Self-managing groups - what does it take?

by: Ruth Nettle, ILFR, University of Melbourne, and VCG Ltd.*, Peter Van Beek, SyTREC Pty, Ltd.**, Sandra Jefford, GippsDairy***

*r.nettle@pgrad.unimelb.edu.au, and "The Virtual Consulting Group Pty Ltd" (www.virtualgroup.com.au)
**sytrec@gil.com.au
***GippsDairy: A Regional Development Program for the Gippsland dairy industry: s.jefford@landfood.unimelb.edu.au

Ruth Nettle

INTRODUCTION

The use of groups in agricultural extension has been well established. Parallel to moving from individual contact to working with groups was a movement from giving advice - 'telling farmers how to do something new or better' - to encouraging them to understand the reasons for change and discover some solutions for themselves. The emphasis in operating styles (especially in groups) has been said to have changed from teaching to adult learning. This was assumed to require facilitated groups. Group facilitation has thus become 'a big industry' within extension. Yet there is a tendency for farmer groups to be highly dependent on external input for their funding, content, management and organisation. Researchers and practitioners are interested in investigating the factors that encourage groups to become more self-managing. This article reports on one such project within the Victorian dairy industry.

The Victorian Dairy industry through GippsDairy*** commissioned a project to VCG Pty Ltd* to design and test a process aimed at increasing the capacity of dairy farmers to access, gather, interpret and apply information to their own situation through a "self-managing" group. The topic, content and management of the group was to be driven by group participants (dairy farmers), with the assistance of an administrator/coach.

Conference: Achieving change through improved knowledge systems - Palmerston North, New Zealand, 16-17 August 2000.

This conference was designed for professionals involved in technology transfer, innovation, improvement, change management, and compliance in the New Zealand land-based industries.

The conference provided an opportunity for the exchange of ideas between practitioners and researchers on a range of approaches to achieving change.

Presenters from a range of New Zealand and Australian organisations outlined their experiences of coping with change, mainly through the use of case studies. The conference also provided an opportunity to introduce APEN to New Zealanders working in the field of achieving change.

Conference proceedings will be available for $45 (incl. gst & P&P). For details contact John Stantiall: j.d.stantiall@massey.ac.nz Massey

FROM THE CHAIR

Jane Fisher

APEN President

e-mail: Jane.Fisher@nre.vic.gov.au

Budgeting Extension into the Program

Reflecting on issues that confront people involved in extension is fascinating. One of the hot topics at the moment seems to be **developing a culture that allows for budgeting and planning for extension when designing research programs.**

At the Institute for Horticultural Development, we are engaged in working through the issues of effectively planning for extension and evaluation when submitting research proposals. The process is fascinating, and as challenging as working with a grower group.

It has posed some interesting questions: Are research scientists the most conservative of people? Which tools in the extension tool box are most suitable for convincing this highly educated and intelligent audience to change the way they think about research and extension? It has been easier to find the postives of adoption for growers than for scientists - "you will make more money" is usually the best. Research scientists have reacted to our ideas of

incorporating extension into research proposal with comments like "It is more work, and I don't have time for that".

One way around the research-extension conundrum is to develop a recognition of extension as a profession. Perhaps we need to change the way we refer to ourselves - instead of "research scientist" and "extension officer", why not use "scientist - extension" and "scientist - research"? Other steps along the professional super-highway include **publishing the results of extension programs, participating in conferences and forums about extension.**

Which of you have planned and evaluated your extension programs, and discussed them in an open forum - in house, at an APEN forum, or in a journal? Have you nominated yourself or a colleague for the APEN Extension Award? Have you submitted an abstract for the posters at the "Creating a Climate for Change Forum"? Go on, it's easy - **just identify when you are going to do it, and go for it.**

FROM THE EDITOR: *MARK PAINE*

Welcome to the new format ExtensionNet! (Our plan however is for 8 pages every two months!). In this issue we have a number of articles that share a theme dealing with the special role performed by extension to cross professional boundaries.

Ruth Nettle discusses a group process that has set about the task of learning based on the principles of self empowerment. Ruth and **Peter van Beek** have tested the

idea that farmers are fully capable of mobilising their own knowledge and skills to form interest specific learning groups that are completely autonomous and that *invite* professional extension agents to their groups rather than *depend* on these professionals for the continuity of the group.

Stuart Morriss discusses experiences with groups in New Zealand that have a membership of Natural Resource Management, Farm Production, Science and Policy professionals. He describes an innovative approach to making each type of profession aware of their unique roles and their interdependences as they work on a common problem.

Fionnuala Frost raises the issue of knowledge systems and social learning in her article. Challenges have emerged from the areas of landscape and natural resource management that have accentuated the need for a more effective alignment between science and community action. This need for alignment raises some fairly fundamental questions about what we consider reliable knowledge (and what we mean by knowledge).

Peter Van Beek provides us with a metaphor for improving our ability to empathise and appreciating the understanding and experience of others with whom we work. His brief article is a salient reminder that as professionals with a particular interest in

learning and knowledge management we need to continually appraise our own attitudes to learning and change.

I hope you derive as much inspiration and pride in your profession as I have received while editing this issue – ours is a highly innovative discipline!

(As an editorial committee we are continually seeking feedback and suggestions for improvement, so please send me any comments, now matter how brief, and indicate whether you want your comments published).

m.paine@landfood.unimelb.edu.au

Self-managing groups - what does it take?   *Continued from Page 1*

PROJECT PROCESSES

The project consisted of *Inner circle* activities involving two farmer-groups, and *Outer circle* activities, involving the steering committee and others in setting up the project, assessing the worth of the project, and continuing beyond the duration of this project.

