EVALUATION OF "SUSTAINABLE BEEF PRODUCTION SYSTEMS IN CENTRAL QUEENSLAND' PROJECT

(PROJECT DAQ 073)

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1. INTRODUCTION

"So the underlying question was this [the LCD process] *is immensely powerful but where does it go from here? "*

"So I think it's got immense power but it is like a giant engine which is just standing by itself turning over and it's not driving anything at the moment."

This consultancy was commissioned as a review of the "**Sustainable beef production systems in Central Queensland Project** (see contract terms of reference in Appendix 1). It has become apparent in the conduct of this evaluation that continued use of the title "LCD Project" is inappropriate. For the purposes of this report we will refer to "the Project".

In conducting our evaluation we have listened to, and gained the perspective's of, producers, project staff, project managers, traditional research scientists, and Research and Development (R&D)[1] managers and policy makers. This is a result of our view that the current experience and the future of the project is determined by both the policy and organisational context in which it is developed and operationalised, as well as the producer experience of the Project. The methodological approach taken in the project is described in Appendices 2 and 3. Our evaluation reveals two possible ways to view this project. These choices of framework through which to view the project differ radically, not so much in terms of an historical account, but in terms of what the future possibilities for R&D might be. Depending on the position taken the project can be viewed as a straightforward application of an old technique which adds to the repertoire of ways of doing traditional "extension". We shall call this extending the status quo, or in theoretical terms, the maintenance of the rural R&D system as a "network of system determined problems" (these terms are defined subsequently - Section 7). The alternative framework is to view this project as at the cutting edge in what can be described as a transformation of the Australian rural R&D system[2]. Theoretically this would be described as a move towards a greater proportion of the R&D effort comprising a network of "problem-determined systems". To shed light on such stark choices we first review the changing R&D policy and organisational environment as perceived by senior R&D managers. Attention is also drawn to recent policy initiatives at Federal and State level which, from our perspective, are important indicators of possible future directions for this project and for the MRC in its support of such projects into the future.

[1] In Russell and Ison (1993) the case is made for using R&D as an encompassing term and for abandoning the term "extension" and taking a broader conception of "research" than is now common.

[2] This is even more evident internationally and particularly in rural development projects.

2. THE CHANGING R&D POLICY ENVIRONMENT: *PERSPECTIVE'S OF SENIOR R&D MANAGERS*

2.1 INTRODUCTION

The R&D policy environment was characterised from a series of 14 interviews with senior personnel from MRC, DPI, a University and private consulting . Expectation and anticipation of change were key features of all interviews. A universal theme was a sense of dissatisfaction with the current system, particularly the researcher - extensionist - producer relationship. All interviewed provided some elements of what they saw as desirable in a future R&D system, but there were no clearly articulated blueprints or total system models. Themes have been identified from the interviews relating to both the national and Queensland R&D situation. These themes reflect the diversity of issues considered important by these managers and in their totality reflect the complex nature of an R&D system in transition.

2.2 THEMES RELATING TO THE R&D ENVIRONMENT

i) Sustainability

"the message to me was this sustainability issue, its a massive social issue"

There remains considerable tension in the R&D community over the nature and definition of sustainability research. For some, such as the senior R&D manager cited above, it is clearly more than a biophysical issue. This tension is well illustrated in the project under evaluation (see Sections 4,5,&6). The current MRC position would appear to be encompassed in the following quote:

"I think the main advances that the MRC tries to bring about will always be increased productivity which is lower costing, lower costs if you like, which is consistent with sustainable development. So we should not ever do something which is unsustainable in any terms really, particularly anyway in terms of land sustainability, but given that we can have that as a given then we've got to continue to try and advance this issue of lowering costs, improving quality of life, increasing productivity where that's necessary and so on. And at the other end increasing demand and making processing more efficient and so on."

What does not seem to be widely appreciated in the R&D community is that the MRC sensitivity analyses for R&D show very good returns on sustainability type research (eg maintenance of land in a particular class). It would appear that this process and understanding would benefit from becoming more open and transparent within the beef industry.

There is also considerable tension and at times conflict between RIRC's in the nature and extent of "sustainability" research. This has already been evident with respect to this Project and Property Management Planning (PMP) a Federal initiative administered by the States, Landcare and LWRDC funded projects.

Whilst there are also conflicting interpretations of sustainability amongst producers (a cause of some tension in the Calliope project) there is increasing evidence from senior and operational managers, including Landcare (L. Northrup pers. comm) that Landcare issues cannot be divorced from production and livelihood issues. This is recognised by Managers from Land Use and Fisheries sections. The need for production data for the PMP exercises has been a driving force for their involvement in the Project. Most producers interviewed would share this sentiment but are worried at the extent to which the term sustainability has become "a marshmallow word" and Landcare has become separated from production issues in community perception.

The main political imperatives of the Queensland State Government are: "*property management planning (PMP) and sustainable agriculture*" . Stories abound of tea or conference rooms being converted into "Property Planning Rooms" for the visit of the Minister. There are no similar stories relating to "sustainable agriculture" but considerable political attention (rhetoric?) has been placed on sustainability in the "Extension Strategy" and the "Research Review".

It is claimed that Queensland is now the only state in Australia with legislative commitment to rural research and extension in place. What is not clear is the extent to which this will be resourced. In response to the review of rural research the DPI has, amongst other points, committed itself to: *More emphasis on sustainability; A more rigorous systematic system to prioritise research; Improved participation of industry and other research providers in planning and priority setting and a New management structure with greater decentralisation of decision making* (Central Qld Newsletter 93/9). No mention is made of grazier participation in the conduct and management of R&D.

ii) R&D organisation

a) Limitations of the current system:

No senior managers were advocates for the status quo. The agricultural production and distribution system was seen by some as not having changed despite recent major technological change. This was linked to the lack of any systemic analysis of the R&D system. As one manager observed: "*there has been no systemic perspective to R&D policy which has been limited and linear in conception.*" As a result it was argued that "*big gains haven't really come from R&D*" and that there is "*no overall framework to enable the change necessary to occur - to produce a different type of industry*". Many initiatives, whilst well intentioned appear to be conducted in isolation from other elements of the system, and thus when in place run the risk of failure.

This was linked to a range of issues which included *"no mechanism for changing strategic direction and involving clients in the process"*, *"too many managers are too operationally focused and not strategic managers"*, and *"producers lack the right paradigm to take advantage of emerging opportunities"*.

Some identified a lack of concern with people by those in the R&D system and suggested that "*if you're not concerned about the people end of it then ultimately it will be a failure*". It was, for example, suggested that staff of the RIRC's were not particularly skilled with people and often had a fairly narrow technical background.

There was a strong critique of reductionist, science lead or top-down R&D. As one senior manager observed:

"I think that there is top down research which unfortunately in the current systems, very rarely delivers results of value to the industry. But I think there's still a role for that but I also think that there is a big role, it might turn out to be half and half [for PIRD[3] type R&D]. In the end I don't think it would ever be 100% ".

A recent (1993) DPIE [4]minute prepared for submission to the Industry Commission inquiry into R&D notes that "*the implementation of R&D outcomes is a matter of some concern. Over the last decade there has been a contraction of agricultural extension/technology transfer services. Private consultants have partially compensated for this withdrawal, but questions remain about commitment and effort expended by the providers of R&D in communicating and fostering the implementation of their results. In essence, to be a success R&D must be practically applied..*".

We did not interpret anyone saying that there was not a continuing need for discipline - based scientists to service the rural industries. What was said however was that the context for the practise of these disciplines was and would continue to change. There was however considerable concern about the ability of scientists to adapt to these changing contexts. For example: *"researchers are generally unprepared to move from their "home ground" where they feel safe*". Others felt the changes afoot were:*" a chance to break down the walls of sheltered workshops"*.

In "extension" circles at a policy level, and particularly within the recent DPI Extension Strategy there has been considerable talk about an R&D system based on principals of Adult Learning. It was noted however that few R&D practitioners know anything about adult learning models and its application in their professional activities.

Perhaps the "bottom line" expression of inadequacies of the current system was that: "*Australian producers still do not make profits - the MRC/AMLC have been largely unsuccessful to date*".

[3]Producer Initiated Research and Development - a scheme developed by MRC
[4]Department of Primary Industry and Energy

Within Queensland: A range of issues emerged which reflect limitations of the current R&D system operating within the Queensland DPI. The extent to which these are symptomatic of the national R&D system are not known but many of the issues are common to those revealed in recent research in NSW (Hannibal et al 1994). The Queensland issues are best captured in a series of statements by senior managers about R&D in the DPI.

"The DPI is far too conservative, and too traditional and not surprisingly has a lot of reductionists"

"Agricultural production [branch] *has been particularly reductionist"* It was acknowledged that this may change with new management.

"DPI has in past provided a consulting service to the top 5% of producers"

"despite the rhetoric of the extension strategy most are still paternalistic"

"despite regionalisation, to date there has not been effective regional management - chiefs in HO interfere"

"there is a continuous procession of experts out of Brisbane who only ever conduct input analyses- they are not concerned with outcomes"

"there is a need for greater involvement of women - a blackspot in current DPI"

"in future the DPI will consist of self-directed regionally based groups that are able to tackle their own problems and to meet emerging regional issues. Delegations and budgets will enable greater flexibility"

"What we will do is what we believe public sector organisation ought to be involved in and that is providing a wider type educational type service .....having producers and industries who are more self reliant in terms of getting their own knowledge, analysing their own knowledge and utilising it."

"DPI staff will increasingly become brokers of information/facilitators. The extension strategy is a few feeble steps along the way"

"future management in the DPI will be less authoritarian with a focus on commercial realities whilst maintaining technical rigour"

"if the DPI does not target what the community wants it will get no money in future"

"Our Minister strongly supports our extension strategy....people in other states say if they had their Minister supporting policy issues like that they'd reckon they were home and hosed .....His [the Minister] *criticism is the department doesn't support it enough".*

b) Forces for change

Future R&D policy directions are shaped by the visions and judgements of individual decision makers. Judgements about future direction by senior managers were based on their experiences and their interpretations of the changing context. All had some visions for the future, and, by and large, were keen to be part of realising that vision. Statements about future R&D thus represent possible, some may say likely, future scenarios. These are the "forces" for change. For example:

"we will see the emergence of national industries and increasingly a national R&D system which will contract out services to industry."

There is also likely to be increased pressure on RIRC's and other Federally funded R&D initiatives to achieve greater integration in what is being termed the "***whole of government approach***" to rural R&D. We are about to experience the emergence of this new catch phrase. It is already shaping policy initiatives in Canberra and the state capitals. Under this umbrella more cooperation and integration of RIRC activities will be required as well as greater integration with other arms of rural policy (eg. Rural Adjustment) and other state and federal agencies (eg. Innovation Centre being set up in Charters Towers to foster regional initiatives). There is also an Industries Commission inquiry into R&D underway.

From a number of sources came the view that a future DPI would be a very streamlined organisation operating in very different ways to the present:

"the aim of management should be to work DPI out of a job - in 10 years DPI may be a streamlined policy department down from current 5-6k employees to less than 2k - in this model most R&D will be brokered out with regional industry boards, Unis etc"

"there is great scope for strategic links with industry - the DPI will go from 5.5k to 1k people"

Our interpretation of these scenarios is that the total number of personnel involved in rural R&D may not contract (a lot may hinge on the Industries Commission Report) but that certainly these personnel will be deployed in new ways and will require new skills. The Tropical Beef Centre is one example of this change process.

The impetus for change is strongly linked to current management models for the public sector (eg rationalisation of middle management is seen by some as an international phenomenon), rationalist economics, and debates about "public" versus "private" good and "User Pays". It is also linked to the changing place of agriculture in the national economy and on the political agenda. One current result of this in Queensland is:

" there is considerable tension between the DPI Executive and the Premier's dept and PPMC"

One implication which follows from these scenarios:

"fifty percent of regional managers are likely to become redundant in ongoing reorganisation in the DPI. "

In Queensland the new Rural Extension Centre is seen by some to become a focus for change, although this is by no means a universal view; for example one observation was: "*there are concerns about the strategic direction and theoretical development in the new Extension Centre.*" One interpretation of the purpose of the centre was that it is:

"part of a new extension strategy in DPI.....one of the main planks or main directions in the extension strategy .....about encouraging or trying to help producers become self-directed learners, so helping them to recognise and process knowledge and information themselves. Um it is about defining extension roles a little bit more clearly so that individual extension officers have double roles. And one of those roles has been called a programme extension officer. It is essentially about adult education, community development type activities generally in a group context although not necessarily..".

The Rural Industry Research Councils (RIRCs) have had a major role in moving R&D from a state to a national or "industry" perspective. This has attracted both criticism and support. As one grazier/administrator observed:

"the MRC has been brave - it is being watched by other RIRCs"..... "the Departments of Agriculture are becoming irrelevant and worked into a bureaucratic lather"

In addition the "*funding organisations have come under fire whether or not it be warranted or unwarranted* " because of "*the long time lag between R&D outputs and having the ones that are relevant applied in commercial on-property management systems.*"

Senior managers also express their perception that there is increasing community concern about grazing land sustainability and that "the industry" has to be seen to be both responsive and responsible. For example:

"particularly in this area where we're talking [about] *the grazing resource* [there is an] *increase in community perceptions of the rangelands or the grazing resources being degraded."*

It is acknowledged that past technological innovation may have contributed to this degradation: "*Now that perception, there's elements of truth in it, there's elements of mischief in it, but certainly in the last 20 years, given the advent of* Bos indicus *cattle and*

the fact that their survival is better than Bos taurus, *the role of supplementation both with phosphorus and non protein nitrogen during the dry season in the north, and the greater availability of transport and being able to move fairly quickly. If things do get bad, transport, abattoir facilities are such that some of the critical decisions such as drought management are delayed longer than what they should be. So all that is putting pressure on the grazing resource.*"

There is also an emerging concern amongst some to "*relate market signals wherever they are to production decision making ... for the beef industry*". This was related to "*reliability of supply*" for international markets. No models of how this might be better realised, other than proposed " regional information centres", came forward in our interviews.

c) Client participation and groups:

The project under review is only one example of a much larger trend towards group based R&D. This has arisen largely because of diverse experiences of the inadequacy of the current system, resource constraints (precluding the older one-to one model of extension) and in some cases a grasping for an alternative because of dissatisfaction with the status quo.. Some are very clear:

"*You're looking at research driven programmes. First of all you've got the people deciding the priorities who haven't got a clue about the industry they're serving, determining the priorities.*" What this person sought was described as "*problem driven research*".

This move to group based R&D has not been adequately supported thus far in the departments of agriculture (at least in NSW and Queensland). For example there is a limited understanding of group processes and theory and associated models of adult learning at all levels in the current R&D system which has been traditionally unconcerned with "people issues". The historical treatment of people as "externalities" is rapidly changing. However many are floundering due to the lack of adequate conceptual models on which to base policy. The availability of personnel to service such models when and if they become available is another issue.

