to take some action. These ideas that make up social learning are fundamentally about improving the conditions for learning and adaptation. There are no set steps to be followed, nor does it prescribe any particular starting position. Rather these ideas can be applied to improve the situation from 'where you are now'. What social learning

is reliant on, then, is the development of a culture and conditions for continuous and rigorous enquiry among the participants in the problem-solving situation. This reflective practice examines not only what is known and needs to be known about the problem, but what exists and needs to change about the social conditions in which the problem situation is located, i.e. learning about both content and process.

In search of a mechanism that might drive this enquiry practice, in Chapter 3 I linked the ideas of social learning to evaluation. I specifically examined developments in participatory, reflection- and theory-driven approaches which can be used to improve the learning capacity of groups and to help environmental management programmes understand how they might be more responsive to social development aspects that underpin their overall goals. These evaluation approaches and tools offer a means to support the capacity for social learning in any given problem situation. At the end of Chapter 3 I proposed four arena in which P & D evaluation approaches and social learning can intersect. These are:

1. Scoping the environmental management problem situation
2. Supporting the capacity to enquire and problem solve
3. Supporting the management of programmes or interventions in the problem situation
4. Research and development that facilitates the growth of theoretical and practical knowledge about addressing complex environmental management situations.

Since the overall intention of this PhD is to look into ways for moving social learning from a 'nice normative theory' to an implementable basis for practice, the link between P & D evaluation and social learning was examined in four case stories where P & D evaluation approaches were used to support the social learning potential of different situations (Chapters 4–7). These cases addressed the overall question: 'Can evaluation, as a legitimate part of environmental management programmes, operate as a vehicle for social learning through its potential to situate learning and inquiry within a valid social and institutional setting?

Each case story was based on a standard schema of questions (see Box 3.1, repeated here). In the first instance the Social Learning Framework was used as a basis for **scoping the problem situation.** This involved a SWOT analysis to identify the particular social learning challenges in each of the cases, and it tested the first proposed intersection between social

learning and P & D evaluation. Secondly, each of the cases tells the story of using some form of P & D evaluation aimed either at **improving the capacity to enquire and problem solve**; supporting **programme management**; adding to the knowledge needed to help address the situation (**research and development**), or a combination of these. Each case had highly variable conditions and used differing approaches. Accordingly the case story investigates the use of P& D evaluation and the events surrounding it (i.e. what evaluation approach was chosen, what happened, and what was learnt?).

> **Box 3.1 Schema of questions for case studies**
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> ▪ *What is the social learning challenge of the situation?*
> ▪ *What aspect of social learning was supported by the evaluation?*
> ▪ *What evaluation approach was chosen?*
> ▪ *What happened/results/outcomes?*
> ▪ *What was learnt?*
> ▪ *What is the significance of this?*

In this Chapter, the observations and conclusions from the case stories are drawn together for re-examination (Appendix 13 contains a summary of the cases and findings). Firstly, the common and significant social learning challenges across each of the case stories are reviewed. Secondly, there is a summary of the experiences of applying the various P & D evaluation approaches in each of the cases, followed by a discussion of the emergent success and limitation factors for applying P & D evaluation approaches to complex environmental management problem situations. A final section includes some observations on the case story methodology.

8.2   Scoping the environmental management problem situation

The task of building capacity for social learning may be broadly interpreted as 'how to translate existing theory on social learning to practice'. However, in reality this needs to be rendered down to particular challenges in a given problem-solving context. Consequently, while the framework proposed in Chapter 2 identifies four groups of elements important to social learning, where there are limits to time, skill and resources some choices need to be made about which areas are a priority to address or are most amenable to progress. For instance in one situation a pressing social learning challenge may be: 'How can we facilitate active learning processes that confront existing assumptions among multiple stakeholders'. In another situation the question demanding attention may be: 'How can we facilitate social learning within the constraints of existing management and planning approaches?
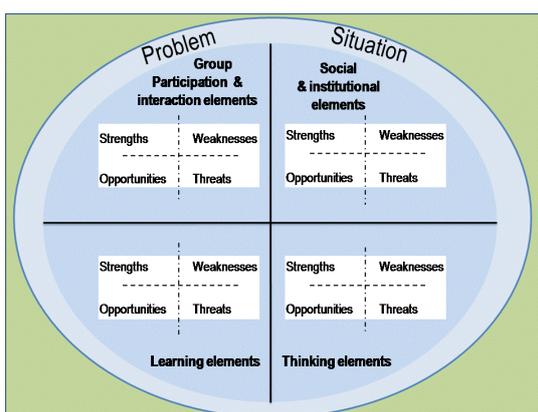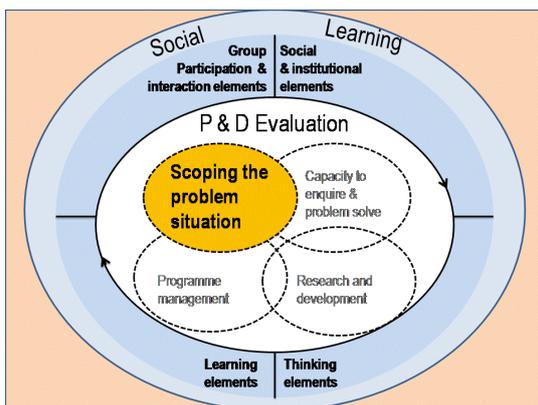
In Chapter 3 I proposed that one of the ways in which P & D evaluation can contribute to building the capacity for social learning in a given situation is by linking the Social Learning Framework (Figure 3.3 repeated here, above) with a SWOT and/or needs analysis to **scope out the problem** (Figure 3.4 repeated here, below). Such an analysis would reflect on how the core elements of social learning are catered for in the problem context, what significant barriers might need to be overcome, and what opportunities there are for progress. To explore how this might work in practice, each of the case stories began with a **SWOT analysis** of its particular social learning challenges. In the first three case stories (i.e. the WCMP, the TZ waste minimisation programme and the social spaces evaluation of the ICM programme) this was a retrospective exercise. Because the final case (the Watershed Talk project) took place during the more advanced stages of my PhD work I was able to make use of the Social Learning Framework to analyse the situation as a pre-emptive contribution to project design and implementation.

In this section I report on the significant and common social learning challenges across each of the case stories. I then comment on the value of the Social Learning Framework as a tool for programme development in complex problem situations.

Common challenges for group participation and interaction

All the case stories shared a need to bring together and manage multi-party collaboration and learning. Indeed groups were widely regarded as the principal instrument for dealing with the environmental management challenge to which each of the case story programmes was committed. These groups ranged in complexity from teams of staff chosen from across a single organisation (as in the TZ company training programme) through to the multiple agencies and stakeholders involved in research and management in the case of the ICM programme, where different collectives and associates would be brought together at different times. Correspondingly all the programmes outlined in the case stories made initial (and often

substantive) efforts to create some form of structure that brought stakeholders together. The processes by which this took place varied but reflected a general reliance on 'getting the right people together', and forming a group with the 'right structure'. This meant considering issues such as representative membership and the group's terms of reference.

What this was rarely matched with was any sense of how the social dynamics of a group, once formed, would influence the outcome of their work together. There was little evidence of any planning to manage or mitigate existing power inequalities, address the various and often contentious expectations around roles, or the history of conflict between members. For instance, the WCMP placed heavy emphasis up-front on recruiting participants from a range of sectors and interest areas across the Whaingaroa catchment, with the intention of forming a representative stakeholder group that would develop a community-based environmental management plan. In contrast, almost nothing in the approach spoke to the means by which this group would draw together their collective understandings of the environmental issues of the catchment, or reach agreement on future management. As it eventuated the WCMP was in particular need of skills in dispute resolution and conflict management to deal with historical and ongoing tensions between key stakeholders, particularly between local hapū and the regional management agency.

Similarly, in the case of the TZ programme, the programme's key proponents recognised that the performance of the company teams established through the training programme was critical to implementing resource use efficiency measures in their respective companies. However, the only means they believed they had of influencing this was through the group structure. Consequently they put effort into guidelines for how many people should be included in the teams and what parts of the company they should be recruited from. The intervention offered through the TZ evaluation project in Case Two was deliberately aimed at providing a balance to this structural emphasis by focusing on developing team self-management skills.

While the ICM programme, too, placed initial emphasis on structure as a means to enable collaboration, social process specialists were included as core researchers in the programme, so that over the 10 years it experimented with a number of platforms for multi-stakeholder dialogue and learning that used different structural and process elements. The IRAP programme, in contrast, followed the more traditional model of creating an 'end user advisory

group'. For this group they recruited people as representatives of various institutions and subsequently experienced a high turnover of membership as individuals felt little personal allegiance to the group. This in turn affected the capacity of the group to work together and provide meaningful input to the programme.

As a whole there was limited awareness that collective learning and action on the part of groups requires particular conditions, and that both physical (location and timing of events) and process (way in which participants are engaged and conversation is facilitated) elements are important to such collaborative learning platforms. Nevertheless, the review of the challenges across the cases revealed this to be the area of social learning that was given most attention by the programmes in each of the case stories.