Inner circle activities

From April to June, 1999 two groups of 8 farmers came together (through personal contact with the steering committee and advertisements in local papers) in two specific-interest learning groups (Building a New Milk Harvesting System, Young Farmers Futures). External facilitation was provided to start the groups, train the farmers in functioning as learning groups, and to some degree *coach* them.

In designing the research process an analysis of some of the reasons behind current group dependence on facilitators was needed. In general it was determined that facilitators use but do not share with participants a set of skills in the areas of: learning processes, group processes and information processes. As part of the pilot some skills were acquired by group members in order for them to not only develop their capacity as learners, but also enable them to take control of group processes. Training to acquire these skills involved an individual learning style assessment, skills in using knowledge networks, asking questions and interviewing people, problem solving tools (McIntosh, 1997), meeting procedures and learning in groups. From the outset, the role of the coach was to focus on transferring skills in group and learning processes while avoiding providing technical input or directing the group towards particular outcomes.

Coaching also involved helping the group to determine and meet their agenda, and provide administrative support. The groups existed to complete defined tasks within a limited time, and both groups met four times.

Group members carried out a diversity of tasks between meetings and reported their findings at subsequent meetings.

Participants took over the running of the group as agreed at the first meeting and the role of the coach became one of providing administrative support, guidance and challenges to widen their thinking - rather than agenda setting, group control or organisation.

Both groups accepted some basic rules:
• The responsibility for success and failure of the group rested with the group, not the coach;
• The responsibility for all group processes were to be shared, even though they appointed a chair for the day; and
• All participants were to be encouraged to speak and contribute, and be given a 'fair slice' of the time available.

Changes in role from facilitator to coach

By the second meeting, the farmers had "warmed" to the idea of "controlling their own outcomes". Notes from my learning journal: *" I sensed a real 'baton change' - of input, control, ideas, planning - from me to them. I was part of the group, the group asked me for guidance if they got stuck on 'where to from here', but otherwise - I had to ask if I could add something."*

The facilitator is a learning coach: That is, they help the learning process in any way by challenging, questioning, clarifying how the group is going according to their goals, have they sought out and used the knowledge system fully? Have they challenged their own assumptions about the topic? Have they sought out opposing views have they reflected on their actions? The way this is done is by clarification of the facilitators role by the group in question. The learning coach doesn't organise events or speakers or determine the direction the group should go in, or draw conclusions.

From the APEN Secretariat

Membership Renewals

There has been a good response to the first invoice for subscription renewals. A reminder invoice will go out early in September to those who have not yet paid.

Remember, the amount that goes to each Chapter from membership subscriptions will be based on the number of financial members at 31st October 2000.

At present there are 484 on the membership database, 185 are financial - so keep those subscriptions coming in folks!

Chapter Round Ups

Unfortunately we did not have any information for this ExtensionNet about activities in and around the Chapters. In the future issues of ExtensionNet we would like to include **more "People Information"**, so please let us know any tit-bits you would like to share - new job, award received, a good joke etc. I will be emailing the Chapter Contacts every couple of months to remind them to send the information in - so either go through your Chapter Contact, or email me direct on rcurrie@albury.net.au

APEN 2000 National Forum

Keep the **25th and 26th October 2000** free for this important event at the Melbourne Exhibition and Convention Centre. Registration details are within this newsletter.

3rd Australia Pacific Extension Conference

Monday 10th to Wednesday 12th September 2001. The conference is to be held at Coolum on the Sunshine Coast in Queensland. The steering committee is in the process of firming details for the theme and streams for papers etc. We'll keep you posted with more information.

Farmer comments during their involvement included:

"We set each other tasks - each one was accountable."

"You must come with a common goal, there must be a specific topic of 'burning need'."

"What makes it successful is to achieve a result."

"Help is needed in administration - and to coordinate, but the group must be controlled / organised by farmers."

At the concluding meeting both Ruth Nettle and Peter Van Beek attended as part of the internal evaluation for the project. At this meeting participants reported their findings (deciding to make these available for publication), commented on the processes used, documented changes in their own information gathering practices, and prepared an evaluation report of their project for presentation to the GippsDairy Skills subcommittee.

Outer circle activities

These consisted of two half-day workshops with the GippsDairy steering committee, representatives from both learning groups, and from the Victorian Department of Natural Resources and Environment (DNRE).

External Evaluation

Those who participated as part of the farmer groups said that the project achieved its purpose of determining if self-organised groups were a viable option to current group work in the region. All participants considered the group learning skills they either acquired (or recognised) were being applied in a wide range of situations.

Learning groups build on an inherent capacity of participants in the local community to self organise and realise their opportunities for change. The group exists to make progress on specifically defined tasks and not for the continuity of the group. Devolution of the group is a critical stage in the life cycle. Participants reiterated the need for groups to be *"short, sharp, focussed on a job of high need to everyone involved".* More focus is provided early in the life of the group when one or more participants are currently working on an actual case (e.g. building of a farm dairy). Several farmers referred to the networking benefits of the approach. Networking means connecting farmers, professionals and others who were previously unaware of the skills and experiences that each possessed in relation to the task area. This is a critical role for GippsDairy to co-ordinate.

GippsDairy believed that this alternative model to the current style of farmer groups offered them an opportunity to improve the development of human resources in the region, and build on their research and development investment. This development is accompanied with a risk. After all, in the highly pragmatic world of farming, participants in many traditional groups often do no more than judge which bits of information provided by technical specialists are relevant to their needs. It is difficult to communicate the concepts used in learning groups that underpin the development of self organisation and promote reflection on routine activities. GippsDairy intends to continue the development and use of learning groups because they feel these groups create a capacity for change in the region, they are focussed on actions towards goal attainment (ie purposeful), and they encourage more effective use of professionals (knowledge system networks) (Van Beek, 1992).

