DEFRA Research Project KT0110

Improving access to advice for land managers: a literature review of recent developments in extension and advisory services

Report to the Department for Environment, Food and Rural Affairs by the School of Agriculture, Policy and Development at The University of Reading, ADAS Consulting Ltd and John Archer Consulting

Chris Garforth
Brian Angell
John Archer
Kate Green

March 2002
Contents

Glossary ii

Executive Summary iii

1. Introduction 1

2. Policy context 2

3. Provision of information and advisory services: recent changes in thinking and practice 3

4. Case study analysis 8

5. Conclusions and recommendations 19

References 23

Annex 1: The case studies

Annex 2: Template for case study descriptions
Glossary

ANDA  (French) National Association for Agricultural Development
CAP   Common Agricultural Policy
CBSC  Canada Business Service Centres
DEFRA Department for Environment, Food and Rural Affairs (UK)
DIDCO Dairy Industry Development Company (Australia)
DLV   Dutch privatised national extension service
DRDC  Dairy Research and Development Corporation (Australia)
EU    European Union
EZ/EC Empowerment Zones and Enterprise Communities (USA)
FWAG  Farming and Wildlife Advisory Group (UK)
IAF   Integrated Arable Farming
IBP   Interactive Business Planner (CBSC)
IFM   Integrated Farm Management
IFS   Integrated Farming Systems
LEAF  Linking Environment and Farming (UK)
NLP   National Landcare Programme (Australia)
OCIS  Organic Conversion Information Service (UK)
PPP   Profitable Pastures Project (New Zealand)
SAC   Scottish Agricultural College
SBA   Small Business Administration (USA)
SBDC  Small Business Development Centres (USA)
SCORE Service Corps of Retired Executives (SBDC)
SEERAD Scottish Executive Environment and Rural Affairs Department
SMEs  Small and Medium Enterprises
USDA  United States Department of Agriculture
Executive Summary

Background

This report is a contribution to continuing discussions within DEFRA about the future design and planning of rural information and advisory services. It summarises recent Government policy reports and debates in respect of farming and the rural economy in England; reviews international literature on information, extension and advisory services; and presents an analysis of sixteen case studies drawn from Europe, North America, Australia and New Zealand.

Recent research and policy documents comment on fragmentation of business, technical and environmental advisory services available to farmers and other managers of rural enterprises. This reflects the complexity and diversity both of the policy goals which farming and other rural enterprises are expected to support, and of the regulatory requirements with which they must comply.

Provision of advice and information

Recent developments in thinking about advice and information services include:

- A shift in emphasis from supply-driven extension, to demand-driven information systems
- A questioning of assumptions about the relative importance of information constraints in land managers' decision making
- A move from simplistic micro-economic models of farmer decision making to an understanding of the influence of values, attitudes and personal factors
- A better understanding of the communication process through which advice is offered and received and information is exchanged: this is not a one-way transfer of "messages" but an ongoing interaction
- A recognition of the need for collective decision making, particularly where environmental goals are concerned, which has implications for the ways in which service providers interact between themselves and with users
- A growing consensus that government funding of advice and information services should focus on rectifying market failures in the supply of services, and on delivery of environmental and other social benefits
- A recognition that government funding does not imply a need for public sector delivery of services.

Lessons from case studies

For the case study analysis, a framework of eleven parameters was developed to characterise each advisory approach. The sixteen cases reflect the diversity of schemes and methods by which government and the private sector seek to provide information, advice and other non-material support to rural businesses.

The cross-case analysis highlights several trends and issues which build on and reinforce the conceptual developments identified from the wider literature. Schemes which facilitate learning, confidence building and motivation are valued by clients. They are particularly important where major changes in land management strategy are being considered, new skills are required or collective agreement is needed. Schemes which provide facilitation are more likely to lead to long term effects than those which simply make information and advice available.

There is a renewed interest in group methods, and positive assessment in the case studies of the benefits of group methods in a range of settings. Groups are a
particularly effective setting for facilitating learning, building confidence and assessing new management and technology options. Empowerment of group members is an important outcome.

Twenty different advisory methods were used in the case study schemes. The potential of Internet-based methods is shown in the successful use of interactive online tools and software. There is less enthusiasm for the Internet as a means of linear information transfer; and concern that a significant minority of rural land managers will not have access to it in the near future.

On-farm participatory development of technological and management options is more common in the non-European than the European cases. This may reflect a more stringent regulatory framework which circumscribes managers’ options, or simply that the culture of top-down, science-led technology development and transfer has tended to dominate in European countries.