Common social and institutional challenges

Existing institutional and social arrangements often offered the biggest challenge for programmes, which in some cases proved insurmountable. Not only were the four cases influenced by how these qualities manifest in their own particular context, they were each in their own ways intent on influencing the social and institutional structures and modes of operation of the particular problem on which they were focused. For instance, in the case of the WCMP the overall ambition at the heart of the initiative was to generate a new form of community-based environmental management which would at least complement if not replace existing dominantly agency-led planning and decision-making in the Whaingaroa catchment. For the TZ programme, the key social context was the organisational culture and norms of behaviour of the participating companies. The programme's intent was to affect the way companywide decisions were made about resource use by introducing cyclic monitoring and reflection-based management methods. The premise of the ICM programme was not only to generate new technical knowledge about physical elements of the Motueka Catchment, but to develop and trial ideas about integrated management itself, with corresponding implications for the way in which decisions and actions were undertaken by individual agencies and stakeholders. Finally the Watershed Talk programme had a specific intent to model processes that could be utilised by local management agencies by providing a novel experience of a platform for collaboration and learning for two local council staff.

However, despite fundamental aims to generate some form of social and institutional change, the programmes (WCMP, Target Zero and ICM) had not undertaken any form of assessment

of the existing conditions, and what might represent significant barriers to their work. Thus they sought to change conditions that they had not really gauged. Indeed, while programmes were quick to pick up on the opportunity presented by the expressed willingness of a key agency or organisation to become involved in the programme, this was generally taken at face value and no further consideration was given to what might be needed to ensure this enthusiasm could be translated into action. In the case of the WCMP, and the ICM programme, the initial interest expressed by various agencies in novel ways of working did not ultimately manifest in any major changes in practice. This could be due to a number of factors, such as incongruence between political or senior management will and the expectations of the on-the ground staff involved the programme, a lack of understanding on the part of the agencies or organisations as to how to implement changes, or failure to grasp that involvement in these programmes required any changes to their way of working.

What this amounts to is a certain naivety around the importance of understanding the social, cultural and institutional context of environmental management programmes. In the case of the WCMP this manifested as a neglect of issues of community capacity and credibility, such as how the current resource management treaty rights negotiations ongoing between the tangata whenua of the Whaingaroa catchment and the local resource management agencies would influence local Māori participation in the project. In the case of the TZ programme there was a lack of understanding that the companies they were seeking to influence were themselves social systems with pre-existing attitudes and capacities for learning and change.

Understanding how a programme fits within its social and institutional context also enables the programme proponents to orient their actions in concert with the activities of others. Without this they run the risk of attempting to achieve too much, working in isolation, or not being aware of additional actions that may be necessary to ensure their success. For instance the ICM research programme struggled in early years with the role they were to play in achieving management on-the-ground by not fully recognising the nature of their relationship with the other agencies and communities of the Motueka catchment. Alternatively, the TZ programme expected individual teams to influence the learnt behaviours, habits and strategies of an entire organisation, when what was needed was for team efforts to be complemented with actions (such as 'switch off' campaigns) that would increase awareness and interest across the companies as a whole.

Common learning challenges

In keeping with the aim of generating platforms for collaboration among multiple participants, each of the cases shared a need to support collective learning, in both content and process knowledge. In the first instance making progress on the specific environmental problems in each of the cases rested on harnessing existing or acquiring new, technical information. For instance, in the case of the WCMP, a source of contention in the community was the unknown cause of decline in fishstocks in the Whaingaroa Harbour. In the ICM programme, the local unitary council was interested in information that would enable them to make clear-cut decisions about aquifer management and water allocation.

In both of these programmes there was a generalised faith that new information (particularly that generated by reputable experts) would clarify choices and actions for those involved. For example, in the WCMP, one member of a local harbour care group already used such scant data as were available about harbour water quality to advocate for his own interest in riparian revegetation. However, the evidence was far from conclusive and, instead, the interpretation of the data became a new source of debate among stakeholders. The WCMP was hampered in its original intention of acquiring unchallengeable scientific data by not receiving funding to support research on the issue. Nevertheless, it is questionable how much difference this would have made. In practice, data on environmental issues is rarely incontrovertible. More commonly, sense-making of local environmental issues requires the active interpretation of knowledge from numerous sources. Had more data been available on the relationship between increased silt levels and fishstock, further questions would have inevitably surfaced – such as which rivers and streams were contributing to the problem? What is the impact of rainfall patterns? What is the impact of local fishing? What planting and fencing practices would reduce the silt problem?' For landowners, fishers and managers the question would be 'how does this affect what I do?' The resolution of these issues would no doubt take lengthy negotiations that were reliant on the goodwill and historical relationships between parties, and on the platforms available to analyse the information and develop strategies. Even when technical information is available the processes of problem resolution still require attention.

The ICM programme, running for 10 years, had longer than the WCMP to learn about new ways in which technical information can be used to address environmental problems, and what else might be needed. Accordingly it is possible to see a shift in awareness, at least among the research collaborators, from expecting scientific information to stand alone in its

contribution to problem solving, to recognising an equal need to understand the way in which this can be integrated with practice-based or cultural information from other sources to generate more complete knowledge about the problem system. In particular, the ICM programme showed an increased awareness of the importance of relationships between stakeholders for building knowledge about a problem. The story of the Sherry River cow crossing (Davies-Colley et al. 2003) became an important reference for members of the ICM programme as it was illustrative of a new wisdom about the importance of rapport between science and non-science stakeholders.

Of the three programmes presented in the cases (Watershed Talk being a subproject within the ICM programme) the TZ programme had the most clearly articulated theory of learning. This centred on development of technical knowledge about company resource use patterns and opportunities for improving efficiency. However, because the success of the TZ programme relied on teams of company staff developing specific knowledge about their local situation, the programme placed as much, if not more, emphasis on developing participants' skills in learning and problem solving as on imparting generalised information on, such topics as energy conservation or waste recycling. The ultimate aim of the programme was to enable participants to go on learning, and responding to new resource use issues in their respective companies. For this end, teams needed skills in diagnosis, assessment, planning, and monitoring. Consequently the Waste Managment Unit (WMU) that ran the TZ programme was open to extending more technical-oriented learning capacity to the area of team self-management (i.e. process learning) to improve their effectiveness as agents of change within organisations.

The overall presence or absence of an articulate approach to learning in each of the cases is an issue of such import that it can be easy to forget that even with a planned approach to learning there are many other challenges to overcome. Learning challenges identified in the social learning theory and practice literature elsewhere were taken into consideration in planning the Watershed Talk project (Chapter 3 section 7.3). These were:

- Barriers to learning – including motivating learning in non-crisis situations; and issues of relative power and authority among participants
- 'Too early' and 'a priori' problem definition
- Managing open-ended dialogue process that allows for the unexpected to emerge
- Development of trust – particularly ways in which this can be expedited.

As an action research project it was able to ascertain that attention to the physical and process elements of the collaborative learning platform (that was developed through the project) was able to mitigate and resolve many of these issues. In particular it highlighted the value of four elements in designing platforms for collaboration and learning:

1. Design based on principles well rehearsed in settings of collaboration and conflict resolution (rather than adherence to formula)
2. Extending the concept of the platform beyond a single event to consider pre-event preparation and after- event conclusion activities
3. Use of innovative techniques that target typical group learning challenges
4. Reflective practice that promotes reflection among participants as well as the project team.

Common challenges of 'thinking'

At the basis of the programmes in each of the case stories was a need and desire on behalf of the programme proponents to be able to understand the problem system (whether a catchment or an organisation) in different ways; to be able to recognise links between physical and social elements of the system; and to more effectively measure and assess the impact of actions taken to deliberately influence the problem situation. Meeting this need relies on a capacity to draw on different knowledge about the system held in different locations. For example in the case of the WCMP, where the aim of the programme was to improve holistic management of the Whaingaroa catchment, an approach was needed that could collectively draw on knowledge held by tangata whenua, local landowners, harbour care groups, and research and management agencies. In the case of the TZ programme, the different knowledge about the resource practices and all the actions and decisions that impinged on this (for each of the companies enrolled in the waste minimisation programme) was held by staff across the company including system operators, managers, and those responsible for financial decisions.

Again, the programmes ranged in their ability to meet this knowledge integration need. As outlined earlier, at its most basic, the approach to facilitating systems thinking simply relied on getting people together in one place, from which it was assumed that information would flow and collective understanding develop. For example in the WCMP, the proposed approach to developing collective understanding about the catchment was an 'information day' and a community 'visioning exercise'. Visioning is certainly a practice used in many systems thinking methodologies and can often be carried out using facilitative devices that are

inclusive and encourage participation. However, in the WCMP the visioning remained high level and not linked to any other processes that would help analyse the current situation or design of ways forward.

As a 'learning for improvement' based initiative, the TZ programme had an inbuilt approach that enabled programme participants to analyse the resource use practices across the organisation. This was useful for examining the intersection between the different 'hard' elements of the system, such as operation practices, and resource inputs and outputs. However, before the evaluation intervention, the programme had not made the connection to the 'soft' or social elements of the system, such as actors' motivation and resistance to change or the organisation's communication systems. What was needed was an approach that would extend the programme participants' notion of 'the system', allowing them to think about potential constraints, or key elements in the social part of the system, and to design ways to work with these.

Significantly, the TZ programme was the only initiative that catered for incomplete information about the problem system. The programme advocated an adaptive approach reliant on cyclic monitoring, reflection and action to build knowledge about the issue in question. The distinction in setting between the TZ programme and others, such as the ICM or the WCMP, is likely to have influenced this. Employing an adaptive, experimental approach to issues of public policy, where there are numerous parties involved and formal and informal expectations to meet, is arguably a more taxing endeavour than encouraging an organisation to take a measured approach to understanding its resource use practices.