CONCLUSIONS

Interest-specific and self-managing farmer learning fits a defined need in agricultural extension. This project has demonstrated that:

a) groups can be brought to a high degree of self management with minimal training and input;

b) participants value the experience enough to want to initiate and use such groups when appropriate; and

c) self-managing groups thus have a place in a continuum of group management styles and purposes.

Completely self-organising groups were never piloted in this project - the challenge becomes *"how do you adopt a hands-off approach?"* This will be followed up through the second phase of the learning group development.

Paolo Freire (1974) believed the role of teachers is to stimulate the learning process rather than just teach facts. He suggested that the teacher *"must break down the barrier between teacher and taught"*, and should start from where the learners are - encouraging learning and exploration from the learners' experiences - such is the place and role of self-managing farmer learning groups.

POSTSCRIPT

Since the pilot project was completed, funding has been secured for the second phase - the training of community learning coaches and assistance in the establishment of interest-specific learning groups based on farmer defined topics. As at the beginning of July, eleven learning coaches have been trained and are ready to begin supporting farmer groups. These coaches expect to be involved with 22 groups over the next six months. For more information contact Sandra Jefford at GippsDairy.***

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APEN NATIONAL FORUM

Creating a Climate for Change: Extension in Australasia

The 2000 APEN National Forum *Creating a Climate for Change: Extension in Australasia* will be held on 26th and 27th October 2000 at the Melbourne Convention Centre, Victoria, Australia.

Highlights of the Forum will include:

• A range of guest speakers from across the geographic spectrum, featuring Dr. Elske Van de Fliert from the International Potato Center in Bogor, Indonesia.

• Extension funding bodies panel discussions including Andrew Campbell, Land & Water Research Development Corporation and Dr. Roslyn Prinsley, Rural Industry Research Development Corporation and Les Baxter, Horticultural Research Development Corporation.

• A biennial award to a young extension professional.

• A prize for posters related to issues in extension, policy, evaluation, rural sociology and community development.

• An optional two day trip to the Western District, Victoria following the Forum.

Through its theme, *Creating a Climate for Change*, the forum will recognise the untold extension possibilities awaiting us in the global village of the 21st century.
The Forum will provide an opportunity for the display and discussion of existing and 'state of the art' extension practices through both geographic and industry level up-date sessions. As such it offers an opportunity for government agencies, corporations, private industry and service providers to create a mutual platform of understanding and information.
Attending the Forum will be extension professionals and related disciplines involved in the daily challenge of connecting research and practice, using information and creating change in community knowledge, attitudes and behaviour. The National APEN President, Ms Jane Fisher, expects more than 150 people at the Forum to discuss extension in Australia and the Pacific.

Ms Fisher said "The Forum *Creating a Climate for Change* will explore planning, evaluation and the outcomes expected from extension programs and challenge participants to think about change in extension methodology".

The Doors to People's Minds Open Outwards

By Peter Van Beek,
SyTREC@gil.com.au

I believe that images we carry in our heads are important. Images trigger comparisons and words, and words guide actions and choices. At the 1999 APEN Forum in Perth, I heard many remarks that made me shudder: 'Getting people to change their minds', 'Making them uncomfortable enough to do so', 'Giving them Information', 'Using better presentations to get information through', 'Packaging, marketing, promoting it better', 'Targeting it better', 'Using more forceful methods'.

My question to you is: 'What image do you see in your own mind when you hear or use the words 'People's Minds'? Do you see a full bottle or an empty one, a blank whiteboard on which you can write your messages, a box with dials for you to change settings, a software disc you can overwrite, a wide eyed person waiting for 'Manna from heaven'? I am fair dinkum, what is your image? If you have none, just listen for a moment to your own words and hear what they tell you about your image.

My image of 'People's Minds' is of castles with fortified doors, guarded to keep unwanted intruders out. The doors to these castles open outwards. Trying to batter them in with 'Information' only forces them shut more tightly, and the doors wear the scars of many such efforts.

In my image, the way into these castles is through genuine questions, posed to the guardians with humility and respect. Most guardians will then open the doors and come out to answer my questions. Once satisfied

that I respect them and understand what they mean, they normally invite me into their castle by asking me questions in return.

Those quotes at the APEN Forum came from men and women, including some facilitators. To me, they imply conquests, a sense of superiority, and the use of aggressive tools. I wondered how many extension projects are really about improved battering rams, however they were disguised. And if you and I were to bet on their effectiveness against the battle-hardened veterans guarding of the doors, what odds that the new battering rams will fail, just as the old ones did?

My experience is that the two most powerful extension tools are humility and questions, genuine ones! What is more, I am increasingly convinced from listening to hundreds of farmers during the last five years, that the guardians of the doors are very well connected. When a message obtained from me is relevant, timely and worthwhile, it spreads faster than I can move. When I fail to honour my own beliefs and try to ram a message home, news about me also spreads fast. And it is not good news, not for me anyway! I shuddered at the Forum when thinking about how many dollars, but more importantly how many opportunities, we are wasting by not realising the images we use.

So what images do you see when you hear or use the words 'People's Minds' and 'Information'? And what are the consequences of those images for the words you use and the actions you choose?

THE AUTHORS

Stuart Morriss[1], Terry Parminter[2], Mark Paine[3], Gavin Sheath[2,] Roger Wilkinson[4]

Negotiating Environmental and Production Outcomes In Practice

INTRODUCTION

In the subject domain of political science, policy agents seek to achieve policy outcomes by influencing the behaviour of people with a range of policy instruments (MAF, 1996). In the subject domain of extension science, extension agents often seek to achieve particular industry outcomes with a range of extension tools. In both subject domains, understanding the motives, incentives and relative importance of factors influencing human behaviour, and those factors influencing individual and community change, while fundamental, is sometimes overlooked.