There is a clear trend towards more client-driven or demand-driven processes. This has implications for staff resources and training, particularly to develop skills in facilitation of learning, conflict resolution and communication.

Private sector delivery of services offers greater efficiency, flexibility and accountability than delivery by the public sector. There is no evidence from the case studies of concerns among clients about conflicts of interest between the commercial activities and the government-commissioned activities of private sector providers. More important to clients is the individual credibility of those delivering the service, which is based on perceived expertise and objectivity.

There is no direct correlation between staffing intensity and impact of services. Some schemes achieve considerable leverage of volunteer or complementary resources. The cases yielded little data on impact and cost-effectiveness. Some indicative figures from specific cases are presented.

Conclusions and recommendations
The report concludes that approaches and programmes are not always directly transferable from one context to another - particularly if they are to be used for purposes different to those in their original setting. Provision of advice and information should always include facilitation in order to maximise take up and impact. Integration of advice at the point of delivery is an important goal but does not necessarily mean services being brought under a single management. Land managers benefit from having an array of diverse services and providers, but do require professional support in identifying those most appropriate to their circumstances. Design and delivery of services must be based on a coherent understanding of how and why land managers make decisions, particularly those that involve substantial or complex change in management strategy.

The report suggests four principles for future provision of services:
(1) integration of advisory services should not be at the expense of diversity
(2) Government should continue to fund the provision of services because of the significant market failures in the supply of and demand for advice and information
(3) there should be a presumption against growing a public sector capability for delivering advice and information
(4) there should be a presumption against the prescription of acceptable decisions and behaviours for land managers, in favour of the development of local solutions and strategies.
1. Introduction

1. The purpose of this literature review was to identify good practice in the provision and integration of advice in agriculture and other sectors, as a contribution to the continuing discussion within DEFRA about the future design and planning of information and advisory services. The specific objectives were to:

   (1) develop criteria for the comparative assessment of approaches to the delivery of advice and information to farmers and other rural land managers

   (2) identify effective and efficient ways of making available to rural land managers information and advice, which both integrates economic and environmental content and balances the needs of government with those of land managers

   (3) make recommendations on the opportunity for government to develop models to assist in achieving the aims set out in the Rural White Paper.

2. The preparation of the review involved five steps. The research team:

   • carried out a wide search of published literature and Internet resources to identify recent initiatives which embody innovations in the provision of advice and information to land managers and other decision makers in rural-based industries

   • prepared a working paper reviewing recent conceptual developments with respect to the provision of advice and information; this established a conceptual framework for the remainder of the research task

   • developed a set of criteria for selecting schemes or programmes for comparative review within the agreed conceptual framework

   • prepared sixteen case studies, from published and unpublished sources, followed up where necessary and possible by email correspondence with those who have operational knowledge of the selected schemes and programmes

   • conducted a cross-case analysis in order to draw lessons and conclusions.

3. The review is presented in three main sections. First, recent reports and policy statements are reviewed to identify the main parameters of the debate about the role of information and advice, and their provision, within government policy for rural areas of England. The next section reviews changes in the conceptual frameworks within which discussions about advice and information in relation to land management decisions take place, and current trends in the ways in which advice and information services are provided. This is followed by an analysis of the sixteen purposively selected case studies. In order that the lessons drawn are as relevant as possible to the UK situation, all the studies have been taken from Europe, North America and Australasia. They include three which focus on small businesses generally, rather than on farming enterprises specifically. The report ends with a set of conclusions and recommendations. The sixteen cases which provide the material for the analysis are presented in Annex 1 to the report.

---

1As this review covers some non-agricultural advisory services, the term “land managers” in the report should be interpreted broadly, to include also managers of non-land based rural enterprises.
2. Policy context

4. Government policy on rural areas in England is set out in the November 2000 White Paper (DETR 2000), the English Rural Development Programme (MAFF 2000a) and the Action Plan for Farming (MAFF 2000b). DEFRA’s overall aim is sustainable development in rural areas, which has environmental, economic and social dimensions. This aim is addressed through seven objectives which highlight the interactions between these dimensions.

5. There are two main areas of government policy relevant to the present study.

(a) Farming and the countryside: key policy emphases here are:

- diversification of the rural economy - enabling and encouraging diversification of farm businesses, and the development of vibrant, diverse local economies
- increased emphasis on social and environmental goals in land management
- local flexibility, with a stronger voice for local people in decisions which affect local services, environment and business.

(b) Advice and regulation in respect of land management and rural enterprise:

- minimum regulation - only regulating where necessary
- better and more integrated advice: government is committed to trying to "improve the accessibility, quality and relevance" of advice, and to achieve a better integration of "economic and environmental messages".