There is a strong sense in some quarters that changes have so far been cosmetic and that the system has moved to "consultation" but not to genuine "participation". These observers see that in the consultation process: "*producers are being swamped by scientific pressures (big words, well prepared material etc) in the current move from top-down R&D to consultation*" they also see *"the paternalistic approach is alive and well"*. There is often a tension between what is espoused about the future place of client participation and what can be observed or what is experienced by producers (see Section 4). Some suggest there is growing producer negativity to consultation:

"we've said we want to be more responsive to local clients..... The answer is of course that you get them along to a meeting. And they're getting all meetinged out. I mean

we've now got some groups that say "I don't give a stuff what you do, I've been to so many meetings you must know what my priorities are and just sort of tell me when you've decided". .....most of us would only go along to a group or a meeting while it's serving some purpose for us. So it's unreasonable to think that too much is going to be extracted out of most of these groups. I think most groups have a natural life unless they get into a heavy maintenance sort of thing and once you get into that maintenance sort of phase then there is only certain sorts of producers who will want to be in it and that then starts to narrow down who you can talk to. The same as it's only the same set of parents who always go to the P&C. I mean it's exactly the same phenomenon."

There is reason for concern that the emerging focus on groups may be a rerun of the DPI's focus on groups in the 1960's. As one manager observed: "*They can't just go in and apply a recipe, that was the problem with the early group work in extension. You know if you're going to do extension you've got to have groups. They didn't know why they had to have groups, they just had to have them. So we're not getting out of that method, you know, I've got a methodology now where am I going to apply it?*"

There is however increasing commitment, although sometimes this may only be verbal, to greater client participation:

"I strongly believe myself that the future of much of ... or some of technology transfer anyway, is to get the end user to be the controller of the project."

"The other issue is that experience and other knowledge of other groups such as Landcare and groups that you've talked about and so on convinces me that that's the way to go or a way to go, it may not be the only way to go in technology transfer and um... In other words to get the groups to decide what they want and when they want it and what way they want it expressed to them etc. etc, rather than having, and having the group being able to pull in the technology and technologists that they want when they want them and to decide how that should be, rather than the traditional methods of doing that."

There is further tension and ethically questionable behaviour in the often purely instrumental nature of the proposed changes. These often obscure a hidden agenda. Sometimes the instrumental nature is relatively benign, as for example:

"When people from industry are involved in writing the document and having "ownership" there is a gain of several years over the old ways"

Some comments made were dubious ethically, and could readily be interpreted as patronising and paternalistic.

Whilst there is increasing attention, resources, and enthusiasm for group based client participation in R&D there is also concern about where this is heading and, by implication, the extent to which the future agenda may be definable in advance or controlled. And of course by whom.

" I think we're still not sure where to place our emphasis in terms of groups. I mean I think the LCD ..... it's very powerful and I don't know where it's going basically."

"I think in amongst all of that we can still see that to go out and try and form a group, a local community group of people just to try and solve their problems, doesn't seem to me to be a goer. We thought that might be but I don't think it is. And it's really got to be an existing group or a group formed for a specific purpose which you then might spread out into something else later on. Maybe it's because we tried to do too many at once. .....we've always had a look at this group formation and ...the intent of the AACM model was that we were trying to pilot something which we might then do across Australia. So it wouldn't be any use piloting something like that if we needed to, you know, have one person for every two groups facilitating, we just couldn't sustain that. So I haven't got the answer, we've just got to keep trying."

There is also an expectation on the part of many managers that once set up groups will continue to exist and could be "used" for other purposes. We encountered one group during our evaluation which has been in operation for over 20 years (see Section 4). In thinking about the long-term life of groups we only have to think about our own individual behaviours. We suggest that adherence to the view that groups will continue to exist misses the point of developing the capacity and skills of individuals in a community which are necessary to come together for some goal orientated activity of mutual concern. Thus as with any project groups may only last for the duration of that activity. The critical questions then become (i) how to foster these skills, (ii) for scientists and "experts" how to relate to these groups; (iii) how to effectively wrap-up a group when the job is done; (iv) how to evaluate what the group has done. These are addressed under Future Directions (Section 8).

d) Facilitation:

Facilitation is increasingly seen as a major issue for supporting the move to "group" based R&D. There are conflicting perceptions of what is required from facilitators (eg. extent of technical or content know how as distinct from purely process facilitators), how training is to be provided and resourced and to whom. A proposal from the MRC is already well developed on this issue (see below), but it is unclear whether support for this initiative will extend to other RIRC's. There is also some duplication and, it would appear, minimal cooperation, with leadership training occurring at regional levels through, for example, the DPI. It would appear that those responsible share similar aspirations: eg. *"providing leadership training may enable producers to take advantage of emerging opportunities"*.

There is widespread concern that the requisite facilitation skills do not yet exist in the R&D sector. There is also a realisation that not everyone has the ability, or indeed need, to become a good facilitator, and that this needs to be recognised. For example:

" what really impressed me was the restraint which Richard showed because there were a number of occasions in the early part of it where I thought is Richard even listening to this, ... And the thing virtually unfolded in front of me and it really did become something that I had no doubt at all that that was the true story. They weren't putting something on for us because we were hardly there you know. .....So I was very impressed with that and I thought well you know I've learnt something today, this is what true facilitation is about. I mean I'm a sort of a... I find it very hard to listen to people who can't express themselves and I tend to go in there and tell them what they should be saying, and I want to get on with things you know, and he's much more patient than that and I think that patience must be one of the key things in any facilitator as well as the ability to listen and not try and interpret all the time, just to listen to what's being said. So Richard really showed me how it should be done on that day".

A number of options are perceived for the future:

"there seems like two ways of going ... one is that the groups are actually self sustaining and don't need facilitators, or the facilitators actually are supportive and come from within the DPI or I guess as private consultants. I think that's the way it is happening at the moment but I just don't see that as being the case in the future."

Our interpretation of the current MRC position can be summed up as:

"And what we decided as a group is that what we wanted to do was to see facilitator training for professionals, extension people, and maybe retro training people who are already out there as well as training producers who are the right types to helping them in the techniques to facilitate their groups".

It is also being recognised that facilitation training can be provided by people drawn from outside traditional agricultural sources.

e) Roles of Departments:

As outlined above this is clearly changing and is likely to continue to change for sometime. All senior managers saw some role for state departments, but these differed particularly in the extent and nature of the changed relationship with "clients". Particular views included:

"we see traditional extension services reducing and we see producers having to become more self reliant ... in relation to their own problem solving."

"I see a clear role for the state departments as contractors or subcontractors to those groups"

"DPI has a key role in facilitating with respect to state and national development patterns - we need to work through empowerment"

f) "Extension" and "technology transfer"

These were terms used by respondents and which are common in the R&D lexicon. We place them in inverted commas here because of the theoretical arguments that have been mounted urging that these terms be dropped from our R&D language (Russell and Ison 1993). These arguments are one force for change but there are many others which were identified in our conversations with senior managers. For example:

"we're moving towards having an expectation that the technology transfer, and I hate that term, because you can transfer a lot of stuff, it is not until it's implemented that it means anything, it's implementation of technology"

"We talk about technology transfer. It has to go beyond transfer into action. And the thing is that until people put things into place and um hopefully get a dollar flow from it we've had no impact on industry. Now there is a lot of debate as to where our role finishes. You can take, present the options to people, should we make ourselves responsible for trying to encourage people to take up those options?"

"producers have made the point to us that those sort of disciplinary specialists haven't been integrating in terms of the messages that they've been giving. So one of the things we're trying to do in the extension strategy is to encourage people to develop extension processes that are more system or system-orientated or more integrated in terms of what they're doing and obviously the LCD project fits into that...."

"and so people at the moment are in the process of renegotiating their role as extension officers in line with the new strategy."

"amongst the others would be older advisers who don't have a lot of background training in extension who feel quite threatened because they feel that the extension strategy says that what you have been doing has not been very useful and you've got to start now at age 45 or 50 or whatever to learn a whole new set of skills and to do things differently and that's very difficult for people to come to grips with. Partly its a misunderstanding on their part, feeling that won't be allowed to do the things they were good at and it is partly just a lack of skills."

For many the increased recognition of the importance of "extension" by RIRC's was welcomed. One senior manager accounted for this by arguing that there was a backlog of research and that research "*wouldn't matter a damn for the next 15 years or more for production*" and that first you had to tidy up "*all the sociological things, all the economic things, all the financial things, all the restructuring on the property things ... and then bring in the technical knowledge*".

Whilst these statements are revealing they also conceal the notion that knowledge, and "technology adoption" arises in the ownership of the research by producers.

g) Emerging models and opportunities:

Many managers pointed to examples that were already operational or emerging which represented examples of their vision for a future R&D system.

"there are already examples of industry driven R&D and where growers are placed in a position where they have some "ownership" of an individual [researcher or adviser]- Dairy Cooperatives (Target 10), Sugar, 80% funded by industry; chicken and pig industries, fisheries."

Amongst the RIRC's the MRC has been at the forefront of these initiatives:

"I think though that one of the things that we have tried that looks as though it is going to be successful and certainly been very enthusiastically received is the producer initiated research and development groups [PIRDS], where we take established groups and we offer them a small amount of money to do what they want to do and some of those are bus tours to find new technology. I think for a group like that a small amount in the context of our overall budget $10,000 each, they can do an immense amount with that sort of money. And they've got to have an objective, they've got to tell us what the objective is"

"once they've got a track record of handling these sorts of things and they can show us that they can do it then I think they should be prepared to put together a group which subcontracts researchers to them and we fund the group and they sub-fund the research contractor. Now I think there is some real mileage in that .....what I would see is that the PIRD thing becomes much bigger. At the moment we've only got 30 groups going ..... it could spread to maybe three times that across Australia, and then we might be able to pull out of that each year 10 groups who are capable of doing something bigger and who want to propose something bigger. And then as time goes on that becomes a recognised way of doing things, and the technology transfer problem has virtually gone if that happens."

This initiative is generally welcomed by producers who know about it (there were many interviewed who did not), although producers also frequently express their desire to retain their local extension officer. Our interpretation of this statement is that they do not wish to see their community losing visible and tangible evidence of a government service even if they never take advantage of it. This is clearly a political issue and in any emerging transformation of the R&D system this issue will have to be treated accordingly. The question these initiatives raise are central to this report - where to in the future and how can they be supported. It is clear that currently with PIRDs

"there are some inefficiencies in administration and some graziers could do with a hand in running the process (grazier/administrator)"

There are also concerns that these initiatives do not have sufficient support and may be being set up to fail:

"providing funding to the extent that producer R&D groups have autonomy needs more than just operational support"

Some suggested means of support included:

"MRC could provide strong support when graziers come up with results which challenge preconceptions, especially of existing researchers"
"to build strong networks with organisations such as a University to particularly enable sufficient academic freedom to develop robustness"
"Travel scholarships for producers which develop analytical abilities, especially for young producers; mentor schemes"

On the other hand:

"some of the farmer groups are saying why aren't, why isn't wool doing this and why aren't grains doing this and so on. I think um, it is early days yet, I wouldn't like to claim it as a success yet, but what I do know is that there is an immense enthusiasm about it."

iii) R&D opportunities

A major outcome of our research has been to reveal the gulf between senior management and many, but not all, producers on the one hand and operational managers and R&D staff on the other in their sense of what is possible from projects such as DAQ 073. Senior management envisage many potential outcomes or initiatives that might be taken and is predicated on a broader conception of R&D than is evident amongst operational staff. Examples include:

"It can be used on issues such as when the bureaucrats and Goss's government I know have been talking about it, a living area in Queensland and taxing people or whatever on what is supposed to be a living area. In fact this information could blow that apart. I mean it's just nonsense to say there are standard living areas. Even within a locality there aren't."

"it is enormous [policy issues around a sustainable living area], *it is far bigger than R&D can deal with and it is really a governmental thing I think, and it may be our job to sort of collect the information and put it on government's door. I come back to that because I think that MRC can do that and has done that."*

"...are there opportunities for us to present this to the tax people for example?"

"There are other R&D implications such as on the very severely degraded land we ought to be looking at kangaroo farming or something like that. And we'd be prepared to do that. But I think this study has got to generate the bases on which that should happen,

convince the industries that it should happen through this information and then it is no use us sort of doing a trial in isolation from all of that because no one is going to see the need to take it up."

Some recognised that : "*people do not see the* [LCD] *document for the potential it releases*" and *"there is no strategic vision of the total package of skills to develop with clients*". What was apparent to another was that: "*there is a learned helplessness behind the lack of action on a lot of the opportunities that have become apparent*"

iv) Threats to the emerging R&D opportunities

Those interviewed saw a number of threats to the emerging alternative R&D models and to realising the potential that was being created. These included:

"not allowing groups to crawl before they walk (but depends on how and by whom they are kick-started)".

"MRC is highly politicised and current staffing practices reinforce the status quo; the Board can receive inappropriate advice"

"Self-help groups need a critical friend"

"the old DPI structure resists projects such as the LCD project"

"researchers may not adapt to the changing structures - the role of the DPI in research support will have to be questioned"

"*the reality is that the adjustment is not going* [on in the DPI] *and there is still a focus on individual properties and not the big picture. Cabinet doesn't know about the drought - we need pictures and patterns and policy support and then in a few years we can get down to property level"*

"extension people are not rewarded enough - arguments are being made with the PSMC. Because there are no progression schemes a vacancy is needed for effective promotion."

An analysis of these threats suggests certain considerations for the future. For example, not pushing groups too quickly and collaboration between the MRC and the DPI on the career structure for people servicing these initiatives if they come to remain in the existing organisation.

In one interview the danger of PIRD's and other initiatives arising from the Project going the way of producer demonstration sites was raised because:

"The early PDS's were a huge success which doesn't surprise me because it's based on adult learning. What happens? Because it became such a success everyone jumped on the band wagon and they started even calling field trials PDS's."

Cooperation and/or competition between organisations was mentioned by many in the interviews either directly or by implication. At a national level there is increased focus on collaboration and certainly there is evidence that it is increasing. The changing resource scenario ensures this but we would suggest from the evidence to hand that there is still not enough cooperation at the strategic, priority setting level between bodies such as MRC and the DPI. Part of this is associated with institutional maintenance and enhancement.

This issue is connected to concerns about producers being grouped out. Two views were apparent on this issue. Those who agreed that this is, or was likely to be the case, and those who argued that producers were very capable people able to make decisions about what they did or did not do. Those who held the latter view suggested it was more a problem of the agencies and organisations who did not know about, nor coordinate with, each other's programmes. Of course the producer's experience of any group activity can be disastrous for a range of reasons but, it was argued, this does not put people off future group activities. Our conclusion encompasses both these views. We suggest there is still considerable good will and active citizenship in rural areas which has the potential to be exploited. That said, as long as individuals and groups are respected, and their experience is not of being manipulated or "facipulated", then they are well able to look after themselves.