The purpose of this paper is to draw attention to work underway in New Zealand at this interface of extension science and political science. Its aim is to develop improved technological learning processes that will be effective in managing change in a range of policy, industry and business contexts. Work discussed in this paper focuses on the subject domain of sustainable land management, but is also underway in other areas of technological learning. Research is considering both individual competency and institutional contributions to technological learning and change.

POLICY CONTEXT IN NEW ZEALAND

New Zealand's political economy is characterised by a single tier parliamentary system, public sector agencies set up around sector-based portfolios, and local government dealing with regional and territorial (district and city) issues. In both agricultural and environmental areas, policy processes involving discussion documents, proposed policies, submissions, hearings and appeals through the courts are familiar to us. But whether these processes are leading to effective policy, that is policy that will deliver sustainable outcomes in economic, social as well as environmental terms, has been questioned, particularly by land managers.

More often than not, policy development processes are characterised by confrontation. In fact, New Zealand's political economy is constructed in such a way as to encourage it. In resource management policy, confrontation often develops between sector groups that purport to represent the interests of their stakeholders. While land managers have both agricultural production and environmental protection interests, confrontation is often most prevalent between the farming and environmental lobby.

Confrontation also develops between policy agencies. New Zealand's central government bureaucracy is constructed with portfolio-based departments. Separate departments have responsibility for agriculture and forestry, economic development, research science and technology, the environment, and for conservation. They often have competing interests in the management of land, whereas a land manager will have interests that span all these areas.

Achieving sustainable management of land resources is complex, involves a multiplicity of disciplines, and requires that they be integrated in practice. Clearly, policy for sustainable land management, and the actions of policy agencies, should support this. But while the structure of policy institutions, and the nature of their relationships and responsibilities, can be a constraint to this occurring, structural solutions can have their own problems (Hawke, 1988). Furthermore, they can only ever address inter-government agency issues. They do nothing for those structural impediments that involve non-government agencies and organisations (or lack of them) that are also a key part of the policy system. The alternative being suggested with this work is to address problems caused by structure with process solutions.

1 Massey University, PALMERSTON NORTH, NEW ZEALAND

2 AgResearch, HAMILTON, NEW ZEALAND

3 The University of Melbourne, Melbourne, AUSTRALIA

4 Landcare Research, CHRISTCHURCH, NEW ZEALAND

Improving Technological Learning and Policy Processes

A research project was undertaken with the dairy industry in the Manawatu and Waikato regions of New Zealand during 1998/99 (Parminter et al, 1999). The project involved a case study looking at factors influencing dairy farmers' use of farm dairy effluent management practices. Within the project, methods for negotiated environmental and production outcomes using an organisational change model were evaluated. Both qualitative and quantitative techniques were used.

The organisational model used in the project was the Practice Interplay model. In this model, the term "practice" is used in a specialised sense to describe a group of people with a similar way of doing things (Gremmen 1993).

These behaviours are underpinned by a similar set of values, ethics, and ways of communicating that determine competency. Often the distinguishing features of each practice are taken for granted by the practitioners. They only become apparent when conflicts arise between practices, or when a new entrant to a practice has to discover them in order to become accepted as being "one of us" (Parminter, et al, 2000).

The value of Practice Theory, when applied in the policy context, is that it provides a way of reconsidering the structure of the policy system and the way in which participants in the policy process work together. Returning to Stone's definition of public policy, being communities trying to achieve things as communities, and the problem of community

identification, this model enables the community to be clustered in a completely different way to that which is the norm in policy development processes. It enables recognition that within-organisational differences in preferred policy positions can be greater than that between like-minded individuals in different organisations. In policy organisations this can occur, for example, between disciplinary groups such as economists and scientists, and those in head office and those in the regions.

To illustrate how it differs from the norm, an example using a simplistic situation where a policy system comprising only two clearly defined organisations is presented in Figures 1 and 2. The traditional policy process would have the two parties coming together, bringing their respective (internally agreed) policy positions with them, and through some form of negotiation process, get to a policy decision (Figure 1). Applying the alternate model would have the views of individuals from both organisations, but practitioners of the same Practice (e.g. policy analysis, science, and advisory), coming together with those of the other practices, and again through a negotiation, getting to a policy decision (Figure 2).

In both cases, the policy development process, involves the interaction, or interplay, of the practices involved. In the traditional model of policy development, these groupings are usually lobby groups representing sector interests (farming, environment, recreation) and policy agencies (sector portfolio-based government departments). As indicated earlier, their interplay in the policy process is often confrontational.