Developing capacity for systems thinking is not an easy task. In environmental management it is dependent on features of the political and decision-making context such as structural openness, facility for ongoing interaction between social actors, and the way in which platforms for dialogue and learning are established and facilitated. For instance, the desire to know as much about the problem system as possible often dictates the way in which groups looking into local environmental management issues are brought together. In the Watershed Talk project, participants were recruited not just for their knowledge about the Motueka catchment but for their willingness and capacity to engage in discussion. This additional selection criterion represents a departure from common public engagement practices in environmental management, which often start and end with the people regarded as most

directly connected to the problem. Participation of those only with the highest stake in an issue seems to have become an unchallenged cannon of participatory environmental management. It is therefore good to ask ourselves whether this should be the only criteria, and is it possible to plan processes based on other principles, and what might they deliver?

The ICM programme, like the WCMP, focused on better understanding and management of a catchment with intersecting political, cultural and management systems. As a research programme, with more time and resources to experiment, the programme as a whole has tried many different approaches to support systems thinking (e.g. participatory ecosystems modelling; Cole et al 2007). The social spaces framework evaluation (Chapter 6) was a systems thinking approach designed to enable programme participants to see across the social system of the programme itself. Nonetheless, for all of the cases the challenge of improving the systems thinking in the situation was substantive. Programmes struggled to find or develop appropriate methodologies. Part of the difficulty lies in the sheer novelty of the practice. Even available expertise in systems thinking, in the case of the ICM programme, did not make this easy, as one of the greatest hurdles for systems thinking advocates is persuading parties that the steps that seem to take people backwards to the problem definition rather than forward to its solution will yield dividends in the end. In introducing systems thinking into programmes two points of practice emerged as helpful. Firstly, it is useful to regard approaches to systems thinking in environmental problem solving situations in less than absolute terms – asking 'how can we improve capacity to see the problem system?' Secondly, it is important to clarify the boundaries of the system (or part of the system) under investigation, accepting it is not possible or even desirable to be holistic all the time.

8.2.1 Using the Social Learning Framework as a basis to programme development

Using the framework as a whole to draw a portrait of the problem situation discloses much that is useful about learning and social interchange processes generally. However, the way programmes or activities are designed to address a complex situation is largely a creative one, therefore the value of the Social Learning Framework in practice is tied to how it can be used as a basis for questioning and reflection that can aid the unique diagnosis of any given situation. The evaluation (enquiry) approach I have linked to the Social Learning Framework here is a simple SWOT analysis. By applying this to each of the cases – asking what were the existing conditions of the situation and how was the programme able to respond to these – I derived an assessment of specific needs that were a priority for the programme or intervention

to address. The way in which I applied the SWOT and needs analysis was fundamentally self-reflective. A more participatory process, which involved programme proponents, managers and participants reviewing the strengths, weaknesses and needs of the programme, and jointly assessing priorities, would both increase the usefulness of the evaluation and the overall understanding and efficacy of those involved in the programme implementation.

The attraction of using the Social Learning Framework in the planning phases of environmental problem solving is its potential to build expertise and competency. The Watershed Talk project is illustrative of this where awareness of the social learning issues pertinent to the situation led to not only greater efficacy in the project's design and delivery but also enabled some critical research and development about techniques for developing platforms for collaboration and learning. However, what this hinges on is a diagnostic approach to problem solving that does not just focus on the problem but rather on the problem solving capacity. Accordingly, having completed an initial scoping of the situation using some form of social-learning-based critique; a next step is to question how the proposed intervention matches the social learning capacity needs. For instance, does the success of the programme rest on platforms for learning and collaboration that simply don't exist? If so, how will this need be met? This in turn suggests a potentially beneficial link between social learning and evaluation approaches that aim to surface the logic of programme with a view to improving the connection between the expected outcomes and the operational objectives and implantation path. Theory-based evaluation and the use of logic models are both P & D evaluation approaches designed to feed the need for a working understanding about the cause-and-effect relationships anticipated in the proposed programme.

Furthermore, since the problem situation will not remain the same over time (indeed the basic assumption of any intervention is that the situation will change), it is a premise of good programme management to watch for what changes are occurring, whether important issues are being progressed, as well as what significant factors are changing in the context around the problem which will further influence the programme's effectiveness. For instance, it may be important to track shifts in the institutional context that could make decision-making more or less open to participation by multiple parties. It is not possible to monitor everything, and programmes need a way of perceiving and prioritising the pertinent elements within the problem situation. For this purpose the Social Learning Framework can be coupled with implementation and outcome evaluation to derive monitoring criteria, and to provide a basis

to ongoing programme management. This also enables a programme to track progress in the social conditions for problem solving, not changes to the more physical elements on which the programme may be focused (e.g. tracking changes in stakeholder capacity for collaboration, not just improved water quality).

Finally, the social-learning-based SWOT review highlighted how fundamentally atheoretical the case story programmes were. There was common need for (and general lack of) applied social and organisational theory to feed the purpose and direction of the various programme interventions. For instance, the ICM programme both needed and desired workable theory about integration – how did integration work? What did it look like? What were the stages that a programme like the ICM could expect to go through? For the TZ programme, much better equipped with practice ideas about resource use efficiency, there was still a notable gap in knowledge about organisational learning and change, and the role that groups might play in this. Similarly, the WCMP – based on a model of catchment management applied in Atlantic Canada – had no means of utilising the growing body of theory and praxis around community-based environmental management, and hence had nothing to draw upon to explain what was going wrong or what might assist the programme out of its difficulties.

The implications of this theory deficit are that environmental management programmes do not just need to clarify their own internal logic, but require inspiration from current knowledge about the practices of social changes in which they are involved. One way in which this can be met is through theoretical framework-based evaluations. The TZ teams' evaluation and the ICM social spaces evaluation are both examples of using theoretical-framework-based evaluation to expand on core elements of social learning to provide more specific working knowledge for the programme. In the TZ programme the checklist evaluation introduced programme participants to new ideas about group processes, and the role of groups in organisational change. For ICM the Social Learning Framework evaluation offered a way for programme participants to visualise across the social system in which they were working and identify the diverse communication and knowledge building challenges inherent in a transdisciplinary research endeavour. Table 8.1 summaries the way the Social Spaces Framework can be coupled with evaluation to support effective programme interventions that address complex environmental problems.

Table 8.1 Coupling the Social Learning Framework with P & D evaluation

Scope the problem situation	Social Learning Framework and *SWOT/Needs analysis*	Understand the problem situation in terms of the specific social learning issues inherent in the problem context.
Scope the problem solving capacity	Social Learning Framework and *theory based evaluation/logic models*	Understand the relationship between the proposed programme or activity, the existing social learning issues, and the capacity development needs
Watch for changes	Social Learning Framework and *implementation/outcome evaluation*	Develop monitoring criteria that track changes in social learning capacity and can be used to assess how effective the programme is in terms of its implementation or outcomes.
Introduce new ideas	Social Learning Framework and *theoretical framework evaluation*	Introduce ideas based on theory and praxis around a specific social learning challenge for the programme.

This coupling of the Social Learning Framework with various evaluation approaches illustrates a way that environmental management programmes can become more adaptive, and responsive to the social context of the environmental problem situation. However, there are two issues to consider in practice. The first is a matter of resources, and expertise. Simply put – who is going to do this? Does the application of social learning theory through evaluation demand too much expertise in both social learning and evaluation? Is it likely that programme proponents will be willing to invest time and resources in the generic matters of complex problem solving when they are most likely recruited for their interest and skill in more contextual aspects of the problem? One scenario would be the employment of social learning and evaluation specialists to work alongside programme proponents and participants. Although the cases presented here are examples of where this has indeed taken place, they are by no means common. Furthermore, the experience of working within the various situations suggests the relationship between process expert and programme proponents and participants is far from straightforward. What these experiences intimate is a need for a change in the standard set of expertise required of environmental managers such that they can more successfully accommodate creative input from a range of sources in the design and implementation of environmental problem solving platforms.

8.3   Using P & D evaluation to build social learning capacity in four cases

Each of the four cases explored in this research involved some attempt to support the capacity for social learning in a particular environmental management situation using an approach based on P & D evaluation methodologies. These contributed to one or more of the arenas for supporting social learning capacity in environmental management initiatives identified in Chapter 3 (see Table 8.2). The four cases explored through this thesis spanned 10 years of research and practice of the Collaborative Learning for Environmental Management group (CLEM) at Landcare Research. Each case offers a progression of thinking and learning about the potential role of evaluation to support social learning

Table 8.2 How P & D evaluation contributed to social learning capacity in each case[1]

	Whaingaroa	Target Zero	ICM – social spaces	Watershed Talk
Scoping the problem		✓	✓	
Programme management	✓	✓	✓	
Capacity to enquire and problem solve	✓	✓		✓
Research and development	✓	✓	✓	✓

8.3.1   Case One: The Whaingaroa Catchment Management Project (WCMP)

In the case of the WCMP, a participatory, goals-free evaluation was undertaken at the end of the first 2.5 years of the programme. In addition to meeting the programme funder's desires for some accountability around the programme, the intention of the evaluation (led by my own values as the evaluator) was to introduce an opportunity for learning about the programme for those involved. In particular the evaluation sought to confirm the principal programme participants in their achievements, highlighting what had worked, as well as what was problematic; and to generate an overview of the structural elements of programme that would enable stakeholders to clarify some of the programme's confusion around stakeholder roles and relationships. The evaluation therefore addressed purposes of **supporting programme management**, and **research and development**. Through the participatory

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[1] Lighter shade ticks indicates a minor contribution; darker shad ticks indicate a more substantive contribution

processes used, some support was also given to participants' **capacity to enquire and problem solve**.