From the evaluator's perspective it is apparent that senior managers are in transition themselves. On the one hand they speak about prioritising producer participation, but on the other hand the rewards and funding do not necessarily reflect this goal at this stage. In addition senior managers speak of valuing producer participation but in terms of the effectiveness of this in meeting the already developed agendas of their own organisations.

v) Equity

All R&D is ultimately about attempting to alter people's behaviour (Ison 1994). If one accepts this proposition then questions of equity become important. This was recognised by some senior managers in their comments:

"we very much want to deal with the issues that this portion of levy payers who can't make it have to deal with, and it is very hard to deal with those issues because those people are generally not articulate, um they're not receptive even to the technology as well.....They're less easy to get new ideas across to, even if we have new ideas which can help them."

"we would very much like to address the problems for those people because they are our levy payers just like anyone else is so if it's best for them to move out of the industry we should try and arrange it so it's the most comfortable and it's a real option for them

rather than a disastrous option for them. And you know kangaroo farming or something might be on. But in the overall context of the thing I mean we have to try I think as a corporation to advance the industry as much as possible.

This issue has been taken on board from one perspective in the administration of PIRD's:

" applications for PIRD projects are read for their potential, not on the style and presentation of the proposal. PIRD's are judged and currently managed by producers. When put in graziers hands technology transfer disappears as an issue" (grazier/administration)

vi) "Industry"

In every day speech we often refer to things as if they actually existed and as if everyone shared a common understanding of what is meant by a word. A good example is the word "industry". This term is often used in such a way that really means something like - well yes I understand about that and it is important, in fact it may be critical, but really it is not my concern or it is too difficult.....that is the industry's concern. An example was:

"So on the other hand I think that the industry itself should accept that this is the real situation and it can be information which is based to tell the industry, the industry itself to learn about itself and realise that it must do something to change."

Within the MRC there is an emerging sensitivity to this issue:

" So when you speak of a change in the industry in the context of Queensland or even Australia, I mean who are the people, who is industry, who are we talking about?"

"We're talking about, a change that will have an impact on our industry, we're talking about our shareholders, our levy payers. Our levy payers are the processors and the producers. So there's got to be um, we've even refined that to say we've got to be able to identify the people who you know, we've got to be able to point to Joe Bloggs, a person who has benefited. It is no good saying this is an industry benefit. If there's not somebody out there who's saying yes I have benefited from this and I'm making more profits because of this, the argument is very weak."

This issue is raised because the word `industry' was frequently used when issues were in the `too hard basket' and as a means of escaping responsibility for the `real' issues which beef producers said they faced.

vii) Evaluation

There are inconsistencies between actions that are supported and what is espoused in terms of evaluation. Evaluation is a poorly understood term and illustrates again the system in transition. On the one hand senior managers are often wanting objective criteria on which to evaluate the success of a project.

"with all of our projects what we judge them by is industry impact and that is the only criteria on which we judge them, industry impact. So there would have to have been something changed in industry, something substantial and we have trigger points for all of our projects which they're an internal measure"

"We would like to have some hard data on what is happening and what actually changed. I mean you can change people's attitudes we know that but whether their behaviour changes is another matter. So what we would want to quantitate is that somebody actually as a result of this thing sold his bulldozer and started planting trees. I don't know, something like that. Then we could say that that happened across 50 farms. So that is what I'd say in these triggers and all our objectives. We want to have quantifiable time-bound objectives. And that is very hard in some areas and that is where we compromise and go soft. Only because we can't, it just isn't realistic to define a hard objective.

On the other hand there is recognition that a complex issue such as technology implementation is not easily measured in quantitative terms. Different perceptions of what constituted evaluation were evident, some in contrast to those cited above:

"It's never been easy with extension really to apportion how much of the outcome was due to me, I mean there's lots of things that influence why people adopt things and the benefits they get out of them. So i suppose I feel comfortable with the fact that if i participated in a process and it worked and people did adopt, then I'd claim some of the credit and it doesn't matter whether I get the proportions right or not. Now in these days of costs and accountability.... people have some difficulties with that but I don't."

viii) Resources

The national agricultural R&D effort now exceeds half a billion dollars annually with the majority of funds ($470 million in 1990-91) being expended through public institutions (DPIE 1993). Projected expenditure for RIRCs is $264 million in 1993-4, approaching 40% of total public expenditure. Collectively they are a powerful and integral part of the R&D system.

The recent QDPI review found that between 1986-7 and 1990-91, funding for R&D from consolidated revenue (in real terms) dropped by 20% whilst external funds, mainly from RIRCs increased from 14 to 23% of the research budget over the period. This is indicative of the increasing leverage RIRC's have in contributing to research directions.

When averaged across all RIRCs 81% percent of funds are spent on what is termed R&D which is differentiated from communications and technology transfer (13%). On average sixty percent of the R&D budget is currently allocated to production research.(DPIE 1993). This report also noted that "*Several RIRCs noted that resources devoted to the communications/technology transfer area have, or will be increased in future years*" and that one RIRC directs 11% of its budget to this area and funds "*extension/liaison officer positions to enhance the transfer of R&D outcomes to industry*".

There is concern in the MRC that as an organisation they may not be in a position to fund all initiatives which arise from the Project. A related concern of some DPI managers is that they will not be able to service the expectations that are generated from the project in terms of staff and financial resources. For example:

"I think we will be a threat to it if they can't show that they're going to do something with it. We won't continue to fund it if it's just going to produce strictly local benefits which um. I mean we've always said, we always limit our involvement in things until they become robust enough to sustain themselves."

"I mean if it goes for 3 or 5 years and produces magnificent results then we can say well this is well worth going on for another 5 years. But we won't say righto fella's go for your life, we will underpin this forever, we won't do that. So it's always depending on what results they get."

This was particularly linked to the issue of facilitation and how groups might be supported in future:

"I think ultimately[in 3-5 years] *the facilitators have to come from within the existing groups and it comes back to a leadership situation, whether or not that particular person is going to be comfortable in that role, how he is going to be perceived by his peer group, in view of the fact that it will be one person out of ten or a dozen people that will come out of that group or there may be fusion of two or three of these groups. The thing is that when you look at the circles that Richard has got, I think in many cases it will be many common problems across what are now discrete groups, so there could be a coalescing of three or four groups of 10 people now, three years down the track four groups of 10 may come together into a group of 15 or 18 people that are benefiting from the experience and elect to keep going - I don't know. These are all potential scenarios.*

Other potential sources of funds would appear to exist, but were rarely identified in interviews. For example the DPIE funds several agribusiness programmes to assist in the implementation and commercialisation of R&D outcomes. These include RIBES (Rural Industries Business Extension Service) which will provide up to 50% of the cost of employing a consultant or facilitator who (among other things) can provide professional help on value - adding or technology transfer projects. WBPIS (World Best Practice Incentive Scheme) aims to assist farmers, processors and marketers of rural products to adopt best practice methods in their operations. IAMP (Innovative Agricultural Marketing

Programme) provides development finance to market rural-based products, processes and marketing systems.

In Victoria producers pay to belong the Farm Management 500, which is expected to soon plateau at 500 producer members. This has been supported by the MRC as has the BIA (Beef Improvement Association) technical officer. The National Australia Bank are potential sponsors of group based R&D in Victoria.

One conclusion that can be reached is that the R&D sector will increasingly have a diversity of "players", many of whom were not part of the traditional system. This will alter the distribution of funds but it is impossible to tell the direction the total resource pool for R&D will take. In the context of the project under review, future activities will depend on: (i) how much the RIRCs are prepared to move funds away from traditional research areas in the first instance (these funds may find their way back to the same sources but via different organisational arrangements); (ii) the extent to which there is greater coordination and sharing of a sense of purpose between RIRCs, Landcare, and initiatives arising from State Government consolidated revenue.

SUMMARY

The themes identified from the interviews reveal an R&D system in transition. There is a strong sense that the traditional model of R&D does not deliver to producers and thus the failure of technology implementation is seen to be a major concern. There has been a significant move to consultation with some beef producers. The extent to which producer participation in R&D is to be embraced is not yet clear. The outcomes of the Industries Commission inquiry into R&D may accelerate the rate of change within the rural R&D sector.

This section of the report covers a diversity of issues, which together reflect the complexity of the changes confronting the R&D system. We have felt it important to cover these in some detail because we perceive that there is a limited appreciation of these issues amongst operational staff and amongst most beef producers interviewed. This has important implications for the future of the project under evaluation, but perhaps more importantly, what transpires beyond the life of the current project in terms of producer involvement in R&D and the resultant technology implementation. The issues encompassed in this section of the report are worthy of further discussion and debate with members of the R&D community.

3. PERSPECTIVE'S ON THE PROJECT

3.1 History and development

The LCD technique had its origins in Canada and was first used in Australia in 1976 by Gordon Yabsley in the wine industry in the NSW Hunter Valley. On the initiative of Rod Strachan (formerly DPI, now with Taylor Byrne) the technique was first used in Queensland in the Maranoa region from a base at Roma in 1987. This was ***in response to a request from producers*** in Landcare to the Department asking them *"would they put together some sort of manual on grazing"*. It was felt that a manual would just sit on the shelf gathering dust so the idea of adapting the LCD technique was proposed "*as we can't wait for research we must ask the graziers*". Initially the LCD technique was introduced from the standpoint of an adult learning model and where "*the LCD was a social group of people .....What's the criteria? Someone you'll have in your lounge room".*

There was a network of tensions which surrounded the formulation of this project. These were internal to the DPI as well as between DPI and MRC. Within the DPI there was strong opposition from within Agriculture Production Branch; for some there was: *a strong perception that the LCD process failed in Roma"* but for others *"it was not supported"*. As one person observed: "*the Department went through one of its throws and we were made either redundant or sent overseas....the whole thing just fell apart.....that is one of the fundamental problems with extension.....there is just no continuity.*"

However, it should be noted that at Roma one of the groups continues to this day on its own initiative, and that four new Landcare groups formed from the Maranoa experiences (Lawrence *et al* 1994).

The initial project proposal was knocked back in the DPI and then, with some fostering from MRC came forward as a proposal for a state wide project with a central management committee "*for the purposes of quality control*". This was not supported by the MRC and the current Project in Central Queensland was funded "*as a pilot*" based around Richard Clark. Many of these tensions remain. Some comments made included:

"the LCD project has needed protection within the DPI"

"there are still people shooting down the project"

"Richard has suffered a fair bit of psychological abuse"

"few people understand it or see it as a 3-5 year scenario"

From there the project has continued to evolve: "*we said well once this pilot gets underway we could assess its value, I think we set something like an 18 month time frame. We would review it and subject to that review extend it into North Queensland. As it transpired it's gone so well here that we took a premature decision to get it started up there and that's what's happened".* The most important criteria on which

this decision was based was *"Probably producer acceptance.....producers really were enthusiastic about this as an opportunity for them to contribute sustainable grazing practice guidelines"*. The MRC was also pleased with the quality of the output, although some concerns have also been expressed (see below).

The Project is officially entitled "Sustainable beef production systems in central Queensland" but in everyday conversation is almost universally referred to as "the LCD project". As suggested in the introduction this is a source of tension. As one observer put it:

"the project is seen as LCD, not "Sustainable grazing project" - which has meant that there has been a lot of time defending the methodology, and many see it as an end, not a means"

One grazier made a specific point of contacting us to suggest that the name had to change because it gave no sense of what might be possible, and that consensus often lead to the lowest common denominator.

We note that the term "technology transfer" does not appear in the Project contract between DPI and the MRC but it does refer to setting out "*extension methods that will be utilised in the adoption of sustainable beef production*".

Several senior managers were quite clear that to see the project as a "technology transfer" project was quite unfair. As one put it: " *it was quite clearly and even still is a process for collecting producer perspective's on sustainable grazing practice. That's what the LCD project is. I think anything about technology transfer is not about the LCD process it's about how you utilise the groups and empathy or whatever that's occurred with those groups being formed and used like that.*"

This person was highly supportive of the Project but further comments made exemplify an important dilemma confronting the future of this and similar projects. The dilemma relates to the use of language and how that language is interpreted or experienced, particularly by producers. This person went on to say: "*But I would have thought that as far as technology transfer is concerned what we're really talking about is how do we use the group that's working well together and how can we feed into that in a way that'll see a greater uptake of technology.*" Our concern is with phrases such as "**how do we use the group**" which has overtones of manipulation and certainly does not reflect a relationship of equals, something that might be achieved by substituting "**how might we work together with producer groups so that we are able to address issues of mutual concern**". The latter is the language of invitation, which arises out of an alternative theoretical framework and ethic and gives rise to the possibility of developing co-researching relationships.

3.2 Perceptions of the project by R&D managers

A useful distinction for considering the perceptions of managers is in relation to strengths and weaknesses at either the strategic, allocative or operational level. For the purposes of this discussion we include theoretical issues in the strategic arena.

i) Strategic/theoretical strengths

Richard Clark, and the role that he has played, was seen by almost all senior managers as a major strength.

"Richard Clark has put one hell of a lot of time into this particular area at this stage and quite obviously unless you've got a dedicated employee who's sole task it is to drive these things, it is not going to happen. "

Our interviews show that he has the full and unreserved confidence of the MRC. He was also seen to be in touch with the theoretical underpinning's, particularly in regard to adult learning. Some questioned the sustainability of any system that was dependent on one person. This is addressed under future directions.

The project was generally accepted as addressing one major area of concern (although this concern was not expressed by all respondents). This related to the dearth of descriptions of current practices, which was seen to be essential understanding as a basis for future R&D planning. Thus the "*LCD provides opportunities for bench marking and then moving on to best practices*".

The modelling efforts associated with the outcomes of the Phase 1 workshops was viewed positively and this aspect of the project is worthy of enhancement, with the products being subject to greater critical scrutiny by both producers and the R&D community both informally and formally (eg publication). This cannot be sustained in the present project structure however. Consideration might be given to the allocation of further appropriate DPI staff resources to this component of the project.

ii) Strategic/theoretical weaknesses

There is concern in some quarters as to whether the LCD process provides baseline (actual practices) or benchmark (ideal practices) data. One respondent suggested that the "*LCD may be useful to provide one form of benchmark, localised and owned by some producers but the MRC argues that the LCD provides baseline data*". This person argued that what is needed is baseline data.

The fact that there are two processes running concurrently - LCD and PMP - was seen as problematic and of concern for many, but not all. This depended on organisational role. Clearly some managers saw them as dove-tailing and helping either each other or the achievement of PMP's objectives. It was suggested that this was not as problematic in North Queensland as it was in Central Queensland. We suggest the MRC and DPI should view with some alarm this clash of endeavours which impinge at the strategic, allocative and operational levels. The PMP because it is institutionally driven develops from an "extension" push which may be directly opposed to the LCD project if it is to be understood to be a participatory and producer lead project.

There was a strong sense of concern that a potential weakness of the project might be that the trust and information provided might be abused.

"I mean its information is power and if power gets into other people's hands who might want to use it mischievously well it might be detrimental to them."