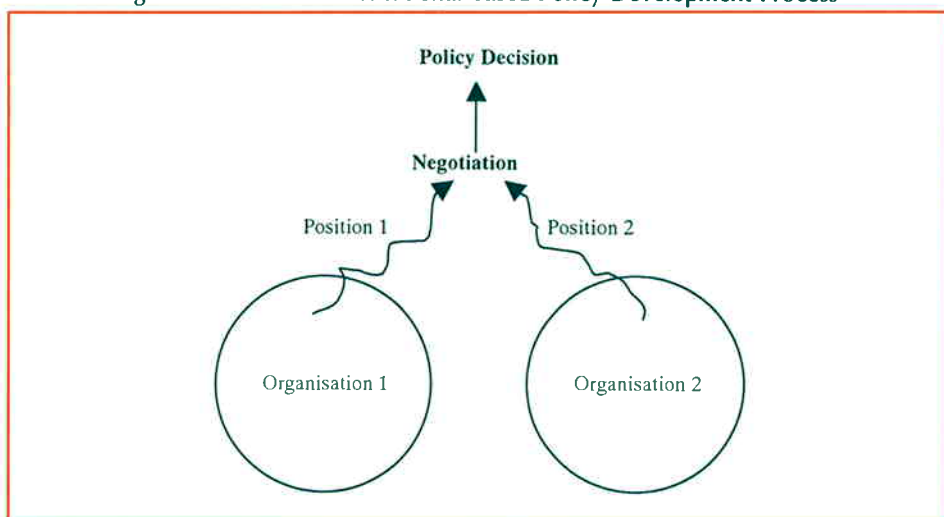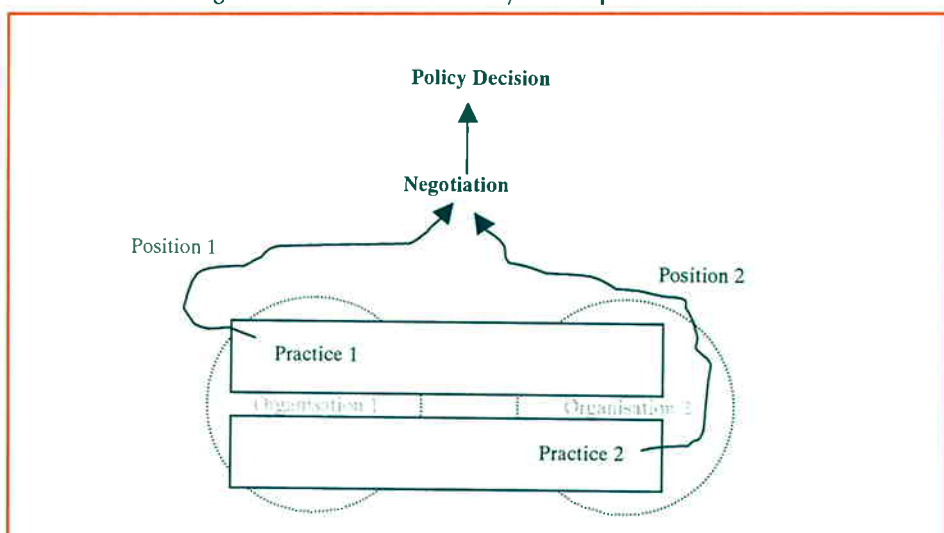**Figure 1: Traditional Institutional-based Policy Development Process**

Figure 2: Practice-based Policy Development Process

Using the Practice model provides the opportunity to disentangle and reconstruct the groupings of individuals in the process in a less confrontational manner.

Rather than two organisational positions coming to the policy table, it enables two practice positions to come to the table. In theory, it enables them to leave their institutional and individual positions behind them, and consider the issues as practitioners and representatives of their Practice, as against representatives of their organisation.

Farm Dairy Effluent Case Study

The objective of the farm dairy effluent case study was to understand, develop, and evaluate methods that would enhance the effectiveness of practice interplay within the context of sustainable agriculture. The farm dairy effluent subject was selected because of the well defined behavioural change sought, its apparent implementation conflict, and differences between Regional Council policy in the two case study regions.

A modified Rapid Appraisal of Agricultural Knowledge Systems (RAAKS) method (Engels 1997) was selected to provide the framework for studying practices and their interplay, modified to concentrate on practices rather than actors.
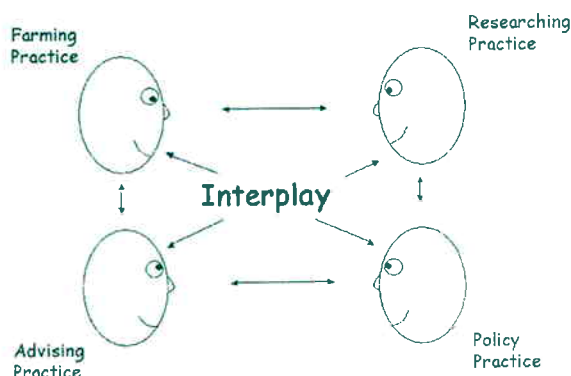
Two initial workshops were held in December 1998, one in each region. They examined the perspectives of selected Practices, namely farmers, scientists, policy analysts and dairy farming advisers on why farmers choose to adopt management practices considered to be more sustainable, and the factors that influence how well they are implemented. Facilitated focus

Figure 3: Interplay of Practices

group discussions were held with practitioners from separate Practices, mixed Practices and plenary sessions to describe existing Practice activities, information linkages between Practices, and interactions between Practices. Notes were made on flip charts, and audio tape recordings were kept for each session. Data was analysed from the first workshop to identify the views of each group of practitioners about their own Practice, and about the other Practices. The concept of interplay analysis between the Practices is represented in Figure 3.

The issues identified in the workshop were then built into a quantitative verification instrument that was developed and piloted in March 1999. Issues identified by the Practices in Workshop 1 were listed, grouped by Practice that raised them, then amalgamated into questions phrased in a way to reflect the competencies required by practitioners in that Practice, and by the interplay conditions required between Practices. The survey evaluated alignment between Practices on each of the issues, and substantiated priorities using a gap analysis technique. Follow-up interviews were also carried out with Practice participants in the Manawatu region to further verify the findings of the workshop. These interviews were taped and analysed.

A second workshop was then held in May 1999 where the results of the first workshop, the interviews and the survey were fed back to participants. The workshop participants (the same as at the first workshop) evaluated the results of the questionnaire using *quadrograms*. A quadrogram visually summarises Practice expectations, perceptions of actual performance, and the gap between these across all competency and

interplay attributes by Practice. For example, the quadrograms for the results between and within the Farming and Policy Practices are presented in Figures 4 and 5.

While the workshop highlighted a number of other issues, the survey enabled the significant gaps between expectations and perceptions of actual performance, i.e. opportunities for improvement, to be more specifically identified. At the initial workshop, the Farming Practice said that policy practitioners are not justifying their rules, that Councils are dictatorial, and that farmers want a procedure for negotiating alternatives to the current policy approaches. However, the survey results showed that the farming practice perceived there to be significant performance gaps in the policy practice in relation to:

• Enabling New Zealand to be more competitive in the international market place;

• Providing farmers with sound technical farm dairy effluent advice when they need it;

• Providing good feedback on how effective farmers have been at improving water quality;

• Providing a procedure for farmers to negotiate with regional council staff on the acceptability of alternative farm dairy effluent systems;

• Being able to explain and justify their policies to farmers;

• Considering the whole farm as an integrated system;

• Having the respect of farmers; and equally committed to enforcing regulations and educating farmers.