6. In recent months, several government initiatives which address various dimensions of farm and countryside policy have given added impetus to the consideration of the way advice is provided to farmers and land managers. In their differing ways each has been a response to a crisis (e.g. Foot-and-Mouth Disease) or a perceived crisis which may result from impending policy change and the need for more sustainable farming systems (e.g. The Task Force for the Hills). The following reports all contain particular reference to issues relating to information and advice provision:

- Task Force for the Hills (DEFRA 2001a)
- England’s Rural Future: Government response to the reports by the Rural Task Force and Christopher Haskins; Progress on implementing the Rural White Paper (December 2001) (DEFRA 2001b)

7. Furthermore the Economic Evaluation of the Upland Experiments2 which reports in March 2002 will inevitably focus on aspects of advice provision.

8. All these initiatives are based on considerable consultation and as such the issues raised in relation to advice provision do in some way reflect felt needs within the industry. The most recent of these, the Curry Report, concluded – “We do not think

2 DEFRA Economic Evaluation Project No. RU0102/2
that the current approach to farm advisory services meets the needs of farmers now, or will adequately prepare the industry for the challenges and opportunities of a reformed CAP."

9. Three major themes relating to advice provision run consistently through these reports: the need for integration; the importance of facilitation; and quality. The call for more integrated advice reflects the current fragmentation which exists both in the provision of publicly funded advice and in the extension of publicly funded research and development through knowledge and technology transfer programmes. According to Winter (1995) and Gasson and Hill (1996), the privatisation of agricultural advisory services in England and Wales has contributed to this fragmentation. The level of service also varies depending on how funds have been drawn down or allocated: this too leads to increasing feelings of fragmentation. The term facilitation features most prominently in the Task Force for the Hills report (DEFRA 2001a). It implies something more than just the provision of advice and information. The Task Force for the Hills refers to the lessons from successful Objective 5b projects which "were to pool advisory services into a first stop integrated advice shop which provides not just advice but facilitation and help with implementation – the all important follow through". In the Curry report the concept is applied to the implementation of retirement advice – "services that can provide guidance and facilitation in all the components for successful retirement by farmers" – and more generally "The lack of advice and facilitation is also hampering effective delivery of the Government's environmental and rural development objectives". The term has also been used in the past during the Objective 5b programme, when facilitators were appointed to encourage uptake of the funds amongst the farming community. It should go without saying that publicly funded services should be of high quality, yet the Curry report suggests that services such as the Farm Business Advice Service (FBAS), SBS (Small Business Service) and Rural Development Service (RDS), along with "numerous other providers of information and advice in the public, private and voluntary sectors", are not only fragmented but also often "of variable quality".

10. Behind the findings of these reports there is an industry which is adjusting not only to the consequences of regulation flowing from food quality scares and increasing environmental regulation but also to greater emphasis on reform of the CAP and increasing exposure to the vagaries of exchange rates. Farmers in England are facing significant external forces for change and these conditions are known to raise anxiety and stress levels (Pooley 1995). A consequence of these pressures is a diminishing confidence in the future of the industry and what farmers are there to do. It can be argued that in these circumstances it is wholly appropriate for government to be considering its role in providing vision, leadership and support to businesses to help them through this period of change. Rural land managers need a framework of clearly articulated government policy within which to be creative and build on local opportunities. At the same time it is vital that farmers are able to compete. Therefore advice and information, along with other services, must serve a complex set of agendas for both rural business and government, in order to achieve social, environmental and economic objectives.

3. Provision of information and advisory services: recent changes in thinking and practice

11. Information and advice are important tools in the achievement of policy objectives. The logic seems straightforward. In a liberal democracy and market economy, it is individual land managers who create the future of farming and the countryside, through the combined effects of their decisions on how to use the land
and other resources under their control. They need advice and information in order to make decisions within the parameters set by law and regulation. Government wants land managers to make decisions which are consistent with its policy aims and objectives. Government therefore has an interest in ensuring that land managers have access to advice and information that will enable them to make decisions which benefit both the individual management unit and the wider public interest. At the same time, it is important to remember that information and advice on their own may have little or no effect on decisions unless complementary elements are in place.