"I think that if it um if it was, if the QDPI misused the information I think that could bring it to a shuddering stop. I think that they um, I think Richard Clark has got a very good rapport with the people as I saw it and that they would trust him. But if they'd found that the information that they'd given him, and it wasn't confidence, I mean he cleared it with them before he even gave it to another group. But I think that's the danger, if somebody two or three down the line suddenly felt oh jeez this would be good to give my mate in the ACF or something and suddenly it appeared in some anti-beef cattle issue, I think the thing could dry up over night. ***It is a fragile flower that confidence and that is a threat to it I think.*** *Threats contained in just putting it on paper really."*

Our response to this issue is that nothing is to be gained in the long term from running away from this issue. The demographic and political realities of Australia mean that all resource managers will be increasingly subject to public scrutiny. A proactive stance is likely to be more advantageous in the longer term. **This issue needs also to be squarely addressed in the initial invitations to participate and during the meetings.**

The issue of training was named in a number of interviews. It was acknowledged that the Project team had had considerable early training but several still saw this as a major issue. There were some who suggested the need to move outside the current arrangement with the DPI. Clearly policy makers within the DPI also see new structures and arrangements continuing to emerge.

Several future initiatives or scenarios were envisaged:

" the challenge over the next five years is to develop the theoretical underpinning's of the process for staff and support personnel."

"the project will be enhanced by starting it in other parts of the country and then increasing staff mobility and interchange"

These issues are taken up in future directions (Section 8).

iii) Allocative Management Strengths and Weaknesses

The management of this project within the DPI and latterly the Tropical Beef Centre (TBC), has been conducted in a very tense and emotion charged environment. Our interviews reveal a wide range of perspective's and interpretations of events depending on the perspective's and roles of the individuals concerned. It is not possible for us to enumerate all of these and as we are charged with evaluating this project our comments are restricted to factors which have either aided or constrained the achievement of the project objectives.

One of the most pervasive influences on the project has been the continual challenges on methodological and theoretical grounds arising from within the traditional R&D establishment. This would appear to have been often ill-formed criticism in theoretical

and methodological terms, with constant interpretation of the projects objectives from a positivist empirical standpoint. This has helped to create a siege like atmosphere around the day to day activities of the project. This has consumed unnecessary time and emotional energy and has probably constrained the project considerably. Many senior administrators viewing this from the outside see this as having "passed over" and see many former critics as "having come on side". This is an unrealistically optimistic assessment at this point in time.

Another major source of tension is in the annual round of negotiations for staff resources to service the project and in the subsequent management and operationalisation of these "on paper" time commitments. One manager described his role as "*cajoling, conning and getting people to participate in the project in various ways.*" The system is still plagued by old rivalries and the ability of individual staff to play one programme (and programme manager) off against another. It has also been seen as more demanding managerially and more difficult "*than most projects because it has such a man-power requirement.*" This project requires also the desire to cross discipline boundaries (which is risky and may nor be rewarded in the present system)- some officers were far more successful in this project than others. This has not been helped by the pervasive sense of crisis existing within the DPI and the "dissolving structures". No one within the DPI provided alternative scenarios for the allocation of staff resources to a project such as this.

Several managers close to the Project operationally suggested they "*would not like to judge strengths and achievements at this stage*". One particular manager saw that what came out of the whole ie. completing all the Phase 1 and subsequent activities and refining the process as it went as one of the most important issues. Concern was expressed at the ability of DPI to respond to the expectations and demand that the project was creating: eg "*I mean the increased demands for sustainable grazing in terms of plant identification .... the awareness has been raised tremendously and every group wants us there every day.*" There is clearly a tension between the role of a "programme extension officer" and an R&D facilitator (the role that is required to fulfil the possibilities raised through the Project).

This has important implications for the MRC, suggesting a need for more interaction and flexible planning, including possibly an active role in the project management. Currently under NAP2 projects are said to be formulated by a "series of checks and balances" including consultancies, surveys, and consultation with producers and researchers. This project formulation process and the intended greater integration of all NAP2 projects is not transparent to those outside a small circle. The integration would appear to be sought after the "formulation" rather than being a product of the "formulation". The commitment of all resources over a five year time frame leaves little opportunity to respond meaningfully to initiatives which are demand driven (by producers) rather than "supply pushed".

iv) Operational Strengths and weaknesses.

A major weakness, in the context of senior and middle level managers, was just how few had participated in a Phase 1 LCD. That is, they had **no experience of the process in operation.** The implications of this are profound given the very different

nature of the project, and the fact that all R&D personnel who participated saw it as a positive experience.

Concern was expressed that the hypothetical property that was discussed was restricted to 4000 good (class a) land and did not reflect the balance of land classes (as per Tothill and Gillies) likely to have been found in the district. Thus there seemed to be little data emerging about degraded land. This issue appears to have been addressed in the latest guidelines for group facilitators.

The "*poor knowledge graziers had with plants and their resources*" was revealing" for some. For some the variable nature of the data meant that they considered the process to be more important than the content.

Several people commented on the amount of material that had been generated from the project and the difficulty with handling this in a productive way. At times this placed overloads on the system, and was subject to time delays associated with the personal priorities of all those asked to contribute either technically or editorially. Some suggested that there was no feedback on suggestions for changes in the project when they were offered.

4. EVALUATION OF THE PROJECT FROM A PRODUCER PERSPECTIVE

The following conclusions are based upon interviews with participants from 8 LCD groups; one group of LCD group leaders from a region (Calliope) who represented five groups in that area; 4 interviews with individuals who had been involved in the LCD process and observation two groups at phase 1 and 2. Groups were at various stages in the LCD process. Two groups were yet to receive the first phase document; the other 3 groups and the Calliope groups all had the booklet which documents the benchmark of sustainable practices for that area. Two of the groups had moved -past the first stage of the project.

The consensus from every group and individual was that the process which had been embarked upon had been worthwhile and many groups and individuals were extremely positive about the process. The producer's perspective on the Project needs to be understood in its own terms. No group or individual, other than the Kunwarara group and one of the Calliope group leaders articulated any notion that the process was ongoing.

4.1 Phase 1 - Strengths - Producer Perspective.

Producers consistently spoke positively of the **goal orientated** nature of the LCD process. Meeting to produce a document which was worthwhile for new people coming into the area and which provided documentation of current sustainable practices for the area was considered a useful project that was worth the time and effort that was required. Generally producers expressed considerable pride in the document and were pleased with the outcome of their discussions. There was a suggestion that a map of Queensland on the cover which geographically situated the area covered by the book would have enhanced the document's accessibility. Particular emphasis was given to the user friendly, accessible nature of the booklet.

Several producers also felt that **documenting current sustainable practices** was a useful goal with which to confront the environmentalists. Particularly producers who articulated a connection between farm management, productivity and sustainability felt that this document provided a basis from which to argue their case.

The **concept of sustainability** was also tackled and often discussed in great detail. One of the DPI project team described the grazier discussion of sustainability:

'It was their words, they said, " maximum production with no degradation of land. And then they said amongst themselves oh bullshit. You know we're never going to get no land degradation, so, okay, minimal degradation. And then they said oh well look you're not going to get maximum production under those circumstances are you? So we'll go for optimal production and we'll minimise land degradation....It was their definition, they'd come to an understanding of what they wanted to achieve....They have come to construct a meaning around the word sustainable which they can work with every day.....Once they understand it they get confident about communicating it.'

Not all groups had this experience and some facilitators are now quite wary about the way they tackle the issue of sustainability.

The producer **exchange of detailed information** was also named as a particular strength of this process. Although producers often met with each other, the level of detailed discussion which occurred with these discussions was named as qualitatively different by many producers. There were a number of spinoffs from this process:

a) Producers said they became more **aware** of the reasons and consequences of their farm management practices. LCD meetings often demanded that producers explain to each other what they were doing and why. They suggested that this process may not lead to immediate changes, but made people question what they were doing.

'It helps focus our attention on every piece of information that you can pick up...it focused our attention on what we are actually feeding and how to achieve our end aim of feeding cattle better.'

There's nothing like some other fellow asking you about why you wean at this particular time to put you on the spot, and make you think about what you are doing'.

b) Some, though not all producers picked up **new ideas** which have led to immediate changes in practice.

'Listening and talking to other people, that is how we rural people in general get onto new ideas. When you get put in that situation where you have the benefit of all that knowledge you see things from a different perspective. People don't just say this is what you do. They also say this is what you get, they give you the reason why they do that. When things are made relevant like that then you can relate it back to your situation and you can look at your problem in a different way.'

In the interviews individual producers named a number of specific actions which they had undertaken as a result of participating in the LCD. These included:

* inoculation against botulism
* control of rubber vine
* burning
* allowing more saplings to survive
* new teeth requirements at the meat works were pushing some producers towards change and they picked up new ideas from the discussion.
* more careful about how and where soil tests are done.
* different use of licks for feeding cattle in the drought.
* the use of cotton trash to stop erosion
* mating time for young heifers changed

c) Other changes were longer term. They were not necessarily directly part of the LCD process, though certainly these discussions with other producers were part of providing the continued impetus for change. A couple of producers pointed out that when competition between producers is friendly and open then this can provide improved outcomes.

'If, P. is doing something better than I or I better than him then he'll go over and have a bit of a squiz won't he. If I'm a dollar in front of him he wants to be up there. It's competition.'

'It's part of keeping at the cutting edge, knowing what other producers are doing and what works for them.'

As part of this process, one group mentioned that a goal for the group was for each producer to eventually have a computer and to be able to use it.

Several other producers said that with the drought there was little they could do at the moment other than survive, but that they had some ideas that they would like to put into practice when the drought broke. This referred particularly to the planting of improved pastures.

Other producers said participating in the LCD would prevent costly mistakes. One producer said, and others agreed:

'I had some ideas about what I was going to do but I certainly don't have those any more'.

d) There was general agreement that **young producers in the area gained more** than the more experienced producers in terms of new ideas and practices. The depth and detail of the LCD discussions provided excellent information for these producers. Unfortunately, the 10 year criteria for being part of the group meant that new and young producers were thinly represented. One producer suggested his group was much more 'full mouth than 4 tooth!' In each group, the newest producers to the area quite independently mentioned that they felt that they had gained the most from the experience and ideas which were circulated in the group.

The more experienced producers said that they always picked up something from discussions such as these, and that both the document and the discussion would have been invaluable when they first began and would have stopped them making mistakes.

Producers also spoke positively about the **change in the relationship with DPI personnel** using the LCD process. Each group and individual commented about the value of starting with producer based experience.

*'I felt that when they started this that they were at last getting on the right track. I've done a lot of work with them over the years, breeder trial work. It used to annoy me. We would have 4-5 DPI personnel there and they would go and talk amongst themselves....I thought they would be far better off going out and **finding out what producers are doing**, rather than telling producers what to do, or this is what the DPI recommends.'*

'I thought at last they are going to ask producers what they think, instead of trying to tell them. It was a two way street.'

'Someone asked us what we actually wanted to do instead of getting useless information shoved at you and told that you should be able to use it.'

'Roles were reversed this time - producers asked were asked for information rather than vice versa. Now information is coming from the people who are doing it.'

'Its definitely better this way. They're talking to us. They're "milking our brains". We don't mind. Their's something in it for us, you couldn't take their advice before.'

Great value was placed by producers on this aspect of the process which they felt signalled a new respect for producer knowledge and experience.

For groups that were well established, **taking control of the research and development process** so that research was made both accessible and relevant for their area was considered a particular strength. Generally, producers expressed mistrust of much of the research information that was given by the DPI.

> *'When it comes to research and government departments we are pretty sceptical. I think they are out of touch.'*
>
> *'DPI has a terrible name amongst some people out here. In the past they have given bad advice, particularly in the brigalow country.'*
>
> *'There is a problem with the so called experts. They ran trials and gave advice that didn't work. Even now, is age really a determinant of quality? It might be that better pasture is of more significance? Pelvic measurements were used at one stage and they proved to be a load of garbage....Producers have to put their money where their mouth is and there are a lot of risks involved.'*

This was not always the experience of producers. Some spoke highly of the high value they placed on either a particular past or current DPI officer. The Miriamvale group valued highly the input of a DPI officer who has very recently resigned. They felt that his continued support for the Miriamvale Rural Science, Landcare Group has been invaluable.

"He was a great listener, always encouraging of the group and his technical advice were very good also.

Undertaking on-site research, led by the needs of the producer was being undertaken in two different groups and spoken of very positively. There was consensus in both groups about the accessibility and relevance of the research.

> *'Producers do get a say and get the information back....we control it. If we don't like the way it is going we will change it. That's never happened before, even at the research station down the road. Most of us wouldn't know what the heck they do down there.'*

'We have an access line to research that was never there before.'

We've got to get them out of those buildings and into the paddock. Tell them this is the problem that we have got to fix. Work with us. In the past they haven't used the knowledge that is available amongst producers.

The LCD highlighted a question I've had for a long time about early weaning. You lose 12 months on the coast with weaners. I'm looking at different feed supplements to see what makes a difference.

Other members of one of the groups were undertaking research with a new planter and another with stocking rates. These results would be shared at a producer organised field day for the local area.

The issue for these groups was not just that the research was relevant, but that they felt that they could **trust the results and that they gained immediate feedback.**

I think that communication between producers and the CSIRO has not happened until recently. They've done good work and not many people know about it. There has never been a flow back.

There is a flaw in the MRC system. In the past there has been research done. Someone had a good idea, it got funded. There was no producer input. We never got any feedback, we wouldn't know what they did.

This research is in your own backyard. You can see for yourself.... Someone isn't just shoving information down your throat.

A further aspect of the relationship with DPI personnel is that **good facilitators were appreciated.** Their commitment to producers, their accessibility, their respect for producer knowledge and their interest in producer issues and problems were highlighted through this process. Relationships with the DPI generally were enhanced through this process.

"We're really pleased with the contact with X. He likes to get out in the paddock".

"Initially I was a bit suspicious. I didn't like the man. But now I've changed....He's committed."

On the other hand, the reverse occurred where there was a poor experience of facilitation.

'As far as the local fellow here goes, he didn't do much. I thought he had died I hadn't heard from him for so long. We didn't see him before, we don't see him now.'

'Our local fellow hasn't been responsive. We've not even had the second meeting yet and its been more than 8 months since our first meeting.'

An important aspect of the LCD process mentioned by some, but not all groups was the **enhancement and development of local producer networks.** Some groups already met in other meeting and social venues. For others however, the LCD process bought producers together who had previously had little to do with each other, or else extended the quality of relationships for producers in the area.

'We don't get together as much as we used to. We need a wet season for that. We don't meet together at any other time, distances are too great.'

'This was the first thing in a long time that has really drawn people together as a group.....Twenty years ago it was any excuse to get together. We met in groups regularly then.'

'There are blokes who haven't been seen at meetings for years, but they are here.'

'There are neighbours with adjoining properties who hadn't met until the LCD meetings.'

The potential for the development of **a stronger, more organised `producer voice'** was mentioned by several, though not all groups as a positive initiative which could come out of the Project eventually.

4.2 Phase 1 - Weaknesses: Producer Perspective

The weaknesses named at the Phase 1 were different from those experienced by groups who had moved into the second and third phase of the process (See Section 4.3). The weaknesses mentioned were often only seen as peripheral, and as recommendations for improvement, not as comments that should threaten the project.