Figure 4: Farming Practice Survey Results

Figure 4: Farming Practice Survey Results

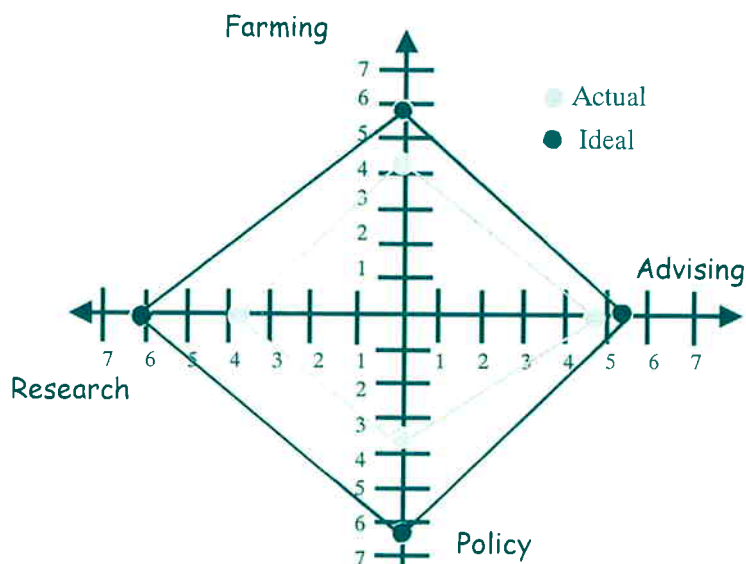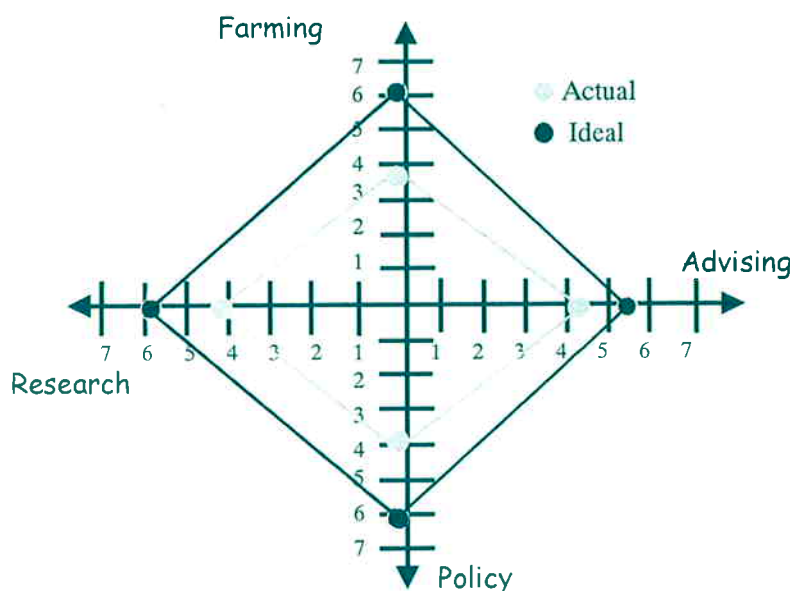## Figure 5: Policy Practice Survey Resuults

Figure 5: Policy Practice Survey Resuults

The interviews were carried out after the questionnaire had been completed. They provided further valuable clarifying information, and allowed the issues translated from the workshop into the questionnaire to be explored in more detail.

The second workshop was designed to enable the practitioners to analyse and negotiate with each other ways to overcome agreed areas of misalignment and the difficulties they were causing.

Strategies for joint action that would improve co-operation between practices to achieve continuous improvement in effluent management practices were developed. They included:

• Developing realistic water quality standards for farmers to achieve;
• Making choices available for farmers to achieve the standards, and penalties for not reaching them;
• Direct problem-solving research with farmers;
• Better communication and working relationships;
• More work on reducing risks of changes;

• Farmer examples and mentors to be used in education; and
• Having specialist advisers to package technical information.

CONCLUSIONS

The value of using Practice Theory in this project was that it provided a way to group participants in a process in a completely different way to that in which they would normally have been in a traditional policy development process. People were working together with others they did not normally get a chance to work with. They gained an understanding of where others were coming from, and negotiated agreed strategies for change in both Practice interplay and within Practice actions. The initial selection of Practices and Practice participants is absolutely critical to the process. In retrospect, this was an aspect of the project that could have been done better, but was a lesson learnt for the future.

The case study found significant misalignments between researchers', farmers', extension and policy agents' perceptions and expectations of factors required for effective farm dairy effluent management. The combination of Practice-based interactive workshops, linked to quantitative verification and testing, and follow-up interviews, worked extremely well. It provided a process that identified opportunities to improve stakeholder competencies and alignment, and agreed strategies that would enable continual improvement and strengthening of the process of technological change. Further development of this model has the potential to break though into a new policy development paradigm that fits much better the collaborative, multi-disciplinary, integrative way of doing things that is essential for making progress on many of today's policy problems.

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Engaging scientists in community action programs, knowledge systems and social learning;

new challenges in extension

Fionnuala Frost
AgInsight
frosts@opera.iinet.net.au

The role of extension is clearly evolving. Over the next ten years, social learning will become the key to developing and designing new landscape systems,.........