The WCMP evaluation and the subsequent outcomes that stemmed from it highlighted two important points. The production of an evaluation document that outlined the basis of the programme and its intentions proved galvanising (even more so than the participatory reflection exercises that were part of the evaluation process), as the participants in the programme gained access to information about the programme which empowered them to make changes. The document that was circulated widely among the stakeholders in the programme became a starting point for debate over the goals and possibilities of the programme, and catalysed a process by which the various participants in the programme reached greater clarity around future direction. This was significant as it was something which the programme process itself had failed to achieve. As the first case story, not just in terms of this PhD but in the sequence of work I was involved in as a member of CLEM, this potentially transformative role for evaluation in environmental management initiatives was in many ways the starting point for this research inquiry.

However, what the WCMP evaluation also revealed was that a terminal (rather than formative) evaluation conducted in this way can result in the evaluator being one of the few (possibly only) people who has knowledge of the overall vision of the programme and the story of its implementation. The evaluator, by then communicating this information through a report or any other process, acts as a filter and interpreter, and thus limits the scope of the learning that is possible for the stakeholders. In short, post-event evaluation can be empowering, but contribute little to the ongoing social learning potential of the initiative.

What also became apparent through the assessment of the WCMP was the vulnerability of programmes where there is a lack of capacity to assess the proposed model of events against the implementation reality. This need for some way of understanding internal theories of action and verifying their merit against the actuality of the context, and the implementation experience, is a fundamental of good responsive programme management. Furthermore, community-based management arrangements (of which the WCMP is an example), like many approaches to addressing complex environmental management situations, are more effective when they can be responsive to important changes in the context in which they are operating. This requires knowledge about the problem system and self-awareness about the programme's

strengths and weaknesses (Foote et al. 2009). The evaluation of the WCMP had reviewed the fundamental premise of the programme, exposed existing assumptions, and demystified the programme process. By this information being more widely shared among the programme participants and stakeholders, changes were able to happen, illustrating that an evaluation, even in its more traditional form, can be an opportunity for learning and development.

8.3.2   Case Two: The Target Zero waste minimisation programme

On the surface, the second case story about the TZ waste minimisation programme appears to be a very different context from that presented by the community-based environmental management programme in the Whaingaroa catchment. However, as with the WCMP, the TZ programme attempted to establish groups (teams) who would influence the overall direction of a wider community (their home organisations) and in particular change their practices around resource use and management. This was done through a training programme that recruited teams from manufacturing programmes and offered them instruction and support in undertaking projects to minimise waste in the company's resource use. The success of the programme relied on having the capacity to support the effective functioning of the teams, matching their technical learning around such matters as waste analysis with process learning about issues such as how to collectively and creatively problem solve. In particular the programme relied on the ability of participants to move beyond initial assumptions about problems, causes and solutions and to take on a more rigorous and disciplined learning approach to problem diagnosis and analysis. The TZ programme proponents (the WMU) were largely aware of the need for the teams to become better skilled as self-managing agents of change. However, they were less conscious of how the organisations (companies) they were seeking to influence were social systems with norms of behaviour and prevailing values that would shape the capacity of the teams to complete their immediate tasks and influence wider organisational changes.

As with the evaluation of the WCMP, the TZ teams' evaluation was influenced by the evaluators' values – principally the desire to work with participants and support their capacity to perform, as well as inform the programme proponents about the efficacy of the overall programme approach. To achieve these ends the evaluation utilised participatory, developmental and theory-based evaluation approaches. The overall approach was to generate a checklist of key factors for successful teams, which was used in conjunction with a a participatory reflection process. The TZ teams' evaluation illustrated the potential of

evaluation approaches to increase the learning opportunities within a programme. It worked in three ways. Firstly, the facilitated, checklist approach offered support to individual groups as they grappled with their roles as change agents, i.e. developing **capacity to enquire and problem solve**. This was considered so successful that attempts were made, through phase four of the evaluation, to incorporate the self-assessment as part of the teams' basic training. It also enabled the individual teams to **scope the situation** in terms of their capacity to influence change across the organisation. Secondly, the overall information gathered across the various companies informed the WMU about some of the common success factors and barriers to the way teams' operated (**research and development**). Thirdly, by incorporating a phase in which the theory, ideas and best practice around working with groups was brought to the fore, the WMU were able to assess how well the teams approach worked to achieve wider organisational change, and the implications of this for how teams were supported and trained (**supporting programme management**).

Several observations can be drawn from the TZ teams' evaluation experience. The facilitated reflective checklist approach proved effective at creating a platform for learning about group dynamics and collaborative problem solving. It introduced quite complex theory and ideas about groups and organisations in a palatable and immediately useful form. Also, by incorporating it alongside the TZ programme's other training opportunities, it was a means to match technical learning with process learning. However, the checklist approach relied on active facilitation that was more effective in situations where there was an existing organisational preference for learning and development. Correspondingly, embedding such an approach in programmes without existing capacity for facilitation and reflective learning is not easy, as it relies on skill and experience with group work, and the confidence to be able to adapt the approach to different situations.

In addition, the TZ teams' evaluation was a new approach for the WMU and initially some negotiation was required to ensure it met their needs as well as the desire of the research and evaluation team (myself and Dr Will Allen) to work in a particular way. Working with programme proponents who were motivated to learn about and develop their programmes was a significantly unusual experience for the evaluation and research team to be notable. The WMU's receptivity to employing the proposed new approach to evaluation and support of our role as evaluators contributed directly to what was able to be achieved.

8.3.3   Case Three: The ICM programme, and the Social Spaces Framework evaluation

As a multidisciplinary, multi-stakeholder research programme intent on making impact on real-world environmental problems the ICM programme has theory and practice needs in engagement, building knowledge, integration, and the theory of ICM. Work to develop the social learning capacity of the ICM programme has involved two interrelated strands of activity: (i) developing frameworks and participatory evaluation processes to help articulate the social process aspects of the programme and enable programme participants to pursue actions in line with goals of improving the collective understanding of the system; and (ii) trialling platforms for dialogue and learning. Case Three explored the former of these, using the example of the Social Spaces Framework and evaluation. Frameworks are a useful way to clarify the inner workings of a problem or programme system, and render visible the less obvious social processes that can shape events. Furthermore, the way in which they are used, such as through workshops or other participatory and evaluatory activities, can develop both a shared understanding of the programme among participants and foster capacity for dialogue and reflection.

The Social Spaces Framework had been developed as part of a process of clarifying the different communication and engagement demands inherent in a long-term complex multi-stakeholder programme like the ICM. It was based on the idea that different social spaces existed within the programme (in a physical, temporal and virtual sense) and that these had differing goals for communication and varying norms of interaction. The framework was used in a participatory exercise with programme participants, enabling them to assess the value of programme activities in terms of how they contributed to the communication and relationship development needs across the programme. The social spaces concept contributed to an increased understanding of the complex social interaction demands of transdisciplinary research (**research and development**). Moreover, like the checklist approach used in the TZ programme, the framework-based evaluation exercise made it possible to present pertinent theory in a form that was acceptable and immediately useful for participants, thus linking theory to practice and contributing to **programme management**. The use of the framework in a participatory and reflective exercise also supported the programme's **capacity to enquire and problem solve** and gave participants the opportunity to **scope the situation,** in terms of the relationship and communication needs across the programme.

In Chapter six the social spaces evaluation was compared with a parallel but less successful experience in another integrated research programme, IRAP. In this situation a checklist of key features of planning and managing integrated research (derived from the ISKM framework) was used as the basis of a participatory evaluation exercise with a mixed group of researchers and stakeholders from the IRAP programme. This comparison revealed three important factors that influence the effectiveness of framework-based participatory evaluation: (i) status of the evaluation within the programme; (ii) trust among the participants; and (ii) orientation of the evaluation framework.

Unlike the situations in Cases One and Two, in both the ICM and IRAP programmes evaluation interventions were not commissioned as independent, external exercises to contribute to demands for accountability or as ways of analysing outcomes or implementation strategies. Rather participatory, development and theory-oriented evaluation approaches were incorporated in a suite of activities aimed at contributing to the social learning capacity of the programme. As such the interventions were not constrained to meet expectations of external parties and were designed solely to contribute to the learning of participants in the programme.

At first glance this licence to practice evaluation approaches in any way deemed appropriate seems a boon to building capacity for social learning. However, what the comparison between the social spaces evaluation in the ICM programme and the ISKM checklist evaluation in the IRAP programme revealed was the importance of mandate, both for the proposed intervention and for the facilitator or evaluator. In the case of the ICM programme, 10 years of growing familiarity with the researchers, local agency staff and other stakeholders participating in the programme had granted the evaluators (social researchers within the programme) acceptance and permission to use unusual and sometimes challenging exercises. This acceptance within the programme was hard won. The transition this demanded of participants in the programme was incisively captured in the following comments made at the final ICM AGM by a marine biologist and researcher within the ICM programme.

> *To begin with I didn't know what a social scientist did. Then I knew what they did, but I didn't know what they were for. Now I think they are critical to enabling an integrated research programme to be successful.* (Dr Paul Gillespie, Cawthron Institute, pers. comm. August 2009)

No such mandate or recognised purpose existed in the IRAP programme, and the exercise to promote thinking around the social system of the programme was largely unsuccessful. Despite pre-prescribed roles for evaluation being at times a constraint on the choices of approach that can be taken, in situations where no relationship exists between the evaluator and the programme participants (or the relationship is weak) the status of a predefined and agreed purpose for the work can be critical to how it is received.