The following weaknesses were associated with Phase 1:

a) The issue of who was included in the Phase 1 discussions. Producers expressed the view that **younger producers** (and young people who may not yet be independent producers) gained most from the detailed LCD discussions. By using the 10 year criteria for inclusion, these producers were often excluded from the initial process. In other groups there were concerns that the exclusive nature of the group was potentially destructive.

'I was a little bit worried originally when we were sort of picked out to be in this group. I thought we'd have to be careful of jealousy from people that weren't invited...It still worries me a little bit, because you know if you gain from an association like this it's only right that it be spread around to everyone. If you get that jealousy thing you know it can really pull an organisation down.'

b) **Women were also not necessarily included.** The initial invitation often didn't make it clear whether the couple, or only the man was invited to the discussion. Active consideration was not necessarily given to meeting times which would suit women and ensure their participation. This was not true of all LCD groups. In some areas the woman was the LCD group leader and women were active participants in the process.

c) The **slowness** of the LCD process was frequently commented upon. Although some groups acknowledged that the drought was a consideration in holding up the process, others felt that the process once embarked upon should have been continued.

'It has been a slow process, and certainly taken much longer than it should have.'

'We had our first meeting in March last year, it is now September 1993 and we haven't got the final draft.'

Extension officers when spoken to about this issue said that their personal work load 'servicing the drought' had increased and the LCD project had to be given a low priority. The hold up in the process was therefore not always (though sometimes) coming from producers saying they couldn't meet in the drought, but from extension officer priorities. One of the senior managers comments on these priorities had particular relevance to this issue:

'In South West Queensland during the previous recession .... one of the very important things we found there when producers were in hardship was that they tend not to socialise and the major thing we did in extension at that time was to provide excuses for people to come together and share. It can be just sharing your problems but it leads to sharing of solutions....Now we've never been knocked back on that sort of approach to trying to help people to come together to solve things.'

This senior manager was suggesting that group facilitation, (possibly not the LCD in its organised format) should not let up because of the drought.

d) In some groups there was **disagreement about the differences between best practices, sustainable practices and base line data about current sustainable practices.** There was also a lack of clarity about the links between sustainability and production in some, but certainly not all areas.

'The document from my group may represent practices which to date have been sustainable or successful, but you certainly wouldn't recommend them....There were too many 'backwoods fellas' in my group.' [Upon reflection, other group leaders pointed out that although this may have taken from the actual value of the document, it would have been the first time ever that such producers had been in contact with the DPI or been in discussion with other more up to date producers.]

'Base line data, that's what it set out to do. A lot of the practices I don't adopt. But it's a good record. Not the best practices, or the most up to date, but they are sustainable for this point in timeIt is what is done in the area. Not necessarily all practices are what are recommended, though that's there as well.'

'Sustainability is a marshmallow word. It suggests that we are only trying to save what is there. It doesn't have within it a notion of improvement. There has been a lot of degradation of the land in this brigalow area'

e) There were concerns expressed in most groups that the document would need updating, as what was current best practice would be different 5 years from now. It was felt that the **bound book format might make the document difficult to update.** Some groups recommended a format in which sheets or chapters could be added.

I hope that the documents aren't used to make things set. There is no value in doing something just because everybody is doing it the same way.

The LCD provides a summary of what has been done. There is no discussion of what we are trying or things outside the basic guidelines such as how to improve aspects of productivity.

'I want to be able to insert a chapter on drought management.'

'We need to meet every 2 years to update so the document remains current.'

f) Some, though not all groups saw some of the detailed **documentation of farming management as potentially dangerous.**

'My group expressed a fear of government regulation and worried about the release of the data. They decided not to proceed with documentation.'

'Perhaps the information like this could get tangled up with the Landcare programme and used as information against us. I thought that would be a possibility.'

g) In some areas, particularly where producers were already active in well established groups the LCD process could **potentially hijack the agenda and processes of these groups.**

'It was as if the DPI came in with their own agenda. It was a real issue for some of the members of our group.'

'We have to be careful what we get involved in because you can get overloaded. But we have a choice. If it isn't beneficial we make a decision as a group to scrap it.'

An incident has come to light near the end of this study which highlights this very significant issue. In conducting our interviews we became aware of the pilot financial study being conducted by Taylor - Byrne using the LCD group members. We were concerned about what seemed to be forcing an external agenda onto the groups. We understood from our interviews that some were prepared to participate despite the length and complexity of the questions and the obvious lack of consultation with

producers in the survey design. Producers named as contribution to the industry and the possibility of getting something out of it themselves as reasons for being involved.

Our concern appears to have been justified. In a meeting in the first week of December Taylor - Byrne met with several of the groups and announced that the producers would have to pay for the analysis of the data. Group members were furious. This had not been foreshadowed in the early stage of their participation. As the Taylor - Byrne study was seen as associated with LCD groups the continuation of this process and support for future MRC programmes is being viewed with suspicion. This group, though a participant in the consultation for the evaluation could not find anyone who wanted to attend the final feedback workshop.

h) There were some concerns that the **real gains to be made in beef production were outside the farm gate**. Producer efficiency could only marginally increase the viability of many properties as the differences between efficient and inefficient producers was not differentiated in the current transport and marketing system. Efficient producers were not necessarily rewarded for their efforts. Any efficiency gains were swallowed up by increased meat processing and transportation costs rather than returned to the producer as profit.

In many areas, on going viability of the property enterprise was based on off farm assets and diversity. These issues were not addressed in the current format which concentrates specifically on the management of on-farm beef production.

Again, this issue was mentioned as both a strength and a weakness. On the one hand producers congratulated good facilitators for keeping them focused and `on track'. At another level producers also felt that important aspects of their total operation were being overlooked through the current focus.

From the **evaluators' perspective** there were several issues which were not necessarily cited by the producers but which emerged from our discussions with producers. These are areas which from our perspective need to be attended to in the future development of the programme.

a) The **facilitation** of the groups appeared to be very **uneven** both in terms of facilitation group skills as well as commitment to the project and its aims. Groups who experienced good facilitation from a committed DPI extension officer appeared to have a very positive experience. Other groups, although speaking positively of the aims of the project were finding the process inordinately slow and that there was no ongoing commitment to them as a group. The facilitation process had not left them with any sense of necessarily wanting to continue with any development of the project.

b) No group who were in the first phase of the project articulated any **knowledge of the 2nd or 3rd phases of the project**. The end phase of the project was understood to be the `Sustainable Grazing Management' document. Several DPI staff who were spoken to about this issue said that future directions had been mentioned. In one group, a group leader, when more explicitly questioned recalled that he had been told that the document may be seen by DPI staff for their comments. Other groups could recall no such discussion.

This issue raises concerns about facilitation and whether DPI practitioners were concerned about not dampening producer enthusiasm for the Phase 1 of the project by telling them of its potential ongoing nature, or whether the potential of the process as a shift in R & D priorities to producer led initiatives and adult learning models is not fully recognised and named.

In summary there were a range of issues cited as weaknesses by some producers in the LCD process. These issues need to be understood in their context. This was that they were mentioned as peripheral and constructive criticism to a process which was responded to very positively.

4.3 ISSUES PAST PHASE 1 OF THE PROJECT

Two groups in the Central Queensland area have moved past Phase 1 of the Project. There were a number of strengths and weaknesses identified in the Calliope Phases 2 and 3 which may be built on for an improved process for other groups.

The response to the Calliope Phase 2 and 3 by producers was extremely varied.

The questionnaire evaluation of the Phase 3 workshop suggested that from a producer perspective, the day was worthwhile overall, particularly the morning session, and that a substantial number of people said that they would follow through with action from the workshop. The open ended comments on the questionnaire suggested that although there were aspects of the day that were valuable that there was room for improvement in the process.

Three areas for improvement were named by some producers and their comments were frequently backed up by observations from DPI staff who attended the workshop.

a) All people commented that there had been much too much information to digest in the workshop and that a lot of the information was not relevant to them.

'Talks were too long - rehash of information already available. More group discussion on particular points.

'A good collection of material. Probably presented in blocks which were too long. Suggest having 4 sessions instead of 2, as too much to absorb at the one time.'

'The level of some of the information given to us was just insulting.'

'The accountant should have been asked. Tax incentives for land care and drought property management.'

'You don't learn much from being 'preached at' by one speaker after another. Particularly when we'd heard half the information anyway.'

DPI personnel were not happy either with the process of the day. The preparation for the Phase 3 day appears to have created considerable tension in the DPI which was not alleviated by the outcomes on the day.

'It was the most horrible day that I have ever seen. It was the most poorly planned extension day that you could possibly have where we had 8 speakers just bang, bang, bang. You know it's just an overload or a complete disaster.'

'The running of it could be a lot better. It started off well in the morning but we got behind and we had too many speakers and a bit bogged down in the afternoon. I think we should have left more time for group discussion and we would have got a lot more involvement by producers.'

The outcomes of the Phase 3 stage also reflect tensions which have long existed within the Calliope Land Conservation Association, and in more general terms within the producer community. Members of the Grazing Subcommittee of the Society were consulted and involved in the planning of the day, although the extent and nature of this consultation is unclear. Some influential members of the group were perceived to be anti-DPI particularly being concerned about the usurping of the Landcare agenda with a DPI initiative. Despite these problems, initiatives have come from the Phase 3 process and are being acted upon and funded by MRC (eg. bus tour). One producer member of the organising committee subsequently commented that participation in the overall LCD process had helped to break down some of these historical animosities.

All involved felt that a number of lessons had been learnt from the experience.

b) The manual which came out of the workshop, which the producer's had requested, was not necessarily seen as accessible, particularly relative to the document the grazier's had produced. The producer's we spoke to didn't express any sense of ownership of this document, and did not see the document as practical in the way they found their own 'Sustainable Grazing Management' document.

'This (holding up the Phase 3 manual), I'm not sure what the use of this is going to be.'

'I think that this is well worded (producer document), particularly from what there is here compared to things in that (Phase 3 folder). There's too many facts and figures in it.'

c) A basic problem with the day was the attempt made to balance the needs and demands of different sub-groups within the Calliope Landcare Association itself, and similar diversity of demands within the DPI. The sense of 'ownership' for the workshop appeared to belong neither to the DPI or the Calliope group, nor was there a sense of common collaboration over the issues for the area.

'Although some people got a lot out of the day you wouldn't want to repeat it. We'll work more with our own initiatives now.'

'..they had so many different people there who wanted different things out of the day and it's very hard to know what people want and to get them that sort of information.'

'I think that we have learnt from that that ..we'll only ever run with their (producers) *agenda entirely. Because we had some DPI agenda in there .....we went down prior and presented what we were going to do and got producer's opinions on that....but still on the day there was some surprises for them which they weren't happy with..'*

As a result of the Calliope experience the Phase 2 - 3 process of the Project has changed. The shift is significant, as evident from a planning meeting of LCD group representatives from the Rockhampton Spear Grass region (9 producers, 3 DPI staff, 1 evaluator present). All present spoke positively about their experiences of the LCD to date. Reflections on the Calliope Phase 3 process were presented by one producer. There was considerable enthusiasm for dialogue and cooperative activity between the representatives of the LCD groups present. A number of initiatives were identified (Appendix 4) and the issue of further consultation and broadening the base of participation was taken on board for the next planning meeting. Those present did not accept the invitation to have the DPI 'challenge' their practices with a view to identifying superior technologies. This however did not mean that they were not keen to pursue technology innovations.

One DPI staff member present felt there was limited life beyond the present project for LCD groups. In contrast almost all producers saw considerable potential. As one commented:

'There is potential to grow like the Southern consulting groups'.

To the evaluator the day was successful in spite of some negative and undermining comments by DPI staff. These could have been derived from a genuine concern about the consequences of group failing to achieve their goals, but it was apparent that the differentiation between process and content was difficult for some of the DPI staff present. Based on my experience of the day a number of conclusions and suggestions are offered:

i) The process as conducted so far has the potential to develop ownership for a wide range of R&D initiatives.

ii) There was concern to ensure that the groups they represented, and those beyond existing groups were given the opportunity to participate. A particular concern was youth participation. The Kunwarrara LCD group have already made positive and creative initiatives in this regard. For example inviting school children to a field day conducted by them at the CSIRO research station. One suggestion was for the MRC to contribute scholarships for 'Year 2000 jackaroos and jillaroos' for children of producers interested in returning to the industry pursuing work and travel in all sectors of the industry following Year 10 and Year 12.

iii) It was apparent that a simple schema to help conceptualise the project formulation process would aid discussion and planning in such meetings. Such a model would ideally start with a phase of exploring what was going on already (`rich picturing')

Producers named only **one weakness** in the developments post Phase 1 so far.

a) The **issue of overload.**

`There is a problem about who is involved. I can afford to be involved because I have a wife and son at home who are working their butts off.'

'The main change bought in my life by the LCD is a huge workload'.

'There are problems with putting your head up and taking any initiatives. You get landed with everything.

This is a significant issue that needs to be addressed in the future development of the Project. Co-ordination of group research initiatives is a time consuming task that some producers are wary of. Several groups we canvassed said that they had reservations about on-property research, even when it was very relevant for their needs, due to the amount of time taken in setting up and monitoring these projects. The message was that the producer-based initiatives required support.

In summary, there has been a recent shift to a more open ended model of the Project following Phase 1. This has developed out of the experiences of the Calliope Phase 2 and 3 which proceeded as originally planned. The current shift is towards greater producer control of the direction and initiation of the post-Phase 1 developments in collaboration with the Phase 1 facilitator/s.

5. PROJECT TEAM PERSPECTIVES

5.1 Introduction

DPI personnel provide the facilitation, recording and document editing for Phase 1 of the project. They also provide the on-going co-ordination of the Project and possibly will service some of the initiatives which may develop from the Project.

Their perspectives on the process shed light on the context in which the Project has been operationalised. Conversations were held with eleven DPI personnel either with individuals or as part of a group. They had been involved in the facilitation or recording of the LCD groups. Two groups were observed by the evaluator's.

There are some problems capturing the themes from such a diverse group without misrepresenting their perspectives. Some common threads emerged from these discussions and observations. Contradictions between different themes emerged because of the diversity of perspectives and experiences.

5.2 Strengths from the Project Team Perspective.

a) All, bar 1 of the project team members confirmed the **positive process** which they observed **for producers** particularly in Phase 1 of the Project.

'..it was interesting to go through the process and just watch them feed off each other .....I think they enjoyed it, I know I did!'

'One of the greatest strengths is the grazier ownership of information. It challenges them to think about what they mean by sustainable production as a whole....It also challenges the DPI to come up with better management practices as a whole.'

'The strength is of the LCD is for them to come together and talk, share their ideas, learn form each other. Another strength is for them to take the situation in their own hands and run with it.'

b) The Project has had a range of **positive outcomes for DPI personnel.** The same issues were not mentioned by every person. However, many of the Project team workers felt that there were a number of 'spin-offs' some of which were expected, and others which were surprising.

'I learnt a lot out of it....It was a real opportunity to find out what they want to know which will have wider implications to the beef cattle industry.'