One of the most significant outcomes from the **Decade of Landcare** is **an appreciation by much of the agricultural community of the impact of natural resource management (NRM) deterioration on the landscape and the substantial changes needed to be adapted into current farming systems.**

After ten years of concerted participation, we, as an agricultural community, are coming to terms with the enormity of the challenges that accompany the realisation of sustainable agricultural systems and landscapes. While there is substantial research and development in farming systems and an abundance of economic models predicting the most efficient and effective land management practices, the role and understanding of the 'social dimension' to sustainable systems remains comparatively limited at research, communication and policy levels.

We are also beginning to understand, after the ten year Landcare focus, that in order to address natural resource management challenges, a balanced interdisciplinary approach is required and that in order to evolve toward an interdisciplinary approach, fundamental **questions as to how research and communication is undertaken must be asked.** Questions such as: What does this mean in practice? What are the crucial issues? What are the priorities? How can individual, regional and state needs be reconciled? **What processes need to be put in place so that extension professionals can have input into these questions?**

Evolving on from the Decade of Landcare, two issues are becoming particularly challenging for extension. The first issue questions **the role of science in the future,** particularly where problems are becoming increasingly complex and systemic, where issues take on a systems perspective. The second issue is one that considers **the role of human activity in NRM,** that is, the interrelationships between technical or biophysical dimensions of NRM and the social dimension.

These issues are not only significant in the way the agricultural community considers NRM, but more specifically are questions extension practitioners should consider when developing programmes.

Fundamental to the way these issues are questioned are knowledge systems, the belief structures underpinning knowledge and the role of knowledge in thinking about problems and solutions to these problems. For example, how do we as extension practitioners feel about the assumptions that **'more or better technical science is the answer to solving our environmental problems? What role does local knowledge have in this context? What scope and value is gained when technical and local knowledge is merged in a knowledge system?** Should land managers undertake their own rigorous research and development with funds from R and D corporations?

If these questions are asked, then the extension discipline will be developing important processes leading to an environment of social learning. This learning environment includes land managers as well as researchers from the various disciplines involved in NRM. Extension processes must continue to evolve to provide opportunities and focus for the various stakeholders and disciplines to interact and move toward the mutual integration of developing concepts, methods and data management. If there is general support for dynamic knowledge systems, then why is it so hard to integrate knowledge? Furthermore, what role does extension have in improving this knowledge system?

One perspective that responds to these questions is **the belief that knowledge construction is a social process, where knowledge is constructed, very often within the bounds of cultural and economic imperatives, as opposed to being 'found'.** In other words the environment in which we live defines the parameters within which knowledge is generated.

Integrating knowledge from a background that separates the disciplines (for example University training) and strives to understand components of the system, rather than taking holistic perspectives is difficult, and places considerable challenge on extension practitioners. This approach to the role and generation of knowledge is taken forward and applied in agricultural environments dealing with complex environmental problems. The likelihood that the knowledge systems key to addressing NRM problems are those generated in communities, in other words holistically and involving a range of perspectives, is generally not well appreciated nor supported in agriculture.

What is the implication for extension? Agreement that knowledge systems are an important part of the 'learning our way out of complex agricultural problems' presents considerable challenge and expectation on the extension discipline. Firstly, if a more systemic approach is to be taken, then **a common language, and more specifically common goals** must be determined. A good example to consider is the quest to reach the moon. Landing a rocket on the moon was an outcome that was tangible, it became a shared focus for all disciplines and the task involved all those who believed in the common quest. These principles could readily become the basis for extension programmes aiming to develop knowledge systems and social learning environments.

A second implication is the **need to engage the NRM community in critical thinking**. For example, rather than rural land managers being regarded as recipients of 'good' scientific research, an environment of shared critical thinking is encouraged.

This environment is one that supports not only research results and their appropriateness to a region or community, but challenges the assumptions, observations and methodology underpinning the recommendations. In this environment of critical thinking there is indeed scope to question not only the physical research but the approaches taken to address NRM. For example, participation and group processes become essential aspects of joint critical thinking activities. Best practice processes and experiential learning methodologies are examples of how this critical thinking environment may be supported.
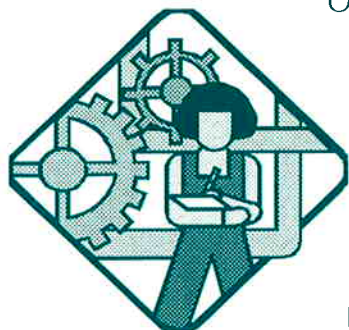
Extension must now evolve on from being a discipline that not only communicates and facilitates, but one that also engages the NRM community (including land managers and researchers) in social learning. In an environment of social learning, the knowledge systems that support adaptive management and innovative thinking are fostered and critical thinking is regularly undertaken. This means that 'solutions' to complex problems are more likely to emerge and be accepted by the community. In order to achieve this 'thinking' and integrated learning community, individuals must be reflective and have the capacity to self-evaluate and reflect on outcomes and the reasons behind the outcomes. These are the qualities and features that extension processes must strive to achieve. In other words, in addition to the communication and facilitation skills of extension practitioners, extension process must challenge assumptions, belief systems and values. This is difficult. For example, how prepared is the extension community to challenge the assumption that group development

processes are not effective in bringing about behavioural change? If extension practitioners apply principles of critical review and adaptive management principles, and in so doing foster an environment of social learning, then group development and participatory principles become the tools of trade rether than key extension processes. Social learning becomes the process. Extension practitioners will also need to determine other indicators of success or change.

In leading back to the title of this paper, the challenge for extension practitioners is to not simply engage scientists in a communicative environment with rural community groups, but **involve people in such a way that a social learning environment evolves.** Common goals, shared language, critical thinking, fundamental questioning are all features of this environment. The role of extension is clearly evolving. Over the next ten years, social learning will become the key to developing and designing new landscape systems. The question is, how will extension practitioners and the extension community as a whole, encourage and sustain this environment.