The orientation of the two framework-based evaluations also differed. The ICM social spaces framework was initially derived from participants' own observations so had direct meaning for them. Furthermore, the facilitation of the social spaces evaluation exercise was oriented towards appreciative enquiry (Cooperrider & Srivastva 2001), enabling participants to build their understanding through the acknowledgement of successful activities. In comparison the ISKM framework, while adapted for the IRAP programme, had been developed in a different context and was new to the evaluation participants. It also used a critique-based process that scored various criteria as successful or needing attention. This required a degree of comfort among the participants to effectively pass judgement on the programme. This was difficult in the IRAP situation because the group itself had a number of new members and a history of fluctuating membership. This led to limited trust within the group and made open enquiry and reflection unlikely.

This changing membership of groups of stakeholders involved in long-term endeavours is not exceptional (the situation in the ICM programme with its comparatively stable participant make-up over 10 years is unusual). In addressing complex environmental management issues there can be times when there is a need to challenge groups that are not particularly familiar with one another. The issue of whether trust can be build expeditiously within groups to enable high-level reflection was explored in Case Story Four – Watershed Talk.

8.3.4   Case Four: Watershed Talk – a platform for collaborative learning

As part of the ICM programme, Watershed Talk was an action-research project designed to contribute to the programme's need for greater capacity and understanding around platforms for dialogue, reflection and systems thinking. More specifically Watershed Talk was about the potential for change through dialogue, the premise for the work being that the ways in which conversations were conducted around complex environmental challenges could have far-reaching consequences, not only in terms of the outcomes of the specific point of discussion,

but also in the legacy of increased knowledge, strengthened relationship and self efficacy of those taking part (Atkinson et al. 2009). The project objectives were therefore both transformational (increased **capacity to enquire and problem solve**) and informative, i.e. enabling the research and facilitation team and the participants to learn something about the creation of platforms for dialogue, reflection and systems thinking. More particularly it examined the effect of various innovative techniques (developed as part of the platform) on previously observed challenges to social learning. In this way the project contributed to **research** into overcoming barriers to learning and hence the **development** of effective platforms for collaboration.

In some ways Watershed Talk can be compared with the first case story – the Whaingaroa Catchment Management Project. Although much smaller in scale, both have their origins in the concept of drawing together participants with diverse views to facilitate a more holistic understanding of the ways in which to address catchment management problems. However, there are a number of important distinctions between the two. Firstly, cultivating and learning about processes of good dialogue was a primary function of the Watershed Talk project, not just a means to an end. Secondly, the intended legacy of Watershed Talk was not a community-based environmental management plan, or an established community group, but enhanced capacity for individual and collective problem solving and learning – and specific measures were included in the project to indicate how this had progressed. Thirdly, the platform created through Watershed Talk was designed on the basis of core principles well rehearsed among theorists and practitioners of multi-stakeholder dialogue and conflict management (respect, diversity, empowerment, reflection, generosity, and active cultivation). These principles were used to guide platform conception and implementation across all the project phases. Principle-based design requires a sensitivity to the existing context (and to any changes in that context) that can only be achieved through active monitoring and reflection on behalf of the project team, and encouragement of feedback from project participants. Such a flexible and responsive approach to project design and implementation is in many ways the antithesis of the model-driven approach used in the WCMP.

This also hints at the integral role evaluation and reflection play in the project. Structured forms of critique and analysis took place over the entire project, not merely in the events formally named as evaluation. Evaluatory processes were used to drive the development of individual knowledge, networks and self-efficacy. For instance, at one level the individual

interviews at the beginning and end of the project could be regarded as a 'before and after' data-gathering exercise to enable assessment of the project's outcomes. However, they were also intended to stimulate participant's self-awareness about their level of existing knowledge, and consequently improve their confidence for participation in a dialogue about the catchment. The final interviews also acted to cement new learning by promoting reflection on what had occurred. Thus the interviews had both a transformative and informative intention. In the same way soft-systems enquiry processes were used as a fundamental part of group processes to enable participants in the group meetings to reveal and interpret local stories, and use these to build solutions to local problems. Indeed evaluation was so integral to the design of Watershed Talk as a platform for learning that, in some ways, Watershed Talk could well be regarded as a participatory evaluation exercise with a theoretical basis in social learning.

The outcomes from the project, measured through the final interviews, evaluation feedback and project team's own reflections, suggested that the attention to physical and practice aspects of the platform had yielded dividends in the quality of participant engagement. A number of the creative devices, employed to challenge conventions and revitalise people's sense of interest in connecting with one another, were successful in delivering on their intentions (e.g. the icebreaker map exercise and the sharing of a formal meal). In particular, the use of photography as a basis for gathering and communicating ideas about the catchment was noteworthy for its impact at multiple levels. It was a simple and effective tool to support participants' garnering of ideas and pulling together of their reflections on what they already knew about the catchment, and at the same time prepared them for engagement with others. The use of the photographs as a common prop for conversation drew attention from the speaker to the subject, effectively neutralising preconceptions and prejudices about individuals. Since all participants had the same source material – their own images from their own observations, the focus of attention was on their personal expertise as opposed to their relative position as experts – countering uneven power dynamics. Most importantly the use of photographs tapped into visual storylines that were readily accessible for people.

The use of Kahane's (2004) *camping out* was an approach which, as a facilitator, I had not been certain would be successful. A sense of urgency and desire for outcomes often drives groups towards actions and limits their capacity in the first instance to give space to the development of ideas, causing a rush to conclusions or consensus and so constraining options and new directions. Certainly, among the two groups that took part in Watershed Talk, there

were those who did not enjoy the more open ended means of handling conversation. However, the modelling of active listening – real interest and respect for what was being offered (fundamental to the camping out approach) – enabled a less directive process to still satisfy participants' desire for purpose and progress. Nevertheless, of the two groups that took part, one was able to agree on a more conclusive set of ideas by the end of the second meeting than the other. This may have been a consequence of the different nature of the topics the groups explored. The group that came to clearer ideas for the future discussed the issue of invasive weeds in the catchment. The other group had looked at the changing land-use patterns in the catchment – a more nebulous subject. This suggests that some topics require more time than others for analysis and to come to ideas about grounded action. It may also be that what is at first thought of as 'a problem', i.e. land use change, when more closely examined lacks substance and is based on fears, uncertainties, prejudices or lack of knowledge than any real challenge requiring resolution and action.

One of the more surprising findings of Watershed Talk was the appetite among participants for ideas about process. Participants made many observations about what they had noticed was different to their usual experiences of public meetings, and evinced a genuine curiosity about the methods and design of the project, as well as postulating their own theories as to what had occurred. Watershed Talk contrasts more conventional problem solving and community-planning processes by focusing foremost on ways of working together rather than specific problems. The outcomes from the project suggest communities may have greater tolerance for this than is often supposed – when the practice is inclusive, and vital.

Beyond learning about how effective the interventions and overall process design were in enabling people to collectively explore complex issues, the feedback from the post-back evaluation and from the follow-up interviews indicated that participants had experienced both content and process learning to a high degree. The public document that was produced out of Watershed Talk (Atkinson et al. 2009) identified four subsets of shifts in knowledge, capacity, and sense of responsibility:

1. Altered ideas about the Motueka catchment and its community
2. Personal changes in how individuals see their own role and that of others
3. Changes in ideas about how to meet with others and problem solve
4. Preparedness for further engagement and action

Adults do not learn from every experience they have. Well-known work on transformative learning experiences by Merriam and others (e.g. Merriam & Clark 1993; Merriam & Heuter 1996) indicates that those experiences which result in growth do so because they have a personal effect on the learner and because that effect is valued within the learner's meaning system. The approaches used in Watershed Talk used grounded personal experience as a vehicle for accessing new information (through the actions of taking photographs and sharing their meaning with others). The collective reinterpretation of the stories about the images was then a means to fluidly connect new emerging information to this personal experience. Finally, asking participants to analyse their perceptions of the conversations that took place for themselves (through the post-back evaluation and final interviews) opened participants up to ideas about public dialogue and how future interactions could be better managed.

Merriam et al. (ibid.) also point out that not all transformations are growth enhancing. Negative experiences, (such as those associated with trauma) can result in a retardation of perspective rather than an expansion. In the public document circulated about the Watershed Talk project we postulated that many conventional means of running public conversations could have just this 'anti-transformational' effect, generating a polarity of views, reinforcing existing power arrangements, and acting in all ways unconsciously about the messages and norms of social interaction they are in effect reinforcing. That the unspoken messages of public forums may in fact be affecting perspectives and behaviours in negative directions is ironic given how reliant the canon of environmental management has become on achieving outcomes through processes of public engagement and information exchange.

One significant issue for the Watershed Talk project was its perceived lack of authenticity from having operated outside a formal institutional constrained context. The ICM programme had an ongoing partnership with the TDC. However, despite professions of interest, it had not been possible to establish projects that explored different models for developing social learning capacity in official catchment management situations. Accordingly, Watershed Talk was set up to trial such an approach independently of the agency, but by inviting key TDC staff to take part, the intention was to provide at least these individuals with an opportunity to themselves consider how such processes might be used in their own public engagement situations. While both TDC participants clearly enjoyed taking part in the Watershed Talk meetings, a critique offered by one was that the conditions for the Watershed Talk project did

not match the 'real world', and were not feasible in typical local planning and decision-making settings.

Taking the meaning of 'real world' to imply working with limited budgets time, and data, and political constraints (Bamberger & Rugh 2008), Watershed Talk arguably still clearly operated within limitations imposed by the first three of these factors. Similarly the topics discussed in the meetings were not fictional but derived from the concerns and experiences of the participants living and working in the catchment. Furthermore the Watershed Talk meetings also had to work with the same parameters imposed by social and cultural norms of assembling and conversing, as any public process of interaction and problem solving. Nonetheless this perceived lack of correspondence between such processes and the current conditions for local and regional government public processes of decision making speaks to a potent barrier for capacity building for social learning, in particular for the potential of integrating social learning platforms into the repertoire of approaches used by councils. The legal frameworks for problem solving and decision-making under which local and regional councils operate (through the RMA 1991 and the Local Government Act 2002) are more broadly facilitative than highly directive of practice. They speak to the need to create opportunities for conversation and input at various stages of local government decision-making, not necessarily how these processes must take place other than that they be transparent, democratic, make genuine effort, and be effective and efficient means of reaching a decision. If institutional prescribed norms are not responsible for inflexibility in council processes, what might be the alternative cause? Arguably the barriers are not structural but social.