'Normally we just speak to producers about a small aspect and I think it's interesting to go through all the major things. To find out how varied the district is especially when you haven't been here for very long. You can learn a lot..'.

It's a good training tool for district familiarisation

Just as new producers were seen to benefit from this process, it was acknowledged on several occasions that Phase 1 provided **an excellent orientation and overview of the area for new DPI personnel.** However, as one of the project team pointed out more experienced staff could also benefit from hearing the producer perspective on local property management to give a different lense and perspective on property management and relevant research issues.

c) Some, though not all DPI Project team staff spoke positively of the re-orientation of their work towards a more collaborative approach with producers, from their previous `expert' position.

`It's a complete change, an about face. The DPI wishes to see itself as the main source of all knowledge. It would put material together and disseminate it to graziers, but graziers would often reject it on the grounds that it wasn't practical, etc. So we now have the process challenged. We asked them "what do you consider is sustainable production and what do you need to do? And they came out and said it!'

The idea of going to landholders in the group and saying "we want you to tell us what should be done - that was different. The idea of working with a group is progressing.'

d) Some Project team members, although acknowledging the value of the Project for producers, saw their participation in the project primarily as a means of **gaining access to information** which could help them more easily fulfil their other programme functions.

`Primarily what got me involved was that report, that's what I want out of it. Looking at what's happened with Phase 2 and 3..it's more time consuming and to my mind less rewarding than Phase 1....It would appear that we're locked into doing a certain amount of that but I'll be spending less time on it than my Calliope colleagues....this Project really provides another way for me to attack some of the other issues on my agenda.'

I'm interested in things to a certain extent partly because I'm new to the area and from this point of view it gets me familiar with some grazing practices in the area.

There is a very strong link between property planning using land holder groups and the LCD. We decided to get involved because we thought we'd get a lot out of it and it would help us further identify what direction we need to take in some area and get a bit more of a handle on some things we're thinking about here. (We also thought that we had got a lot to offer them too.)

Not all Project team workers necessarily saw their participation in the Project as a means to getting on with their other `real' work with the Department and enjoyed the stimulation of the later stages of the Project.

I think we've got into a new stage, and I think for me an exciting stage because we've done the hard slog work, you know writing, enough meetings and getting reports out, and we've formed the base....this is the norm or standard, how can we improve this? We can now set up some action groups where we look at different aspect of it.

Project team members also saw the Department as gaining **valuable base line information on current producer practices** which they had not had previously.

'From a DPI point of view it give us a better handle on how they see their country'

A senior manager, put the position in this context:

One of the greatest difficulties we had in trying to develop work within that area is that you had no description of what current practice was, current stocking rates, whether people burn or didn't burn.....None of that information was available. So really how can you have a research programme looking toward solutions to grazier problems if you didn't know what was happening?

e) It is apparent that the project has `forced' onto the Department a shift towards a **multi-disciplinary team approach.** Some officers spoke of some quite major problems with this shift, but felt that it was nevertheless a `push' in the right direction and an opportunity.

'I think we have a better focus on grazier land issues since this project's come on board'.

'I think there was a big challenge thrown to the DPI in this process in that in the past we've operated in our little disciplines.....when the LCD report came out some DPI personnel were saying "Oh well that's rubbish", but when it came to putting something better down or making sure that it was co-ordinated across disciplines it became very difficult.....But I think it was good for the Department to go through that....It seems to me it's calling on different skills from DPI staff.'

f) **Increasing the network of producer contacts** was named as a positive outcome from the process. This particularly helped some DPI officers identify producers who would co-operate with their `research'.

we've met people who we haven't met before, people ;who we haven't seen for a long time talking about different, major issues. It's been profitable for us.

'They're blokes I work with all the time but not in a group sense like that so it's probably strengthened relationships.'

That's probably one of the biggest pluses, it's given us contact with producers that we hadn't otherwise had contact with. Because gone are the days when we can just hop in the car and drive and drive and drive and talk one to one.

g) The training workshops in facilitation and the **development of group facilitation skills** were consistently named as a positive outcome by DPI staff.

'We've been very fortunate here in Central Queensland in that we've had the opportunities to have these sorts of training courses and we've also had the opportunity to go out and develop them through practice.'

5.3 Weaknesses: Project Team Perspective

a) Every Project worker immediately named **the editorial process** as the most frustrating and time consuming aspect of the Project and one which on the face of it appeared to be an unnecessarily complicated political process.

'The editorial process is the let down. Just the length of time between when the report finishes with the producers to getting it to the publication stage.'

It was the writing up of it that took a lot of time, and getting it past all DPI specialists, getting their comments on it, getting it back, re-writing it, getting it back from them again, then I had to circulate it to the LCD groups to make sure that they were happy with the alterations and if there were clarifications.

One of the Project team pointed out that making sense of the enormous amount of diverse information recorded in the Phase 1 meetings was an overwhelming task in itself, without the added considerations mentioned above.

b) A further issue for Project Team members was time management. This project some members saw as overly time consuming, particularly in terms of the time which they had allocated in their projected work plan for the year. There was little flexibility in their work plans for the potentially open-ended nature of this participatory model of extension.

'..we now do work plans for a 12 month period and we have to say what we are going to be doing for the next 12 months, so we really need the foresight to be able to say 'well I can see this will come up' or 'this will happen as a result of something else'.

'I have about 20% of my time on this project, the others would be 5% I think'

'Time is a problem. It is a different style of working and often does involve a lot of night meetings'

'I'm a DPI officer and quite often there are deadlines to meet with regards to reports the DPI requires...I've been questioned about pulling out of something, not turning up to a field day etc....However, at another level I think it has fitted in very well with the strategy statements and corporate plans that they've got out so I've just kept running with it....'

Some DPI staff saw that meeting the open ended needs of a participatory research programme were overwhelming and that DPI staff did not have the time that was

required to either service projects or place the necessary controls and direction onto the project.

I think it's a bushfire out of control I don't believe anyone's going to be able to control it. I know that some of our other beef officers just hope it burns itself out because it's just a, you know, we're getting so many people running in all different directions.

Clearly, from the perspective of this DPI officer, producer initiatives were unable to be serviced within the current organisational environment.

c) The need for consistency through the project led to exclusion problems in some areas. For example in areas where there was quite widespread use of property managers the **10 year criteria couldn't be fulfilled** for a large enough group of producers and hence no Project was run for that area. Others saw the 10 year criteria as excluding particular producers who may have learnt, or had something to offer the group. Particularly, younger and often more highly educated producers may have bought a different perspective from the more experienced long term producers. This issue was a difficult one for both producers and the Project team. One Project team member said this of a selection in one area:

Some of the contact people weren't the best people to use. They weren't people that were as widely accepted in the community. We lost a lot of very valuable information because some of the more compatible people were left out.

In spite of the difficulties of selection there was agreement that Phase 1 would not be effective if it was a large group process and hence only a select group of producers from the area could participate in this part of the process. How the exclusion and participation criteria for the Project is addressed is undoubtedly an issue.

d) Several workers commented upon the importance of facilitation style and that some people were clearly more suited to working with groups than others. Groups that were poorly facilitated tended not to get off the ground or to go past Phase 1.

I've seen the groups around X, where the DPI is doing the running with it and the danger tends to be that it is seen as just another DPI programme, another discussion group that the DPI is running.'

It should be noted that the group mix was also a factor, and that at least one group who has had the acknowledged, most experienced facilitator has not managed to `take off' in spite of consistent input.

e) Overall, Project staff felt that the documentation for the area was accurate. The one area that some facilitators felt there was a difference between reality and the document was in the stocking rate for the property.

'That seems to be one parameter that seems to be a bit of concern.'

There was also some concern expressed about whether in one or two groups members were sometimes only saying what they felt the DPI wanted to hear.

I'm sure there's a lot that's actually written down that is regurgitated DPI extension. You know, even to the figures like what percentage of the country should be left as shade belts and things. They talk about 20%, well that 20%, there's no definite reason why that should be 20% and producers would only even think of that if they had heard it from DPI extension. So I think that in some ways they regurgitated what they thought the DPI wanted to know. And plus they've got this confusion over what is actually happening and what is the desired or recommended level.

From **the evaluator's perspective** an issue which stood out from the interviews with Project team members and which has not been mentioned in the above discussion was the lack of commitment to adult learning models or participatory research by DPI officers. This issue is highlighted when Project team members were asked about their vision and future directions for the project, which although naming operational objectives for the project, failed to acknowledge the potential which underpins the LCD process through producer participation.

I see this project coming to a complete end after Phase 3....We identify a hole in an extension push or research push that goes up to the relevant people who might be able to address it somehow....This may lead, probably will lead to future work.

I wondered whether it (LCD) was particularly relevant to us extension people. You know we thought we were doing a good job in getting information across. It's hard sometimes to get that information out of research people and extend it. We thought we were doing a good job by getting to our clients, finding out what they needed and delivering to them. But maybe we'll be able to reach a wider audience with this. Really I don't know. I hope so. It depends on how accessible those reports are going to be.

These statements exclude the central value of producer collaboration in learning from shared experiences and the development of producer led initiatives.

The issue was further highlighted in the discrepancy between the value placed by some DPI staff on their own `expert' knowledge, which appeared to minimise the issue which producers prioritised, namely sharing the knowledge of other experienced producers.

Their (the producers) *real benefits come when we go back to them with our* (DPI staff) *best bets on how they might improve their production. I think that's where they really feel they've received something for their efforts.*

Although producers sometimes acknowledged the value of DPI officer input, the priority on this information was secondary to the benefits they spoke of which flowed from their own information sharing or specific information from the DPI tailored to producer requests. The officer quoted above believed that where DPI input was underplayed it was because experienced producers already had heard the DPI perspectives and therefore they were not new. Although this is a point, it also fails to acknowledge the producer perspective. At a more recent workshop, in spite of several

invitations extended to producers for DPI staff to look at the Phase 1 documents and put in their `best bets' the invitation was not taken up. This of course does not preclude the DPI taking this understanding and using it for their own research purposes and as a basis for future interaction with producers.

The issue was again seen in the *juggling* act which DPI officers do between programmes, trading off the information from one area against another, and one programme against another. This often left the evaluators with the sense that some DPI officers were using an `extraction' model in their work with Project groups rather than harnessing the potential of a collaborative or participatory model. The notion that producers were being `mined' for information for DPI staff's other agendas, a notion which producers were often wary of, rather than participating in a project which had important direct benefits for producers is one which can have significant ethical problems.

Extension perspectives which minimise or fail to conceptualise the difference between participatory R & D models and traditional technology transfer models of R & D are problematic in terms of realising the potential of the Project. Clearly there are elements in common between the models. However, the potential benefit of the Project lies in emphasizing the difference which appeared to make a difference to the producers we spoke with. This was namely that **their** knowledge, **their** initiatives and the facilitation of the **sharing of producer based knowledge** were key elements which provided the `spark' for this Project.

6. PERSPECTIVE'S OF RESEARCHERS

This section is based on interviews with three research scientists operating in central Queensland. Whilst this is a limited sample our ability to interpret the data was aided by interviews with other R&D personnel who had been practising research scientists. Overall, there appeared to be a lack of understanding that LCD approaches could be used for anything other than collecting data, or as an extension tool. One researcher talked about ownership, but only in the context of giving/collecting data. The following themes emerged.

6.1 Information gathering:

LCD approaches were seen by researchers as a tool for collecting information. As an objective this did not seem to be well supported as either information was seen to be already there (either in past publications such as shire statistic books, or present in Departmental people), or was too costly (in that the same information could have been obtained for less). For example:

> *"...in the early days I questioned as to was this method going to get any additional information that we already had available...*

> *"... could have been achieved one heck of a lot easier by other methods... a lot of information was already available...a lot has been done in the past... a lot of people (not just departmental) that have been around the traps for a long time that have got this information...(could have got) without going through this process...*

Already there: One researcher felt that there was a wealth of information that could have been accessed in departmental staff. There would be no new information that would have come out if they had been locked into a room. This researcher laid claim that: "*...there isn't one paddock on one property within this region we couldn't improve with the technology that we know about today...*". Further that:

> *"...that information was available in 1978...as a researcher coming from that sort of discipline I'm always upset when people go and reinvent wheels"*

One researcher drew attention to the presence of other groups in the past: "*a lot of the same thing only under a different banner*"

Too costly: Not only was information seen to be already there, but this LCD process was seen to be expensive.

> *"(shire handbooks) were produced for next to nothing, I don't know what your LCD project's costing.*

Pain to deal with the wads of information sent around: This was a complaint of some:

> *"...nothing wrong with the material...there is an awful lot of it and I think there must be simpler ways of getting this information around and talked about it and discussed."*)

On the other hand it was acknowledged that they would be upset if they were left out. An interpretation that could be put on some statements was that their experience and understanding had not been valued in the project process. For example:

"...too much information and I think it ought to be put into a more summarised form...there is a balance here if it were the other way and we never received any material; I guess we'd complain that we weren't given the opportunity of input, but I think there's got to be a balance in the screening..."

Information gained is biased: for some the nature of the data, and concerns about "subjectivity" as opposed to "objectivity" were a concern:

"One of the criticisms that I've always had with the LCD process is (it is) biased in the group you're getting to start with that is virtually hand-picked. It's not open, in other words as a scientist I see there is bias in the thing to start with... you can't expect your results to be other than biased."

"...(because of dominating people, etc) there is always the problem that the answer that you get to be so called consensus data in effect doesn't really or may not represent the true situation. It may in fact be their perception of not what's being done but what ought to be done." ("...I know dash well that some of that information is not correct")

"People give the answers that they think you want"

One researcher pointed out that some graziers did not know effective stocking rates (and said that this was not a criticism, as factors such as idle land complicated figures). Thus the answers that graziers gave, might be either what you wanted to hear, or maybe incorrect. Our experience of a Phase 1 meeting is that a lot of meaningful discussion and clarification goes on between producers during the process which is not reflected in the published documents. None of the researchers interviewed had participated in the Phase 1 process.

6.2 Other uses of LCD approaches

Determining research priorities: there was scepticism of the role LCD groups might play for this role.

"One of the things that I guess LCD (believed could be used for)...as a means of determining research priorities and those sorts of things. I don't believe that they can be used for this at all. I mentioned the sort of bias and the set up originally..."

LCD as an extension effort: Most were concerned with the effectiveness of groups and in the Project "getting the message across". Some bemoaned the loss of good traditional extension officers out of the system.

"The good points as I said is that you've got another group of graziers together that you can extend information and discuss with"

"As far as the LCD process getting a group together, talking, getting other people with information and passing it on. That is the big plus for the system, the fact that you've got another group working and you're getting information to them...that must help technology transfer, but it depends on the technology. (some tech easy to transfer, but) "It (some technology is) either just alien to their normal lifestyle and socio-economic set up. No amount of urging, we can't get it across."

"There is benefit in working in these groups, from what's happened in the past they'll work for 4 or 5 years then they'll start running out of ideas, they'll start running out of people with energy to keep them going. They will just die out...and they will achieve something in that time...ought to be used as one of several means of getting technology and information across. I don't think it is going to be the answers to everybody's problems."