1ST SEPTEMBER 2000 — BRISBANE

3rd Australian Agriculture and Resource Economics Society Annual Symposium: **Deregualtion, Competition Policy and Regional Australia,** Brisbane, Queensland, Australia
Contact: e-mail journal.ajare@latrobe.edu.au

10 - 13TH SEPTEMBER 2000 — BALLARAT

5th World Congress on Action Learning, Action Research and Process Management and 9th Participatory Action Research: **Reconciliation and Renewal - through collaborative learning, research and action**, University of Ballarat, Victoria, Australia
Contact: e-mail conforg@ozemail.com.au

26 - 27TH OCTOBER 2000 — MELBOURNE

2000 APEN National Forum: **Creating a Climate for Change: Extension in Australasia**, Melbourne Convention Centre, Victoria, Australia.   See page 5 for more details.
Contact: Rosemary Currie 61 2 6024 5349

e-mail rcurrie@albury.net.au

8 - 10TH NOVEMBER 2000 — GEELONG

International conference on systems thinking in management (6th Australia and New Zealand systems Conference): **Dynamics of Theory and Practice**, Deakin University, Victoria, Australia
Contact: Lynne Lucas, e-mail ICSTM@deakin.edu.au

27 - 29TH NOVEMBER 2000 — SANTIAGO

16th Symposium of the International Farming Systems Association and 4th Latin American Farming systems Research and Extension Symposia: **Globalisation and Local Development: Challenges to Small Scale Production**, Santiago, Chile
Contact: http://www.rimrsp.cl/ifsa_iesa2000.html

2000 APEN Award for Excellence in Extension

The annual **APEN Award for Excellence in Extension** will be made this year to **a young extension professional** or group of professionals (under 35 years). The award is open to individuals or groups from the Australasia Pacific region who have demonstrated excellence in extension through a work program completed within the last five years. Nominees do not have to be members of APEN.

The award will include a plaque, travel to the 2000 APEN Forum, registration and accommodation at the forum and the opportunity to give a presentation about the extension work for which the prize has been awarded, for an individual or one person from within a group.

The closing date for nominations is Wednesday August 30th, 2000.

More information and copies of the nomination form are available from Rosemary Currie at the APEN Secretariat, 61 2 6024 5349 or rcurrie@albury.net.au

APEN WEBSITE
http://life.csu.edu.au/apen/

WHERE TO CONTACT APEN:

COMMITTEE OF MANAGEMENT

President: Jane Fisher
Ph: 61 3 9210 9243, Email: Jane.Fisher@nre.vic.gov.au

Vice President:
John McKenzie, Ph: 61 2 6366 5000, Email: mckenzj@ix.net.au

Secretary: Amabel Fulton
Ph: 61 3 6231 1419, Email: Amabel.Fulton@utas.edu.au

Treasurer: Horrie Poussard
Ph: 61 3 9532 4470, Email: poussard@theReef.com.au

Editor: Mark Paine
Ph: 61 3 8344 8096, Email: m.paine@landfood.unimelb.edu.au

Committee Members
Chris Sounness, Ph: 61 3 5381 1255, Email: Chris.Sounness@nre.vic.gov.au

Sally Marsh, Ph: 61 2 9351 4686 Email: s.marsh@agec.usyd.edu.au

Emma Robinson, Ph: 61 7 3239 6923 Email: Robinsem@dpi.qld.gov.au

Jon Warren, Ph: 61 8 9531 1788 Email: jdwarren@agric.wa.gov.au

John James, Ph: 61 7 5460 1495 Email: JamesJ@dpi.qld.gov.au

Greg Cock, Ph: 61 8 8391 5042 Email: rd.gjc@bigpond.com.au

John Stantiall, Ph: 64 6 350 5799 Email: J.D.Stantiall@massey.ac.nz

APEN CHARTER CONTACTS

SE QLD & N NSW
Felicity McIntosh, Ph: 61 7 3280 1439 Email: mcintof@dpi.qld.gov.au

CENTRAL/WESTERN NSW
John McKenzie (See CoM)

NORTHERN NSW
Anne Currey, Ph: 61 2 6628 7079 Email: natres@naturallyresourceful.com.au

MURRAY RIVERINA
John Lacy, Ph: 61 3 5883 1644
Email:john.lacy@agric.nsw.gov.au

BORDERS SA/VIC
Lee-Anne Mintern, Ph: 61 3 5573 0900 Email: LeeAnne.Mintern@nre.vic.gov.au

WESTERN VICTORIA
Matt McCarthy, Ph: 61 3 5441 6176 Email: ormrural@netcon.net.au

MELBOURNE
David Beckingsale, Ph: 61 3 9637 8336 Email: David.Beckingsale@nre.vic.gov.au

GIPPSLAND
Julie Williams, Ph: 61 3 5624 2222 Email: Julie.Williams@nre.vic.gov.au

NORTHERN TERRITORY
David Kennedy, Ph: 61 8 8951 8612 Email: david.kennedy@nt.gov.au

SOUTH AUSTRALIA
Narelle Campbell, Ph: 61 8

8842 3900 Email: campbell.narelle@saugov.sa.gov.au.

TASMANIA
Amabel Fulton (See CoM)

WESTERN AUSTRALIA
Amanda Miller, Ph: 61 8 9865 1205 Email: amiller@agric.wa.gov.au

SE NSW & ACT
Sally Marsh (See CoM)

NEW ZEALAND
John Stantiall (See CoM)

NEW GUINEA
Sam Rangai, Dept Agric & Livestock, PO Box 417, Konedobu

APEN SECRETARIAT
Rosemary Currie
PO Box 1239, WODONGA 3689, AUSTRALIA
Ph: 61 2 6024 5349, Fax: 61 2 6056 1967
Email: rcurrie@albury.net.au