Ideas about aversion to change abound in the literature on organisational learning (e.g. Huysman 1999; Easterby Smith & Lyles 2003), and describe both individual, collective, and systemic strategies that emerge in response to new concepts and practices. History, both personal and organisational, is widely regarded as important to organisational learning in a number of ways. At the heart of the perceived mismatch between what was enacted and achieved through Watershed Talk and the 'real world experiences' of the TDC staff members could then be a sense that it would be at odds with historically embedded expectations about how things are done. These expectations are derived from sources both internal and external to the council. They include the expectations of council politicians, members of the public and even the staff themselves around process, such as how an issue is going to be dealt with, who

will be involved, whose view will be important to include or placate, and when this will occur. They also include expectations around outcome or output. For example, there may be an expectation that the end product from the process will be a particular decision (governed by predetermined parameters), a management plan, a rule or some other artefact of planning and management. The threat such rigidity around outcomes or outputs can pose to strategies to address complex problems in resource management has been recognised elsewhere, hence the need identification of 'structured unpredictability' as a critical component of the social and institutional precursors for social learning. As Aarts and Van Woerkum (2002, p. 431) observe:

> *Many negotiations are obstructed because they are expected to immediately result in final plans. However in the case of complex problem solving, a final plan is rarely realistic. Instead of striving for the development of and adherence to fixed rules, participants should invest in constructive relationships.*

That these expectations become the tacit dictators of practice is a consequence of habit, organisational competency traps (where skills have been concentrated in a particular way of doing things), low tolerance for risk, and the potential threat of compromise to existing power dynamics. For example, during a conversation with another TDC staff member about the possibility of incorporating some of the Watershed Talk ideas into a new council public engagement project, concern was expressed at the technique of actively recruiting participants on the basis that it could be seen as 'undemocratic'. In the relatively small community of the Tasman District, there are a number of people who repeatedly become involved in public issues, so working with different participants might have positive aspects for the council of bringing in fresh perspectives and new networks. However, these people would also hold viewpoints that would not be predictable, and have unknown allegiances. Establishing new relationships would obviously be more work. Equally uncomfortable, one can imagine, would be the prospect of informing some of the more regular participants that their slot had been given to others! Finally, and significantly, this was a new process and further conversations with TDC staff suggested a capability issue for the organisation, i.e. that there was little awareness of the different ways in which councils could work with communities and that not all public processes were necessarily best run in the same way.

Ultimately it is a reasonable conclusion to draw that, despite overall positive responses from the TDC staff who took part in Watershed Talk, and genuinely interested reflections on the processes used, the effect of the experience was not transformative for both of them, in the

sense of liberating perspectives on ways to engage multiple stakeholders in conversations about complex issues. Rogers (1951, p. 388, in Merriam & Heuter 1996) observes that *a person learns significantly only those things which he[or she] perceives as being involved in the maintenance of, or enhancement of, the structure of the self.* Running Watershed Talk outside existing social and institutional contexts for planning and management required no real commitment or risk on behalf of the council staff taking part and thus had little connection to their sense of competency around their work (i.e. structure of the self as a public planner or policymaker). This was disappointing, so the next steps for the Watershed Talk project team were to see if it was possible to use the preliminary interest generated by the project to work within the organisation's own setting, using the experience as an entry point for building capacity for social learning.

8.4   Practical issues for using P & D evaluation to support social learning

The previous section reviewed the principal features of what was done in each case to address the specific social learning needs of the situation. This cross-case review suggests a number of limitations and key factors that contribute to how evaluation can support social learning in complex environmental problem solving situations.

Scoping the problem situation	The case-study approach itself used the Social Learning Framework, coupled with a SWOT or needs analysis, to reflect on the social learning challenges of each case. This revealed that it can be a useful basis for developing environmental management programmes that are adapted to the social context of the environmental problem situation. However, this relies on having available those with skills in evaluation and understanding of social learning .
Capacity to enquire and problem solve	The cases illustrated that evaluation approaches can greatly influence the ability of programme participants to enquire and problem solve, supporting both content and process learning. Frameworks to help people see important theoretical ideas or across complex systems lent useful structure to enquiry. However, this capacity cannot be built through one-off evaluation interventions. Rather it relies on embedding evaluation approaches into a programme or problem-solving approach. Receptiveness of the organisation and participants to learning greatly influences what can be achieved.

Managing a programme	Supporting the management of the programme, enabling it to better understand its inherent logic, become well grounded in important theoretical and practice understanding, and track and monitor the effectiveness of its implementation is a traditional role for evaluation. Theory deficit was a common challenge to programmes and theoretical-framework-based evaluation is a particularly succinct way of relating relevant theory to practice. The cases revealed that this again calls for specialist skills in both social learning and evaluation, and openness to evaluation approaches that are not simply to meet accountability needs or designed to assess outcomes is important.
Research and development	In all the cases the programme proponents expressed interest that went beyond whether their particular programme was working to understanding why. This understanding would enable practices to be more thoughtfully and successfully applied elsewhere. Evaluation to support research and development relies on close work between the evaluator and the programme proponents and participants. Establishing the nature of this relationship is a critical factor. Where research and development aspects are embedded in programmes from the beginning (e.g. Watershed Talk), significant progress can be made on issues that might otherwise have disrupted or limited project outcomes.

Accordingly, while the cases are illustrative of the possible connection between P & D evaluation as a medium for social learning, they also highlight a number of issues of practical importance. These can be grouped into three interlinked areas of concern:

1. The evaluator, their skill, values, and role
2. Mandate, and location of the evaluation
3. Organisational disposition to learning and change.

That these factors have emerged as significant is not very surprising. They would easily be among the issues of greatest concern to any evaluator undertaking an evaluation commission or indeed any social process specialist. However, the junction between building capacity for social learning and P & D evaluation places a very particular set of demands in all three areas.

8.4.1 Evaluator, skills, values and roles

From comparison of my experiences in the cases presented in this PhD with those of many other evaluators at ANZEA regional and national fora, it is apparent that what occurred in the cases is an uncommon intersection between expertise areas in community development and evaluation. This is not an unheard of junction for evaluators. As early as 1980 Cronbach et al. (1980) proposed changes to the role of evaluators, postulating they take advantage of their capacity to move among the many programme constituents, and act to cross-pollinate ideas from a range of stakeholders, help clarify the multiple objectives, and to redefine the problem context for the program (ibid., p. 171). Rather than independent and isolated expert, Cronbach and colleagues argued for evaluators to be actively engaged in the political events of the situation – working as a *multi-partisan who serves the general interest* (ibid., p. 152). This, at the time, was regarded as a significant shift in responsibility, from independent technical advisor to engaged facilitator of learning and change. More recently Keast (2004), addressing a conference on social change in Australia, echoes this and speaks of an anticipated change for evaluators from just facilitating evaluation to also facilitating programme and organisational development. Alongside this comes the need to tap into a broader skill set around facilitation and engagement. However, while this is certainly 'a role' an evaluator might fulfil, it is not the only one, and in New Zealand at least it is unlikely in the short or even medium term to become mainstream.

The choice to work as an evaluator, in what can be described as a 'boundary role', is reliant on a mixture of values and capability. Preskill (2004, p347) lists the following extensive expertise:

> *Evaluators who use collaborative, participatory and learning-oriented approaches to evaluation will be more effective if they understand the concept of team development, group dynamics, systems theory, trust and power, organisational change and culture, self-efficacy, multi-cultural competence and adult learning. They will also be more successful if they are able to facilitate meetings effectively, provide feedback, listen actively, mediate conflict and negotiate compromise.*

My own role as an evaluator in each of the cases presented here changed as my skills, experience and confidence grew. In the WCMP evaluation, I undertook what would be regarded as a fairly conventional, participatory outcome evaluation. Through the TZ and ICM programmes, I increasingly acted to expand the possible use and contribution of the

evaluation activity I was involved with. Ultimately my role in the Watershed Talk project would be best described as a social process specialist using evaluation as a means to a number of complex ends – not a very traditional role for evaluation at all. Nevertheless, throughout all these changes, my fundamental ideals remained the same, i.e. a desire to support people in their learning about the problems they were trying to address. At the 2009 ANZEA conference Rachel Trotman proposed a personal inquiry for evaluators to ground them in purpose, technique, proclivity and expertise. The questions she offered (see Box 8.1) make clear the wide scope for divergent career paths in evaluation.

Box 8.1 **Identifying a personal evaluation philosophy**

Why are you involved in evaluation?
What is most important to you in evaluation?
What do you want to support through evaluation?
What do you want to avoid?
What aspects of your personality most affect your approach to evaluation?

(from Trotman 2009)

Choosing to work to build the social learning potential of environmental management situations requires foremost a set of knowledge about social learning. Secondly, it requires skills in a range of P & D evaluation approaches that can facilitate learning, not only for programme efficacy, but to support the resolution of the problem itself. Finally, it entails an acceptance of the need to negotiate (and probably renegotiate) the mandate for the work.