12. "Information" and "advice" are very different, both conceptually and in terms of service delivery. An information service is qualitatively different from an advisory service - although any specific service may have elements of both. Information comprises facts, interpretations and projections which reduce the uncertainty faced by decision makers. It enables land managers to identify alternative strategies and decisions (including that of making no change in the way resources are deployed and managed), and assess the likely outcomes of each. Issues relevant to the supply of information include:

- access by potential users to available sources of information
- effectiveness of sources in communicating information to users
- ease of use of sources
- co-ordination and integration of sources, to enhance access and usefulness
- targeting of information to different categories of user, through audience research, testing and feedback
- matching of content and format to the nature of decisions that may be taken.

13. Advice, on the other hand, implies the recommendation of a particular course of action, or the presentation of a range of alternatives. This can either be a blanket recommendation for all members of a particular audience irrespective of individual circumstances (e.g. precautions when using agro-chemicals); or advice that is tailored to the specific circumstances of the land management unit. In the context of this study, an advisory service provides the latter type of advice. In terms of service delivery, the former "blanket" recommendations, which do not imply any interaction between data from the unit and the formulation of advice, are more akin to information. Issues relevant to the provision of advice include:

- the number of options presented to the decision maker
- the degree to which the advice includes an assessment of advantages, disadvantages and range and probability of different outcomes
- whether the service includes continuing support during implementation of the advice.

14. The last fifteen years have seen major debates and changes in thinking about the provision of advice and information.

15. From supply-driven extension to demand-driven information systems. Traditionally, extension has been seen as the promotion of specific practices or technologies. However, as farms and rural enterprises become increasingly diverse, such a "one size suits all" approach becomes less relevant. A strategy or solution that is appropriate on one land management unit may not suit a neighbouring one. Röling (1988) charted the move away from seeing extension as a persuasive device for getting farmers to do what someone wants them to do, towards the management of knowledge and information systems so that farmers can gain access to advice and information that will help them in their land management decisions. Systems thinking has focused our attention on the needs of information users, rather than the suppliers (Russell et al. 1989). Each land manager is at the centre of his or her own information system, actively seeking advice and information. Professional advisers do not "push" particular technologies but mediate between the land manager and
multiple sources of information and expertise. However, in the attempt to meet policy objectives, government has to manage the tension between these two views. In the Countryside Agency's Land Management Initiatives, for example, "promoting the uptake of new ideas and technologies" sits alongside the provision of support to farm-specific decision making through "whole farm appraisals" which identify all the natural, capital and human assets within the land management unit.

16. **Relative importance of information constraints.** The assumption that access to information is a serious constraint to land managers' decision making has been questioned. In an "information age", there is no shortage of information, nor of channels through which it can be accessed. The design of advisory and information services should be informed by an analysis of the existence of information constraints, their relative importance in relation to other constraints, and their interdependence with those other constraints. If the removal of an information constraint is a necessary but not sufficient condition for land managers to make decisions about future business or land use strategies, then provision of advice and information needs to be part of an integrated package of measures. These may include training and facilitation - to enable people to develop skills and confidence necessary to use information and advice to their advantage. Stewart et al. (2000) report from Australia the use of an interactive group-based farm simulation game to deliver farming systems education to farmers: the combination of group interaction, computer simulation and peer competition stimulated their learning and enabled them to make more effective use of information both from their own farms and from outside.

17. **Theories of decision making and behaviour change.** A simplistic view of the land management unit is that it operates like the hypothetical economically rational firm of micro-economic theory. It deploys its resources in order to maximise profits or utility in the long term, and uses information to minimise the uncertainty inherent in making decisions which change the direction or enterprise mix of the unit. Perspectives from within and beyond economics have broadened our understanding. Land managers may seek to obtain an acceptable, rather than a maximum, level of profit. They may be motivated by considerations other than profit. A farm is more than a business unit or firm: it is a social unit, whose responsibilities to family and community may have a strong influence on decision making. Perkin and Rehman (1994) showed the interdependence of personal, family and farm business objectives in decision making. Others have highlighted the influence of land managers' values and the opinions of other people (Willcock et al. 1999). Personality traits may also play a part. These insights have far-reaching implications for the content and design of information and advice to which land managers might respond.