Some were more sensitive to the aspirations of the Project:

"...pretty sure the LCD group technology approach is not trying to sell one approach as being better than the other but just saying that there are a range of options and basically the individual has to chose ..."

As an extension effort though, it was thought that the LCD process over-serviced people:

"There has been a tendency to over-service these groups then because you go back and see them, so you end up with 15 or 20 there and you say that it is open to the shire... but really, you are giving a detailed over-service. I have seen a top down approach in the past terribly over-service people in the hope that there is a trickle down effect..."

Importance of measurements:

The theme of producers increasingly becoming responsible for measurement - data collection, was explored in one interview. The researcher observed that the: *"...LCD group was used to provide the economic input into this breeding objectives package*" and that it was a "... *very effective extension strategy to use realistic data in this package*".

From the evaluator's perspective this is a significant observation. It demonstrates that if researchers are prepared to start with producers data, there is potential to create a different form of dialogue with producers than has been the case in the past. From this perspective the fact that producers did not take up the offer from the researchers to have their data "challenged" can be seen in a different light. If the DPI/CSIRO were prepared to take the producer's understanding as a basis for starting their own work, especially with the aid of modelling, and "do their thing" it has the possibility of creating a different way of relating between scientists and producers than has been the case in the past.

It was felt that: *"if the LCD groups can at least get them (graziers) measuring outputs then I think that's going to have a huge impact on the industry*" and that "*I am sure that the LCD process has got them thinking in terms of measurements and basic production*" but

"...they're not using the tools that they have available to them very effectively (eg measuring weights, etc)".

6.3 Awareness and ownership of process

Interviews with researchers revealed little appreciation of this concept. One researcher however mentioned that some graziers showed ownership of data that was collected: *"we know how good our information is" and "...(LCD was an) effective extension strategy because they obviously see ownership of it and it has given them a base mark or a benchmark by which to improve their performance."*

Concerns were expressed that the process was seen to be dependent on the commitment:

"... the one thing that has concerned me in that I suspect that the LCD technology is very very dependent on the commitment of the person getting involved with the LCD group."

6.4 Sustainability

This LCD objective was labelled as overambitious, and criticised by one researcher as misleading people and "*an insult to research on sustainability*". This claim arose because the LCD was seen to be formulated as a solution to sustainable management, when it could only ever be seen as a way of getting a good overview of producer attitudes *"...and I think that it has been successfully used to do that".*

It was felt that calling it a sustainable grazing project would be justified if the aim was to get funds as a political ploy, but the problem was seen that people would begin to see the outcomes as constituting what were sustainable practices. These criticisms were levelled despite the high correlation between LCD and "research" data for optimum stocking rates in the area under discussion (see Clark 1993). This of course comes back to the distinctions between baseline and benchmark data. The sustainability issue has also arisen in the Northern LCD project. As a result they have dropped the term "sustainable" from the title of their documents. Scientists appear to only interpret sustainability as a biophysical issue, whereas others see it as a social and biophysical issue.

6.5 Personality and "role" tensions

One researcher noted some problems with the approaches of Richard Clark, although most criticism seemed to be levelled at crossing disciplinary or organisational allegiances (stepping over traditional boundaries and not fulfilling a traditional role). Being invited for feedback was seen as good, but there was a belief that contributions might not be taken up.

In summary some, but not all, of the scientists interviewed were critical of the project particularly on methodological grounds. All saw it as having very instrumental ends and had not participated in the process. The value of incorporating grazier's data into their own work was acknowledged in one case and suggested new "extension" possibilities.

7. SOME THEORETICAL DISTINCTIONS TO INTERPRET THE DATA

7.1 Problem formulation

Problem formulation is a creative process where agreement about the existence or nature of a problem is generated by those involved in the problem - the actors or stakeholders. (For this reason we consciously avoid the phrase `problem identification', which suggests problems exist independently of social processes, preferring the phrase `problem formulation'). These are seen as problem determined systems - systems do not make problems; talking about problems make the system. This moves away from structure (eg existing organisations and their cultures) towards an emphasis on meaning. Language has a central role in this context. It can be argued that "all problems are in language" and that until "languaged a problem does not exist". It follows that since problems are things said, they must always be said "by" someone "to" someone (even if the second someone is oneself). A problem determined system is not a collection of people but a network of meanings. Thus the boundaries are drawn around a "meaningful system". From this network of meaning appropriate structures and process can be devised, which might be a "project" and which exists only for the duration of the project. Expressed another way this is a system to orchestrate action and learning.

In critiques of the "transfer of technology" model of R&D farmers are exhorted to "Be aware!" Rarely are farmer's problems the problems of researchers or extensionists. However producers, like researchers, are not a homogeneous category and they often do not share common enthusiasms for R&D action. Pearson and Ison (1992) call for a conception of agriculture in the twenty first century which recognises the multiple goal realities of rural people and which involves them in the process of problem formulation. Russell and Ison (1994) describe recent research which develops the concept of "enthusiasm" as R&D methodology, as theory and as a biological driving force. The implications of a move towards an R&D system which has a greater proportion of resources initially flowing through a network of problem-determined systems is the need to break away from normative (cook book style) use of techniques and methods and the need to specify outcomes in advance. The change is towards a pathway of open inquiry.

7.2 Naming power in project design

The work of John Heron (1989) provides a useful framework to guide design of processes for the formulation, conduct and interpretation of projects. He identifies three levels of power to be consciously recognised in the process of project or activity design: (i) Hierarchical, with "power **over**" leading to "deciding **for**" (the status quo in R&D terms); (ii) Cooperative, or "power **with**" leading to "deciding with" (evident in the move to consultation, but still often poorly designed and implemented) and (iii) Autonomous, or "power to" leading to "delegating deciding to (**the project has the potential to move the R&D system in this direction)**". It should be noted that a move to the latter position does

not mean that there is no role for "expertise". All groups are likely to need a "critical friend" and to need to draw on expertise. What changes is the context in which the expertise is practised, and the relationships and ethics between the players in the R&D system.

7.3 The "what" and "how" distinctions

When a problem has been clearly formulated (a "what" determined) then there is an opportunity for a range of "how's" to be considered. There exist of course many "hows" for most "whats" and new "hows" can be compared with existing "hows". A good way of coming up with "whats" is to use verbs (eg. monitor, evaluate, facilitate) as a modelling language for the development of notional "systems". Eg "a system to **evaluate**" or "a system to **develop** evaluation processes".

In summary, we make these theoretical decisions because they shape how we interpret the data from our interviews and because we recognise that all observation and interpretation is theory laden. As with the recent "state and transition model" new theories reveal new ways of seeing. Theory is not divorced from practice; they are bound up in the theory - practice learning cycle.

8. CONCLUSIONS AND FUTURE DIRECTIONS

"*human systems are different*" (Vickers 1983)

"*to every human problem there is a solution that is simple, neat and wrong*" (H.L. Mencken in Birch 1990):

8.1 Main Conclusions

The LCD component of Phase 1 has been almost universally supported by producers. It is worth reiterating the bases of that support as generated by producers in a recent Phase 2 planning meeting. They commented that it was "***the first time they*** (the graziers) ***have ever been asked, and now people are starting to listen***". This statement contains two points essential to the future directions of this project. These are "asking" or the extending of "an invitation", and "listening" - of feeling they have been heard and valued. When this is combined with the following statement: "*We let them* [the DPI*] help us too much. It was our own fault. We have sat back and allowed them to do things. We now need to have as much input as possible, not someone to manage us*" the essential ingredients of participatory R & D become apparent.

The future of the Project and subsequent R & D initiatives will depend on where members of the R&D community choose to stand in regard to these points made by the producers. They draw the distinction between a model which extends the status quo (a network of

system determined problems), or fostering the development of a model of R & D which invites the active collaboration of producers on their terms. More importantly such a model has its starting point with the problems or issues which are formulated by the producers themselves and for which they have energy to do something about. It would be possible to view many such groups as a network of problem determined systems. From our evaluation we would conclude that the Project has the potential to hasten the transformation of the R & D system in this direction. However it does require a recognition of the shift in orientation.

The issue here is that there are some significant problems with `harmonising' the differences between the `technology transfer' model of R & D and `participatory/adult learning models of R & D. Clearly there are elements in common. However, by emphasising the commonality rather than the difference, the potential and the possibilities for changes in direction under the participatory model become lost. If the notion is accepted that there is no difference, as expressed by one Project team member who said:

Well my first experience and the way I still feel is that it's an old tart in a new dress

then clearly the possibilities for change and for expressing a vision of an alternative are minimised. These distinctions are increasingly recognised at a senior management level as evidenced by the following statement.

The push in relation to the extension strategy.....is an increased level of participation by all parties involved. An increased ownership and the power that relates to that and a higher level of involvement of extension people in group related, action learning, adult education type activities.....I see LCD as a particular technique that is encompassed by these principles.

Phase 1 or the LCD process must be judged as successful regardless of these distinctions. It would certainly be possible to continue to fund the Phase 1 components and see them as successful within the framework of the current system.

Whilst we do identify some important issues of concern in relation to Phase 1 of the project, and have some suggestions to make (see below), we do not see these as the main issues at stake. If one is prepared to accept the project as an extension of the status quo, then of course these issues assume greater importance.

We conclude that in the absence of any alternative, or the opportunity for those in the project to devote greater time than has been available to the conceptual development of the Project that issues over the precise nature of the data (eg. baseline or benchmark) are not paramount. It is clear that benefits that flow to producers (as expressed by producers in a recent Phase 2 planning workshop) outweigh the concerns of the scientific establishment about the nature of the data. These following powerful statements speak for themselves:

:

"it pulls people together - in Calliope the bitter divisions between UGA and CU members are starting to heal "We now talk to each other".

"it is possible to link production to Landcare eg HGP can get your cattle away quicker helping the land"

"the process and outcomes allows the community to see that we are concerned and that we are doing something."

"the phase 1 process reveals the diverse ways in which people manage and allows a sharing of many useful "rules of thumb".

"what was striking was that we have lived together for 2-3 generations, but we had never questioned each other's management. In the LCD process we started to talk with each other about these things.

"face to face communication is the best way to learn"

"LCD is a great idea - it builds community spirit"

"it is not an agro political process and it is strongly linked to the management of the enterprise"

An extension officer present acknowledged that: *"communication" has improved out of sight"*

8.2 Evaluator's Comments and Future Directions

The following comments are made in the light of the terms of reference that were outlined by the Meat Research Corporation.

1) Overview and evaluate the LCD project and suggest any improvements to the LCD project particularly with a view to changes which will effect the uptake of technologies.

An overview of Phase 1 suggests that it as been an overwhelming success from a range of different perspectives, most importantly from that of the producers.

There are however a number of issues that may need to be considered and which could be adopted to make the process more effective.

a) Both producers and operational staff found that the slowness of the process was the most frustrating part of this Phase. All DPI officers said that the writing of the document was the most time consuming and least satisfying aspect of the Project. It would appear that the necessity of having recorders (scribes) who then do an initial distilling of that information is essential. However, there are a couple of aspects which would streamline the editorial process. Firstly, the Project would be substantially enhanced through the employment of an editor and `plain English' writer on a contract basis who was sensitive to

the producer's ownership of the material. It was clear that many DPI officers did not have the ability to translate the initial recordings into accessible English in a good format which could be used in the final publication. It is unlikely that any other project would have a 'Richard Clark' who was prepared to spend an inordinate amount of weekend time over many months editing these documents. (This is the area in fact where Richard is irreplaceable. No one else would do this, nor should they be expected to.)

The other way around this issue is to relax standards considerably on the presentation of the publication.

This does beg the question of the value of the document in the Project. Our feed back from producers was that this goal directed aspect of the Project was central to their motivation to participate. Virtually all producers experienced considerable pride in the document and continually mentioned the value of the accessible, non-technical booklet.

Furthermore the distribution of the document in the future would be one of the ways in which they judged whether the Project had been worthwhile from their perspective. An issue of the future direction of the project is who takes responsibility for distribution of the document. In the contract between the MRC and the DPI it is written in as a DPI responsibility. This is an important issue for the producers who participated and one on which the evaluators were constantly questioned. Making the document available through DPI outlets was not generally seen as an answer.

A further method of streamlining the editorial process would be to not pass the document past the DPI specialists for any input at this stage. Given that the document represents producer knowledge at a particular point in time, the complications of DPI specialist input into the report at the editorial stage can make the publishing of the document unnecessarily drawn out. This does not mean that specialists should not have an input, but not at this editorial stage.

b) A further issue to be addressed is to enhance the value of the document by making it a less general report. There is some discussion both amongst producers, DPI officers and the MRC about whether the document represents - actual, current practice (baseline data) or what producers think should be happening (benchmark data). The senior management at MRC and DPI suggest that a document that outlines baseline data for each area would be of more value, than one which outlines what producers believe should be happening. From a producer perspective, and also from the perspective of someone new to the area, documenting what is actually current practice, and documenting diversity and the reason for the diversity, rather than consensus may be of greater value. This may make the document longer, but it would also increase its value to both producers and organisations. The interesting information both in a document and in the group discussion arises in the differences rather than the similarities.

The issue raised by this issue is a very basic one of trust. Producers will not feel comfortable to give to the DPI information on their actual practice unless they believe that the information will not be used against them at a later date. There were often a number of

reservations expressed about the documentation of practice and whether the implications for producers would be positive in the longer term.

A further issue which has been raised by senior managers is whether the initial Phase 1 group should be larger and cover a broader area. Hence, the Project could be less intensive because there would be fewer groups. When this issue was canvassed both with producers and DPI staff there was agreement that enlarging the groups would destroy some of the best aspects of the project. This was namely that the groups were small enough in the number of participants to allow detailed exchange of information. Moreover where areas were too large and diverse management practices might be very different. The documentation therefore has to become too broad to be useful. At the Phase 1 group observed by the evaluator a very large cross section of land types were being covered. The consequence of this was that much detail had to lost in the discussion and that it took 4 hours to describe the land types for the area (Admittedly there was some discussion of management practice through the meeting, but most of these issues were flagged for discussion at the next meeting).

The issue for both facilitator and producers is how to open out the group post Phase 1.

c) The issue of diversity raises the question of the name, Local Consensus Data. `Local Collaboration through Diversity' might more accurately describe the process of valuing and documenting diversity as well as consensus. However, as one of the producers pointed out the current name refers to Phase 1 of the Project but not the possible future directions. Another name suggestion might be `The Sustainable Futures Project'. This is an issue that will require further discussion.

d) An issue is that the initial workshop needs to explicitly outline to producers the fact that the work for the group may stop at the publication of the Phase 1 document or that they may like to participate in an ongoing process which develops from the issues raised for producers in Phase 1 (from observation of a Phase 1 workshop late in the evaluation it would appear this is now being addressed) . The facilitation of the group during Phase 1 and the manner in which invitations for future collaboration are extended will be central to the way in which the Project develops.