8.4.2   Mandate, location and role for the evaluation

The evaluator can be contracted as an outside contributor to the programme (e.g. WCMP and the TZ programme) or have a recognised role within the programme (e.g. ICM). Both have advantages and disadvantages. The expertise for the evaluator lies in working out what can be made of either position, or how disadvantages can be mitigated. On the one hand, coming in from the outside can mean that there is a commitment to make the most of the expertise that is on offer. This provides a legitimacy and purpose which is helpful when negotiating access to information or when making demands on the time of programme participants (e.g. the TZ programme). In contrast, coming from within the ICM programme at times made it difficult to be perceived as sufficiently independent to be trusted with the role of facilitating reflection on critical issues. For example, during the review of community engagement I undertook for the ICM social spaces evaluation, one participant questioned how I could critique this when his perception was that this had been my responsibility. On the other hand, as the comparison

between the ICM programme and the IRAP programme illustrated, building a trusting relationship with colleagues over time can enable a greater openness to working with new ways of reflection and learning, and a greater (albeit sometimes hard-won) acceptance of your role in the programme.

This acceptance of a role for reflection and evaluation within a programme is fundamental. In their work on practical reflexivity and experiential learning, Cunliffe and Easterby Smith(2004) point out that the nature of reflexivity itself is to problematise rather than simplify situations. Asking people to step back, assess and rethink the problem situation can slow things down or seem to be making situations worse. This clearly makes such work seem unattractive to those who expect to take action and make progress within fairly short time-horizons, as is often the case in environmental management situations. Another challenge to acceptance of reflection and evaluation in a programme is the lack of a common, let alone widespread, acceptance that there is a problem. The comparative cases of the IRAP and ICM programmes are illustrative of this. My first efforts to establish a role for critical reflection in the IRAP programme were met with an assertion that 'there would be no problems because the desire to collaborate was very strong'. After four years the collaboration in IRAP developed serious, even irreconcilable difficulties as unforeseen problems in the collaboration arose.

The most common mandate for evaluation is one based on critique, and, as in the case of the TZ programme, it is often tempting to use this to become involved in a programme, because it appears to be the only opportunity that is available. However, to have an effect on the social learning capacity of a programme, the evaluation needs to serve more than a critique, accountability or judgement purpose. As the WCMP illustrated a traditional critique evaluation, when the information is shared widely with programme participants, can still result in learning and programme development. Nonetheless it does not support the ongoing social learning potential of the situation. To do this the evaluation must be able to target specific social learning challenges, and introduce ongoing capacity for reflection. If this is not the specified mandate of the evaluation there must be some ability to negotiate a role for the evaluation that meets these learning needs. In the case of the TZ programme there was both interest and resources available to alter the orientation of the evaluation. This leads to the issue of an organisation's proclivity and openness to learning.

8.4.3   Organisational disposition to learning and change

There are two aspects to this that are important: cultural interest in learning and change; and familiarity and use of evaluation. One of the surprises for me during the course of this PhD has been to discover how relatively uncommon evaluation of any kind is in the environmental management sector, notwithstanding the often considerable expenditure that is allocated to programmes. Evaluation attached to short-term and long-term programme interventions is a matter of course in both education and health sectors – both of which are in many ways comparably involved in social change interventions. During my critical conversations (Solomon 2009, see Appendix 1) I learnt from one interviewee how, over two years of employment in the research and evaluation unit of a major metropolitan authority, he had been involved in only three evaluations. Furthermore, his view was that if the unit he was currently working with requested to see the evaluation frameworks being used across the organisation, they would receive very little response. However, if they requested monitoring frameworks, they would be inundated! This can be seen as an indicator of organisation learning preferences. As many of those working in regional environmental management have a background in environmental science and engineering, there is a corresponding cultural proclivity towards 'hard' data gathering and analysis rather than creating frameworks to understand the more complex interventions in which they are involved.
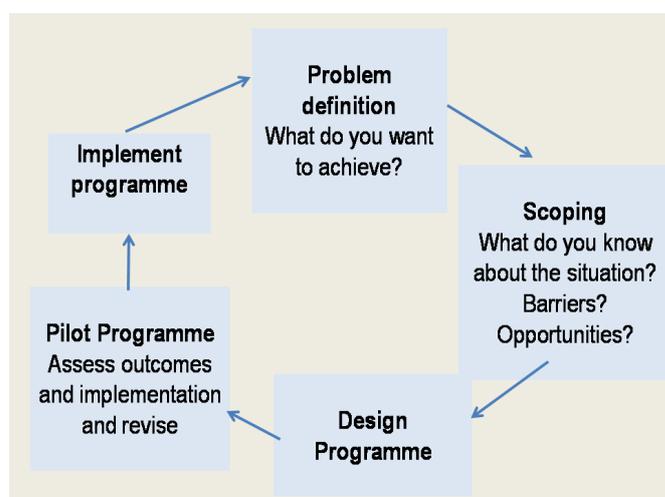

Figure 8.1 **Suggested planning stages for behaviour change programmes** (from Kirkland-Smith 2008).

Speaking from his position as a research and evaluation specialist within a regional council Solomon (ibid.) regarded evaluation as simply a form of good programme management. This echoes views expressed by Kirkland Smith (2008), who, from a similar position in Manukau City Council (a metropolitan resource management agency), posited that the ideal format for designing and implementing programmes to create behaviour change would be cyclic and have five stages (see Figure 8.1). However, her own experience suggested these stages were short cut, often moving from problem definition straight to programme design, and followed

by implementation of a programme which, while termed 'pilot', may end up as the only initiative pursued in this area.

Where evaluation approaches have been used to support programme development, the examples offered during my critical conversations suggested that this was a consequence of the presence in the organisation of someone with interest and skills in this area. An example is the Twin Streams project. Conceived of and sponsored by the Waitakere City Council, this project was ostensibly aimed at improving water quality within an urban catchment in the Auckland Region. It departed from a conventional agency-led approach by using a community development methodology. Testing the assumptions underlying this approach (was this really going to make a difference?), and clarifying the achievements and limitations of this new way of working were regarded as essential roles for the programme evaluation (Chilcott, pers. comm. October 2009). To this end the project worked with evaluators to track the programme as a whole and employed evaluators to work as a 'critical friend' to various sub-projects within the programme (Greenaway, pers. comm. October 2009). This use of evaluation was substantive and creative, and was undoubtedly influenced by the presence of two people with interests and skills in this area employed in the agency at the time.

Notwithstanding the previous argument, this absence of a cultural investment in evaluation could be regarded as having a positive side to it. What is a common practice can often become hidebound and trapped in convention. Exchanging experiences with evaluators in the education and health sector at ANZEA meetings, I learnt that in their working context evaluations are often highly prescribed, making it a struggle to pursue more innovative practices. As there appears to be no established convention for evaluation in the environmental sector, it may be possible to introduce one that does not have to first and foremost serve the needs of accountability.

Moreover, an organisation's responsiveness to change is not just expressed through its tendency to employ evaluators or not. Rather it manifests at many levels in the overall cultural openness to ideas. In the cases explored here (and the critical conversations certainly imply), the regional and territorial agencies involved in environmental management initiatives that demand both collaboration and changed behaviour on behalf of stakeholders are underprepared for the innovation required of the agency itself. The success of projects discussed in the cases, and among those who took part in the critical conversations, appears reliant on pockets of originality and creativity within the organisations that may even run

counter to organisational norms. The term 'working under the radar' was used by more than one of those who took part in the critical conversations.

This PhD research has not made a study of the organisational learning skills and tendencies of environmental management organisations in New Zealand (although I suggest this is a fertile topic for further work). What the cases and conversations indicate is that while organisations may often be unprepared, and are certainly pressured, they may feel more constrained in creative terms than is real. Either way this is not a fruitful context within which to pursue new ideas about social learning. In a recent article, long-time community development practitioner Riccardo Ramirez (2009) comments on a recent revelation in his own field of work, that the development agencies with whom he has advocated more participatory communication approaches are not ignorant of, or confused by suggested departures from conventional practice. Rather, their resistance to change is because their own needs for communication are far better met through *public relations, information, awareness raising, social marketing, or any other form in the persuasive mode* (ibid.). The same might well be said of regional and territorial authorities in New Zealand. That is, the fundamental role of such agencies is to make decisions and implement policy. Any form of communication with stakeholders that fostered their independence and self-efficacy might be considered not only a distraction but might act to undermine the council's ultimate authority.

While this could be construed as a gloomy prospect for those wishing to build the capacity of social learning into mainstream complex environmental problem solving, it is important to note that the cases presented here are successful examples of strengthening the social learning capacity of given situations. Ramirez (2009) outlines his own strategy for navigating the ambiguity of participatory communication using three coordinates: (i) find champions, (ii) develop an understanding of context, and (iii) match this with appropriate communication approaches. The cases presented here suggest a similar set of prerequisites for work that is aimed at improving the social learning potential of environmental management situations. In the first instance ensure there is a person who will champion the work – who is interested, willing, and able to make change happen within their organisation. Secondly, assess the social learning challenges of the situation (potentially using the SWOT evaluation based on the Social Learning Framework). Thirdly, use this contextual analysis to design an appropriate response that can take forward some aspect of the social learning potential of the situation.