18. **From top-down to interactive and bottom-up communication.** Communication is the means by which information passes from one person to another. Early models of communication (Shannon and Weaver 1949, Berlo 1960) described the process as a transfer of messages from a source to one or more receivers. From this conceptualisation, models of mass media influence, and mass advertising, developed. The planning of communication campaigns has been seen as the fine-tuning of content and careful selection of channels to ensure that "target" audiences are exposed to and are likely to respond to the "messages" which government or business want them to accept or respond to. More interactive models of communication play down the notion of accepting messages, and highlight the fluid roles and varying objectives of those involved in a communication process. Rather than getting across a pre-determined message, most human communication seeks to develop new understanding between parties to the communication - a process in which static notions of "senders" and "receivers" are inappropriate.
19. At the same time, "horizontal" communication within a social system is recognised as an important process in the articulation, sharing and exchange of ideas among land managers. An almost universal finding from studies of farmers' sources of information and influence is that "other farmers" are their most frequently reported source. Advisory and information services can facilitate this process by (for example) arranging cross-visits. However, as the markets for the outputs of land-based enterprises become more competitive and further removed from support, land managers may become reluctant to share information and knowledge with their peers. Knowledge gained from experience gives a competitive advantage and therefore has an economic value. An ADAS study for MAFF in 1997 found a decreased willingness among producers in specialist sectors such as horticulture, mushrooms, pigs and poultry to share their knowledge with potential competitors (Angell et al. 1997).

20. The practical relevance of these more interactive notions of communication is seen in the success of action research-based, iterative programmes in which professional advisers and land managers seek to learn together the most appropriate ways of moving forward in a specific context. The LandCare movement, developed initially in Australia (Campbell 1994) and New Zealand but now more widely (Garritty 1999), is a well known example. Farmer Field Schools have been shown to be more effective in stimulating farmers' acceptance of new approaches to pest management than traditional message-based extension programmes (Gallagher 1999, Garforth 2000). Visser et al (1998) report on the application of this approach to co-learning for the management of soil nitrogen. More recently, the importance of negotiation in reaching land management decisions has been highlighted by work in The Netherlands (Röling and Wagemakers 1998, Aarts and van Woerkum 2001). Ison and Russell (2000) set recent experience in extension and technology development in pasture-based farming in Australia into a clearly formulated systems framework. More generally, the importance of horizontal communication and learning is seen in the re-emergence of interest in group methods of conducting advisory work.

21. From individual to collective decision-making. Advisory services are usually designed on the premise that the key decisions are those taken in respect of individual land management units. The search for more sustainable forms of land use (including agriculture) has shown up the interdependence of land management units. The Landcare movement, for example, is essentially a collective endeavour. Individual decisions are taken against the background of a wider consensus among neighbouring units. This has profound implications for the way in which advisory services are provided.

22. From community to interest groups. The notion of "community" is increasingly contested. The word implies common-ness, a similarity in world-views, aims and values. In reality, most rural "communities" contain a range of contrasting views and interests. Professional services and political processes both have a role to play in negotiating consensus or compromise. Röling and Jiggins (1998) speak of the need for "platforms" from which views and interests can be articulated, debated and negotiated.

23. Public sector role in financing and delivering advice and information. The main arguments that governments should fund advice and information for land managers are based on the concept of market failures (Cook and Sachs 1999). There are two elements to this:

(i) information is often thought of as inherently a public good. It is both non-excludable (a person who acquires it cannot stop other people from using it) and non-subtractable (or non-rival - one person's use of it does not diminish the supply for others to use). A user will not be prepared to pay the full cost of
acquiring something that others can access without paying: it will therefore be under-supplied by the private sector in a free market. Information and advice may also be "merit goods" - i.e. their full value may not be recognised by land managers who will therefore purchase sub-optimal amounts;

(ii) providing information and advice is an essential part of any package of measures to correct other forms of market failure, such as externalities (including environmental effects of land use decisions), high transaction costs, moral hazard and asymmetric information. Transaction costs include those involved in accessing and evaluating information and advice from different sources, which may also lead to sub-optimal use by land managers (Kydd et al. 2000).

24. With respect to (i), however, information and advice are not necessarily public goods: they can fall into different categories within the public-private goods matrix (Figure 1).

![Figure 1 Types of goods and services](image)

25. Advice tailored to the specific circumstances of an individual land management unit which is of little direct relevance to others can be classified as a purely private good. A manager will in principle be prepared to pay for it, and it should therefore be supplied at an appropriate level by the private sector. Information and advice can also be turned from public goods into toll goods through various institutional arrangements, such as making information available only to those who pay a subscription. With (ii), an appropriate mix is needed of advice and other measures (cf. para. 16 above), including regulation. Two explicit strands in UK government policy are to keep regulation to a minimum, and not to provide support where it is more appropriate for it to come from the private sector. At the same time, EU legislation already in place will inevitably mean an increase in regulation for many land managers.

26. Government can influence the supply and use of information and advice without directly funding it. Quality assurance of advisory services (where this is not provided by voluntary codes of practice and professional registration schemes) can be backed by legislation, regulation and inspection. It can be made a condition of receipt of public funds for research that the researchers make the findings freely and readily available.