We re-iterate the point made throughout the report that the normative model for Phase 2 and 3 as originally outlined for the Project and implemented at Calliope requires modification. Producers need to be involved in determining the direction of the Project following Phase 1. Some groups at this stage may choose to follow the model as originally outlined and ask for specialist DPI comment on the document. The group which recently met to discuss the next phase of the project declined this invitation. The producer `ownership' of the development of the project in a sensitively facilitated workshop in which the possibilities of the groups closing the Project or moving in new directions are explored.

Issues which might need to be considered at this stage include: opening out the Phase 1 process so more producers may be involved; different groups or group leaders from a particular area meeting together to discuss future directions having canvassed ideas from

their own group; and the resources groups might need to sustain new initiatives; broadening the parameters of the project to include financial management and off-farm issues.

Continued support from MRC via PIRD's and PDS's for these initiatives are essential into the medium term (3-5 years). We urge immediate attention be given to developing workshops for producers and R&D personnel throughout Central Queensland to report on what is already happening and to provide a vision of what might be possible.

2) To evaluate the effect of the LCD in improving the rate of uptake of technologies. To identify potential improvements to the LCD process and to evaluate how possible changes will effect the uptake of technologies.

There is some controversy about this parameter for the evaluation. Some senior managers and project staff said quite clearly that the Project was never expected to deliver "technology transfer" but to gain producer perspectives on sustainable grazing practice. There are certainly some ethical issues about evaluating a project in terms of its ability to deliver new technology implementation without mentioning to producers that this is an objective of the project. Producers in our experience did not participate in the Project to learn about new possibilities for their property management.

This said, clear evidence has emerged from the evaluation of producers taking on new practices or modifying their existing practices (see Section 4.1). Producers expressed enthusiasm for new initiatives but many currently indicate that they have been constrained by drought. The Project actively facilitated the detailed exchange of producer knowledge and practice. This builds on the dominant mode of learning for producers which involves learning from each other.

Through the process producers may also identify gaps in their knowledge on which they would like extra input. For example at the observation of the Phase 1 workshop a producer stated `We want to know more about growing legumes on these heavy clay soils.' The issue was placed on the future agenda for the group. The Kunwarara group has already run a workshop specifically tailored to a range of information from specialists (of their choosing) which they had identified as gaps in their knowledge.

The issue which the Project highlights is that the current DPI structure and possibly MRC structure is unlikely to be sufficiently flexible to fully support the initiatives which the Project has the potential to deliver. For example one manager commented on the demand for plant identification exceeding the organisations ability to the respond. This issue had been highlighted for producers by their participation in the Project.

3) To explore which technologies are suitable for uptake through the LCD process

This item needs to be considered in relation to the comments above. In the interviews researchers made the strongest comments about technologies not being adopted. These related invariably to their own areas of research. "Extension" staff and senior managers were more hesitant about naming specific technologies which had not been adopted. Some

of the latter even acknowledged that some of the technologies when introduced into the system may in fact contribute, under some circumstances to land degradation.

Extensionists were more aware of the differing contexts of each producer and of the constraints that they operated under. Many of the producers interviewed were aware of the technologies being pushed by the DPI but experienced being told what they should do negatively. The LCD forum provided a context for enhancing their understanding of some of these technologies and to respond to their relevance for their properties. We conclude that no generalisable statement can be made about the ability of the LCD process to enhance uptake of a particular technology. We do however reiterate the value placed by research managers and producers (in the Calliope workshop) on the outcomes of the modelling effort that has followed the Phase 1 activities.

4) To identify any present or potential adverse reactions to the LCD groups.

There is considerable awareness of the sensitivity of the process and the data which is revealed. This has precluded at least one group from proceeding past Phase 1 and from not producing a public document. Producer relationships with the DPI are variable, but our data would indicate that there are a significant number of producers who see the DPI as "from the government" and who are hesitant, sometimes hostile, towards divulging data. As described above the project has been instrumental in improving the relationship between producers and the DPI, but it is very dependent on the people involved and the interpretation of the LCD process. Where producers have a good relationship with an individual they are prepared to contribute and be "milked", as one producer put it. In this case he experienced being listened to, and his knowledge respected, in the process. This is not the case when producers feel exploited.

A further issue for the DPI is that a conflict of interest arises where staff may have regulatory as well as facilitatory roles. These dual roles are incompatible with the development of a longer term relationship of trust between producers and potential facilitators of post Phase 1 initiatives. Private consultants, or a form of secondment to groups (where this was acceptable to the groups), or recruitment of "R&D facilitators" (see below) would not present these problems

In summary the possibility of adverse reactions is highly dependent on the quality of project staff, but the Phase 1 process is sufficiently robust in its present form to tolerate variable facilitation, but only in terms of meeting Phase 1 objectives. Post Phase 1 is highly dependent on the vision and enthusiasm of the producers and facilitator as well as facilitator skills.

5. To suggest how producer groups which evolve from the LCD process are to be maintained, following the withdrawal of Corporation funds and to maintain the ongoing activities of producer group facilitation and technical input.

We firstly question the notion that any specific group needs to be "maintained" beyond the life of a group as determined by its purpose. There is a strong goal orientation, or sense of

purpose, of those producers active beyond Phase 1. We suggest a reorientation of the question towards "how might the capacity of producers to come together to formulate R&D projects and to act as co-researchers, be enhanced?". This question moves away from the fairly static notion of "the group" to a more process orientation of project formulation, implementation and evaluation with the purpose for the group lapsing at the completion of the project (or the need for conscious decisions to be made to stay together for new purposes).

There is no apparent simple answer to this question; we however concur with the observations of several interviewees, that "groups need to crawl before they can walk". Put another way it is going to take time and nurturing, and it is a total system issue. This recognises the issue that facilitation skills will be essential for assisting most producer groups to realise their R&D potential. At this stage, many Phase 1 groups may not go past the initial documentation of their area due to the lack of vision, enthusiasm, skill and time of the DPI facilitator. Alternatively, other groups may follow through initiatives identified in Phase 1, but be very dependent upon DPI personnel to direct the future direction of the Project. Again, this is an issue of facilitation skills and the ability of the facilitator to extend the invitation to initiate projects to the producer group as well as assisting the group to develop its own cohesive processes independent of the facilitator. This issue must be take up at a policy as well as operational level.

The MRC is already supporting a transformation of the R&D system through funding of PIRD's, initiation of TAGG groups, to a lesser extent PDS's, through initiatives in leadership and facilitator training and through funding of this project. These initiatives are vital for the future but alone and at the current level of activity and funding may not be sufficient. We suggest the following initiatives:

(i) Preparation of a policy document on "transforming the R&D system" (as a network of problem determined systems) to consolidate the range of initiatives and as a basis for dialogue and negotiation with Landcare, DPIE, LWRDC, RIRDC, DPI and other non-traditional groups such as the National Australia Bank, NFF, TAFE, Private Consultants and UCQ and UQ (with respect to the Northern Project).

(ii) We see the focus of the dialogue as being coordination of initiatives and integration (but not a diminution of the diversity of projects and approaches) and ultimately an integration of the total resources available to facilitate this transformation.

(iii) We urge consideration be given to drawing these initiatives together under a "sustainable futures for rural communities project". The MRC is in a good position to take this initiative. Data from this evaluation support the increasing realisation that production cannot be divorced from sustainability.

(iv) As more of the R&D system moves towards a network of "problem determined systems" there will be a need for R&D facilitators. This is tacitly recognised by the MRC in its leadership and facilitation initiatives. Models of how this might work and the skills

required are provided below. These R&D facilitators must however be "owned" by producers and the pitfalls of Landcare and their appropriation by institutions avoided.

(v) To address widespread concerns about extending the opportunity for wider participation than has currently been available through the Phase 1 LCD technique we suggest a dual strategy: a) raise this issue with existing producer groups (as it is also a concern of producers) and provide support for their initiatives and continued interaction (as with existing funding for bus travel and joint field days); b) give serious consideration to funding other methodological approaches to triggering group action (eg participatory rural appraisal, using enthusiasm as methodology[1])either concurrently or sequentially with the LCD technique. This requires further theoretical development. The main purpose would be to extend the current approach to encompass issues of off and on -farm diversification, gender, youth and diversity of producer experience.

(v) Visits by some FSR&D practitioners and joint workshops for producers and R&D personnel to explore possible future ways of operating (Drs Janice Jiggins, David Norman and Wolfgang Bayer are put forward as recommended visitors because of their practical experiences and awareness of many international initiatives). Attention of MRC staff is also drawn to the video "Participatory research with women farmers" produced at ICRISAT (a copy is available from R.Ison).

Extension and or maintenance of producer, group based R&D requires a new form of "professional", an R&D facilitator. Three possible models for how these people might operate are shown in Figure 1.

Figure 1. Three potential models for community - based R&D which might operate on the bases of shared enthusiasms. a) A producer as project researcher; b) Employing an outside researcher; c) A combination of local and outside researchers.

(insert Fig ?)

The proposed models vary as to whether outside researchers are employed, or whether members of the community could undertake researching roles. This model is further explained in CARR (1993a) a copy of which is enclosed.

Resources: human and financial

We envisage two categories of "R&D facilitator" depending on the model adopted and their role. **Desirable** competencies for people in both categories would be:

[1] See Russell and Ison (1994)

* a high level of inter-personal skills, enabling them to work with a wide range of people and to establish effective, open, networks;
* an ability to write clearly and comprehensively in a language that all can understand;
* an enthusiasm for learning;
* a clear understanding of what the job entailed and why it was being funded;
* a high tolerance level of others and an ability to take initiative when support was lacking;
* a level of self-confidence combined with a preparedness to be a good listener;
* local knowledge would be desirable but not essential
* a preparedness to travel and to undertake up to 2 weeks training per year;
* a commitment to working with people in an ongoing co-learning environment and an ability to evaluate the effectiveness of their role and results achieved;
* measurement and data recording skills

We calculate, based on our experience, that the person employed to operationalise Model 1A, would require to be employed for a maximum of 10 hours per week (average). This is based on our analysis of the person days required to initiate and support the "Marketing of Middle Micron Wool Project" (CARR 1993a). We estimate the cost of such a position being in the range of $15 - 20,000 p.a. A similar conclusion has been reached by Landcare management personnel (L. Northrup, pers. comm).

We suggest an employed outside researcher to service model 1B and 1C (Fig 1) would require the above competencies as well as a good understanding of rural industries and rural people.

We question the thinking behind the implication in our term of reference that the MRC will have to withdraw funding in the future. The question is withdraw funding from what? There is clearly a period when the Phase 1 component of the LCD projects will and should draw to a close. We question whether MRC should continue to fund the post Phase 1 processes in their current form and organisational arrangements beyond the current project life. However we strongly recommend that financial support be maintained for producer lead R&D initiatives growing out of the LCD process. As MRC controls producer's funds the ethical question becomes, not whether these initiatives should receive funding, but the proportion of R&D funds that should be allocated out of the total budget. As one senior manager noted:

'If we take the LCD group at Kunwarara, I think say 10 or 12 innovative very innovative, youngish operators who know what they are on they are on about, know what they are trying to achieve, very much target orientated so that they know the product they are trying to produce and so on. In some ways, I'd more confidence in giving them a million dollars over the next 5 years than going to the DPI here.'

2. Future R&D Networks

(i) Rural R&D is in a state of rapid transition. There are now 3-4 years of experience of RIRC funded research to address the concerns of "the failure of technology adoption"

and of the Landcare movements attempts to deal with sustainable land use. We raise the following policy issues for consideration:

* The need for the emergence of a broader conception of Landcare than is now commonly the case and the fostering of debate about the meaning of "research" or "R&D" so that all groups might see themselves as "researching groups". We see this as in the long term interest of all RIRCs.

* Concomitant with the development of a broader conception of Landcare, is the need to foster debate about the relationships between production, efficiency, sustainability and equitibility in the planning and conduct of R&D. Research on the development of a technological audit which considers these measures of system performance, and the notion of technology as both revealing and concealing is warranted. (It might be noted that USDA have developed a new protocol for determining the contribution of a research project to sustainable agriculture. This entails a panel evaluation in the categories of (i) integration of plant and animal production processes; (ii) satisfaction of human food and fibre needs; (iii) enhancement of environmental quality; (iv) enhancement of natural resource conservation; (v) use of biological resources; (vi) economic viability; (vii) quality of life. Each category is scored as: contributing to sustainability (1), having no direct impact (0), or detracting from sustainability (-1). The project score is the sum of all seven category scores. This has proven successful (Agronomy News April 1993, p3). Producers need to be involved and such a process, if accepted, adapted to regional and local use.

* To achieve greater efficiency in future R&D there is a need for greater cooperation and coordination between RIRCs and Landcare. A collaborative strategy and funding base developed by RIRCs and Landcare is a prerequisite for the effective wide scale development of the R&D model outlined above.

6. To establish ongoing methods which can be used for evaluation

Evaluation is something which ideally starts with the start of a project and which continues through the life of the project at regular intervals. To evaluate in this way requires a simple schema and needs to be productive for those involved. It also requires sufficient flexibility in project design to be able to rejig the project as circumstances and evaluation dictate. No system is likely to work without some form of documentation. This requirement may be onerous and unrealistic for producers who become involved as major players in the R&D system. Many professionals already experience it as onerous.

We attach a schema developed by (CARR 1993) for project evaluation which we have found useful for our work with graziers. We have also developed the technique of using public and private interviews as a means of inviting producer evaluation of their actions. The maintenance of a personal and/or group dossier which is open to all members of the group could be compiled from a series of these evaluation exercises.

At another level we suggest that R&D management in the future will need to focus on outcomes (as opposed to inputs) but more importantly the experiences of the clients, and

whether the system is meeting client expectations. We commend further use of qualitative research and evaluation processes. Related to this is a suggestion provided during our interviews that R&D practitioners needed to think of themselves more like (good) doctors - with a good client relationship, a confidential file for all clients and above all a high ethical standard.

APPENDIX 1

TERMS OF REFERENCE FOR THE EVALUATION OF THE LCD PROCESS IN CENTRAL QUEENSLAND

* To overview and evaluate the specific design and operation of the LCD process and the resulting producer groups. This is to occur through semi-structured interviews with QDPI and Corporation staff in order to identify the reasons behind the initiation of the LCD process and the expectations following its implementation.

* To evaluate the effect of the LCD process in improving the uptake or technologies generated by the producer groups and additional strategies identified by the QDPI. QDPI staff are to be interviewed to explore which technologies are suitable for uptake through the LCD process, which technologies would not be appropriate and the reasons behind these decisions.

* To evaluate the effect of the LCD process in improving the rate of uptake of technologies.

* To hold discussions with QDPI staff and other relevant people to identify potential improvements to the LCD process and to evaluate how possible changes will effect the uptake of technologies.

* To identify any present or potential adverse reaction to the running of the LCD groups.

* To suggest how the producer groups which evolve from the LCD process are to be maintained, following the withdrawal of Corporation funds and to propose ways to maintain the ongoing activities of producer group facilitation and technical input.

* To establish ongoing methods which can be used to evaluate the success of technology uptake through implementation of the LCD process and following the withdrawal of MRC funds.