8.4.4   Professional capacity in social learning

One of the early questions asked in this thesis was 'who is responsible for pursuing the agenda of developing social learning capacity in complex problem situations'. As this is not a conventional endeavour for evaluators, it might be that evaluators, with other objectives in mind for their profession, are not the best equipped or most motivated to carry this out. Furthermore, in a country the size of New Zealand, it is not to be expected that such an area of novel and somewhat boundary professional expertise will have large numbers of people exclusively dedicated to it. Moreover, New Zealand environmental management professionals commonly have generic skills, assume many different roles, or respond to different job descriptions in order to meet the expectations of clients or employers, such that anyone working to develop social learning capacity might go by the title of project manager, facilitator, or community development specialist. Using P & D evaluator approaches to support social learning need not be the exclusive province of evaluators or a group of 'social learning' specialists. The full skill set required to manage the projects in the cases presented here was diverse. Accordingly, productive partnerships between those with different disciplinary backgrounds will be important to the challenge of developing capacity for social learning in environmental management. The Watershed Talk project is an example of this as the outcome of collaboration between a social process specialist (me), a landscape architect and artist, and a hydrologist and former local government policy manager. The skill of working well in multidisciplinary teams will be a critical component for those wanting to support the social learning capacity of complex environmental problem situations.

8.5   Observations on the case story methodology

The case stories in this thesis were all based on work I had undertaken myself. As outlined in chapter 1 I utilised Jean Mc Niff's (2002) schema of questions to ground myself in a regular and structured inquiry. In addition, all the cases were viewed and commented on at some point by others. In Case One (Whaingaroa Catchment Management Project) I was fortunate to have access to a meta-evaluation which had assessed the impact of my own initial evaluation work (Greenaway et al., 2003a & 2003b). In the further cases I worked with colleagues who contributed to the assessment of the outcomes and the initial publications. Nevertheless, self-critique formed an important part of my method. I had not realised beforehand how challenging (sometimes outright uncomfortable) it would be to ask myself the difficult questions—'what really went on here?'; 'how could this have gone differently?' In building

my understanding and, most importantly, challenging my assumptions I recalled advice from action researcher Bob Dick (pers comm. March 2005) and actively sought *disconfirming evidence*. Hence my inclusion of the difficulties faced in the IRAP evaluation (Chapter 6) and the failures with some of the Target Zero teams (Chapter 5). These have been essential in defining the boundaries and limitations of ideas.

Across the cases as a whole there is a wide divergence in context and the social learning challenges this presents. Furthermore, in each case my role, experience and skills were progressively developing such that even I could not be said to be the common denominator. While this might present difficulties for a traditional comparative case study it made for a rich enquiry into self and practice. In each case I had different knowledge which I brought to the situation. In the process I learnt more about how to enable better paths of communication and learning for others as well as the implications of placing myself in this role, such as the risks of rejection and hostility and the need to deal with persistent uncertainty.

The sequential nature of the cases meant that they represent a progression of ideas. The first case initiated my interest in the potential role for evaluation that could support people learning their way through complex situations. Furthermore, the WCMP case story revealed how evaluation could operate at different levels: supporting programme participants in their tasks directly related to the problem situation; supporting those trying to manage a multi-stakeholder initiative; and creating needed knowledge on how to address complex problem solving per se. In the final case story (Watershed Talk) lessons from previous experiences were reworked and further progressed.

Along the way I needed to test my reflections with others, and I held a number of directed conversations with people working as evaluators or within local and regional government in positions where they were responsible for programmes aimed at addressing multi-faceted environmental management issues (Appendix 1). I also went to a number of national ANZEA (Aotearoa New Zealand Evaluation Association) conferences and became a regular member of my local ANZEA branch. These conversations, conferences, workshops and meetings validated, extended and contradicted ideas that were emerging through the PhD. The importance of creating a role for evaluation and the influence of the organisation's own predisposition towards learning were confirmed through my contacts with evaluators. However, my conversations with regional and local government staff contradicted by first

ideas about evaluation, i.e. that it might be a recognisable and therefore potential conduit for bringing in ideas about learning and change. Evaluation has not proved to be a common let alone popular activity within the environmental management sector. This suggests an area for further investigation —gaining a better understanding the organisational competence for complex problem solving in the environmental management sector of New Zealand. This, and other possible future research directions will be briefly discussed in the concluding chapter.

8.6   Summary

The central aim of this thesis has been to examine the possible intersections between P & D evaluation as a means to support capacity for social learning in complex environmental management situations. In Chapter 3 I proposed four possible arena where P & D evaluation approaches and social learning can intersect. These are:

1. Scoping the environmental management problem situation
2. Supporting the capacity to enquire and problem solve
3. Supporting the management of programmes or interventions in the problem situation
4. Research and development that facilitates the growth of theoretical and practical knowledge about addressing complex environmental management situations.

In this thesis I then went on to examine the use of P & D evaluation approaches to support capacity for social learning in four case stories. For three of these I used the Social Learning Framework combined with a SWOT analysis to do a retrospective scoping of the problem situation. What this revealed about the cases was:

- Programmes relied on formation of groups to achieve their ends but were commonly underprepared for how to facilitate and manage these groups to enable collaboration and learning.
- The social and institutional contexts of the cases were very important to the outcomes of the programmes. However, there was limited awareness of key factors within this. This was despite universal intentions to create change in these social and institutional contexts.
- Programmes lacked a coherent approach to learning, although learning, development and change were intended outcomes of the programme. The TZ programme was a notable exception with its adaptive learning approach for developing technical understanding of the waste and resource use practices of organisations.

- Finding a workable approach to improve the systems thinking in programmes was problematic for people in complex multi-stakeholder programmes.
- The case stories also highlighted the atheoretical nature of the programmes. The programmes commonly had a need for an improved understanding of theoretical and praxis knowledge concerning some aspect of the social learning challenges they faced.

In the fourth case story (Watershed Talk) the Social Learning Framework was used proactively as part of project planning. This enabled the project to focus specifically on common challenges associated with the learning dimension of social learning: (i) dealing with barriers to learning – principally those associated with power in groups and confidence or self-efficacy for individuals; (ii) addressing 'too early' and a priori problem definition; and (iii) managing an open-ended dialogue process.

Each of the four cases involved some attempt to support the capacity for social learning in the problem situation using an approach based on P & D evaluation methodologies. The different approaches were employed to address points 2, 3 and 4 above or a combination of these. These approaches all met with some success. Key observations from the use of these approaches were:

- Case One showed how even simple outcome evaluation conducted as a discrete event can change the learning potential of the programme when the findings are shared with programme participants and proponents. However, single-event evaluations do not support the ongoing social learning capacity of the situation.
- Case Two (social spaces evaluation in the ICM programme) and Case Three (TZ teams' evaluation) both illustrate the potential value of frameworks to help programme participants and proponents visualise important aspects of the context in which they operate. Framework-based evaluation can be an efficient approach to introduce complex theory and ideas needed by programmes in a palatable and immediately useful form. However, the story of the ISKM-based framework evaluation in the IRAP programme was comparatively less successful, and illustrates the importance of not only getting the right framework for the situation but matching this with an approach to reflection and questioning that meets the proclivities and unique needs of the participants.
- Cases Two and Four further highlighted the potential value of processes of reflection and questioning. They illustrated that when these are built into a programme over time these

can develop both individual self-efficacy (e.g. Watershed Talk) and collective or group efficacy (e.g. Target Zero). In addition such processes can be used to build both content knowledge about the system (e.g. Watershed Talk soft-systems-based problem solving) or process knowledge about the way the programme is operating (e.g. Target Zero, ICM social spaces, and the WCMP).

The cases highlight a number of important issues of practical importance to using P & D evaluation to support capacity for social learning in complex environmental problem solving situations. These can be grouped into three interlinked areas of concern: (i) the evaluator, their skill, values, and role; (ii) the mandate and location of the evaluation; and (iii) Organisational disposition to learning and change.

The junction between evaluation and social learning requires a set of knowledges about social learning and skills in a range of P & D evaluation approaches that can facilitate learning, not only for programme efficacy, but to support the resolution of the problem itself. This requires a particular role of the evaluator (and a willingness to pursue this) beyond independent technical advisor to engaged facilitator of learning and change. Furthermore, those seeking to use P & D evaluation approaches to support social learning will often find there is a need to negotiate the mandate of the evaluation away from critique, judgement or accountability towards learning, development and change. The ability to influence the nature of the evaluation is a fundamental limiting factor on the contribution it can make to the social learning capacity of the situation. This, in turn, is likely to be influenced by the disposition to learning and change of the lead organisation sponsoring the programme. There are two aspects to an organisation's proclivity and openness to learning that are important: familiarity and use of evaluation and overall cultural interest in learning and change.

The assessment of the cases and the critical conversations suggest that, unlike in sectors such as health and education, evaluation of any kind is not a core component of programmes across the environmental management sector in New Zealand. At first glance this undermines the notion of using evaluation as vehicle to support capacity for social learning. However, set against this is the potential of establishing a new convention for evaluation in the environmental sector that does not have to first and foremost serve the needs of accountability. Furthermore, the cases explored here and the critical conversations suggest that the regional and territorial agencies involved in environmental management initiatives are

underprepared for the innovation required of the agency itself. The successes of the case story projects, and among those who took part in the critical conversations, appear reliant on pockets of originality and creativity within organisations that may even run counter to organisational norms.

To address these challenges, recommended guidelines for working with P & D evaluation to support social learning are: (i) find champions who are interested, willing, and able to make change happen within their organisation; (ii) understand the social learning challenges of the situation (potentially using the SWOT evaluation based on the Social Learning Framework proposed here); (iii) use this contextual analysis to design an appropriate response that can take forward some aspect of the social learning potential of the situation.

In summary, just as it is important to understand that social learning is not a model for complex problem solving, P & D evaluation should not be confused with a recipe for delivering it. No standard model of evaluation can hope to meet the multiple contextual factors of various problem situations. These include the particular social learning needs of the situation, existing skills and capacity, and the opportunities for carrying out successful interventions.