27. Services funded (or part-funded) by government can be delivered in various ways. Until fifteen years ago, most countries in the world had agricultural advisory and information services which were delivered by government ministries, departments or agencies. Some European countries funded services through farmers’ organisations. The situation now is much more varied. Some governments have divested themselves of a capability to deliver advice and information and contract private sector companies to do it for them. Others still maintain their
capability. Arguments for divestiture are based on changing notions on governance and the proper role of the state, and on the assumption that private sector delivery will bring efficiency and cost savings through competition for contracts and by moving services beyond public service personnel regulations and procedures. There may be merits in partnerships between public and private agencies: Haug (1999) argues that different partnership arrangements may offer a win-win situation where the advantages of public extension (e.g. open access) combine with private sector efficiency, capital and market orientation.

28. Figure 2 depicts a matrix of the main combinations of financing and delivery, and indicates the global trends in recent years from the top left hand box to the top right (commercialisation, cost recovery), bottom left (contracting out delivery to the private sector) and bottom right (privatisation). Marsh and Pannell (1998), for example, note policy changes towards out-sourcing, cost-recovery, formation of industry partnerships, cost-sharing, and greater participation of stakeholders in the development of initiatives that affect them. In Australia, where there still is a publicly funded and delivered extension service, government is increasingly focused on public goods services; the private sector is becoming more involved in both funding and delivery of extension. Some countries (New Zealand, England and Wales, The Netherlands) have privatised former government extension or advisory services. In other countries, such as the USA and Ireland, government remains a major deliverer as well as funder of such services.

![Figure 2 Options for provision of extension services: trends in the funding - delivery matrix](image)

29. In order to select and analyse cases of recent experience in the provision of advice and information, it was necessary to establish both an analytical framework and a set of criteria for selecting the cases. In the literature, several typologies have been used to classify and compare extension or advisory approaches (e.g. Axinn 1988; Feder et al. 1999; Röling 1995). These are not particularly useful for the purpose of analysis and comparison: the categories within them are not mutually exclusive (e.g. a "university-based extension approach" may incorporate elements of a "commodity approach" and a "group approach"), nor are they based on sets of consistent criteria. The discussion in section 3 above suggests that we can identify a set of dimensions along which any particular extension or advisory programme can be located (Garforth and Lawrence 1997): the extension approach can then be described as a set of positions along those dimensions (figure 3).

30. A programme may have a very specific focus on business objectives; or it may be attempting to address broader social policy goals, such as social inclusion or environmental goals. Similarly, its resources may be targeted on and promoted...
among a particular category (defined, for example, by enterprise, poverty level or geographic area) or may be offered to anyone who wishes to take advantage of it. Some programmes will seek to promote a specific view of what decisions the users of its services should take; others will have no pre-determined view but will aim to help clients take decisions which will meet their own objectives. While some programmes may have as an explicit objective the transfer of new technology to land managers, others are more concerned to facilitate a process of enterprise and community development which will remain sustainable beyond the life of the programme. Some seek to influence decisions on individual units, others address collective decision making. Some offer purely non-material support (advice, information, training), others have financial incentives built into them. In some programmes, all services are free to the client, in some costs are shared among stakeholders, and in some the client pays the full cost. Information flow may be predominantly top-down, or bottom-up (as in participatory technology development), or somewhere in between. There are clear differences between schemes which operate as short term campaigns, and those which are on-going programmes. Programmes also differ in their intensity of interaction with clients or users: some invest heavily in one-to-one advice, others seek to maximise use of less intensive methods. The review in section 3 suggests some strong trends along some of the dimensions in the matrix (e.g. from technology transfer to process objectives, from top-down to bottom up flows of information, and from free services to payment by clients). For the purposes of this study, it was appropriate to look for cases which covered as much of the range within the matrix as possible.

31. Selection of advisory and extension programmes for the case study analysis was based on four criteria:

(1) collectively, the cases should cover the full range of positions on the eleven dimensions represented in Figure 3 (the "extension approach matrix")

<table>
<thead>
<tr>
<th>Dimension</th>
<th>&lt;&lt;</th>
<th>&lt;</th>
<th>&lt;&gt;</th>
<th>&gt;</th>
<th>&gt;&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus</td>
<td>business</td>
<td>social policy goals</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specificity of clientele</td>
<td>narrow target category</td>
<td>broad or unspecified target</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Means of influence</td>
<td>promote specific view</td>
<td>help client achieve own objectives</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Programme objectives</td>
<td>technology transfer</td>
<td>process</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scale of decision</td>
<td>individual management unit</td>
<td>group, community or area (collective decision)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scope of service</td>
<td>information and advice</td>
<td>financial incentives within the scheme</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Payment for service</td>
<td>clients pay</td>
<td>free to clients</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direction of information flow</td>
<td>top-down</td>
<td>bottom-up</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delivered by</td>
<td>public sector</td>
<td>private sector</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duration</td>
<td>short term campaign</td>
<td>ongoing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intensity</td>
<td>no one-to-one advice</td>
<td>all one-to-one advice</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
(2) we steered away from English examples because parallel studies being carried out for DEFRA were covering these in some detail

(3) non-UK case studies would be limited to Europe, North America and Australasia: it was felt there would be fewer lessons to be learned from the major changes going on in advisory services in developing and transitional economies, because of the very different economic and policy contexts

(4) sufficient information covering all aspects of the extension approach, including evaluation information, should be readily available through published and accessible unpublished sources, the Internet and personal communication.

32. Criterion (4) proved difficult to apply rigorously. There are very few schemes or programmes for which thorough quantitative evaluations have been done; and even fewer which present data which can be directly compared with other schemes or programmes.

33. The sixteen cases are listed in Table 1. Thirteen focus on agricultural enterprise and land management advice, the exceptions being advice centres for small and medium enterprises across all sectors (cases 9 and 14) and a community capacity building programme in the USA (case 15). Four are from the UK (cases 1 to 4), four from other EU countries (cases 5 to 8), one from Canada (case 9), two from Australia (cases 10 and 11), one from New Zealand (case 12) and four from the USA (cases 13 to 16). Non-agricultural examples were included in the expectation that there could be something to learn from successful experience in other sectors. In none of these, however, is the integration of business with environmental advice a major issue.

<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Country</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Organic Conversion Information Service</td>
<td>England</td>
<td>Telephone helpline and on-site advice for farmers considering conversion to organic production.</td>
</tr>
<tr>
<td>2</td>
<td>LEAF - Linking Environment and Farming</td>
<td>UK</td>
<td>Not-for-profit farmer-led organisation promoting Integrated Farm Management through demonstration farms.</td>
</tr>
<tr>
<td>3</td>
<td>FWAG - Farming and Wildlife Advisory Group</td>
<td>UK</td>
<td>Not-for-profit organisation providing whole-farm conservation advice.</td>
</tr>
<tr>
<td>4</td>
<td>SAC - Scottish Agricultural College</td>
<td>Scotland</td>
<td>Provides research, advisory, education and training services to fee-paying clients and on contract to government.</td>
</tr>
<tr>
<td>5</td>
<td>Teagasc - Irish Agriculture and Food Development Authority</td>
<td>Ireland</td>
<td>Semi-state body serving as the research, advisory and training arm of the Department of Agriculture, Food and Rural Development.</td>
</tr>
<tr>
<td>6</td>
<td>DLV Adviesgroep NV</td>
<td>The Netherlands</td>
<td>Private consultancy company, created from the former government agricultural advisory service.</td>
</tr>
<tr>
<td>7</td>
<td>Integrated Arable Farming Project</td>
<td>The Netherlands</td>
<td>Government funded project to promote more sustainable farming practices among arable farmers.</td>
</tr>
<tr>
<td>8</td>
<td>Ferti-Mieux</td>
<td>France</td>
<td>National programme to mobilise voluntary action, through local projects, to reduce nitrate pollution, co-funded by government and the industry.</td>
</tr>
<tr>
<td>9</td>
<td>Online services of CBSCs -</td>
<td>Canada</td>
<td>Gateway to information for small</td>
</tr>
</tbody>
</table>

Table 1 The case studies
<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Country</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Canada Business Service Centres</td>
<td></td>
<td>businesses and start-up entrepreneurs, provided by Internet, email, phone, fax and face-to-face.</td>
</tr>
<tr>
<td>10</td>
<td>PPP - Profitable Pastures Project</td>
<td>Australia</td>
<td>Industry-funded project promoting participatory research and extension among local groups of dairy farmers.</td>
</tr>
<tr>
<td>11</td>
<td>Landcare</td>
<td>Australia</td>
<td>Voluntary groups work together to develop more sustainable local land management systems.</td>
</tr>
<tr>
<td>12</td>
<td>Monitor Farms</td>
<td>New Zealand</td>
<td>Farm of a group member used as a focus for learning how new systems and best practice can improve profitability.</td>
</tr>
<tr>
<td>13</td>
<td>Private crop consulting</td>
<td>USA</td>
<td>Fee-based private sector services which have replaced State Extension and chemical companies as farmers' main source of advice.</td>
</tr>
<tr>
<td>14</td>
<td>Small Business Development Centres</td>
<td>USA</td>
<td>Government (federal, state and local) funds 1,000 centres which provide advice alongside financial support to small businesses.</td>
</tr>
<tr>
<td>15</td>
<td>EZEC - Empowerment Zones and Enterprise Communities</td>
<td>USA</td>
<td>Competitive grant scheme to build capacity of low-income communities to move out of poverty.</td>
</tr>
<tr>
<td>16</td>
<td>IFS - Integrated Farming Systems initiative</td>
<td>USA</td>
<td>National network of learning communities built around the values of sustainable agriculture.</td>
</tr>
</tbody>
</table>

34. Figure 4 shows the distribution of the case studies across the positions on the extension approach dimensions. Some positions are more heavily represented than others. Relatively few, for example, are directed at narrowly defined categories of clients; and on the "means of influence" dimension, most take client objectives as their starting point rather than the "selling" of a particular point of view or set of recommendations. Most are ongoing programmes rather than short term campaigns. Overall, however, the case studies give reasonable coverage of the main points of theoretical, policy and operational interest identified in sections 2 and 3.

**Figure 4**  Case study location on the advisory approach matrix

<table>
<thead>
<tr>
<th>Dimension</th>
<th>business</th>
<th>6,9, 10,13, 14</th>
<th>1,4, 12</th>
<th>5,15, 16</th>
<th>2,3,7, 8</th>
<th>11</th>
<th>social policy goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus</td>
<td>narrow target category</td>
<td>10,13</td>
<td>12</td>
<td>1,5,7, 8,9</td>
<td>2,3,4, 6,11, 16</td>
<td>11</td>
<td>broad or unspecified target</td>
</tr>
<tr>
<td>Specificity of clientele</td>
<td>promote specific view</td>
<td>2,7,8</td>
<td>5,11</td>
<td>1,3,4, 13,14, 16</td>
<td>6,9, 10,12, 15</td>
<td>11</td>
<td>help client achieve own objectives</td>
</tr>
<tr>
<td>Means of influence</td>
<td>technology transfer</td>
<td>5,7,8</td>
<td>1,2,6, 13,14</td>
<td>3,4, 10,12, 16</td>
<td>9,11, 15</td>
<td>11</td>
<td>process</td>
</tr>
<tr>
<td>Programme objectives</td>
<td>individual land management/ business unit</td>
<td>1,2,4, 5,6,7, 9,13</td>
<td>3,8, 10,12</td>
<td>16</td>
<td>11</td>
<td>15</td>
<td>group, community or area (i.e. collective decision)</td>
</tr>
</tbody>
</table>
35. To facilitate comparison and cross-case analysis, each case study was described and analysed using a common template. This covered the policy and economic context of the programme, its objectives and scale of operation, the relationships between key actors, means of delivery of advice and information, a model of the main flows of information, the professional resources deployed, and a summary of costs and benefits. The case studies are presented in Annex 1 and the template in Annex 2.

36. The case studies reflect the diversity of schemes and methods by which government and the private (both for-profit, and not-for-profit) sector seek to provide information, advice and other non-material support to land managers and rural businesses. Reference here to "other support" is significant: as seen below, clients value the fact that many schemes go beyond the straightforward provision of advice and information, to processes of confidence building, facilitation of learning and motivation. The specifics of each reflect the objectives, institutional context and the premises underlying it: different approaches and methods are appropriate to different objectives and contexts and are not necessarily transferable to different situations.

37. Governments are involved in all but one of sixteen cases (the exception being private crop consulting in the USA), though to different degrees and in very different roles. These range from a contract with a commercial service provider to deliver specified public interest information or advice (e.g. DLV), to the operation of a service by a government department or agency (e.g. Teagasc), with many variations and combinations in between. Figure 5 locates each case within the "funding-delivery" matrix.

38. None of the schemes operate in isolation from other influences. Land managers make decisions within the prevailing legal and regulatory framework. However, we excluded from the study cases where behaviour is strictly controlled by legislation and where the role of advice and information is limited to ensuring land managers are aware of their legal responsibilities and have the information and knowledge necessary for compliance. In all the selected cases, the services provided seek to influence voluntary changes in behaviour. The cases illustrate the weight of society's demands and expectations of rural land managers: agriculture and other rural enterprises are expected to contribute to the national economy, sustain the rural
economy, and help to achieve national social and environmental goals. The cases also underline the intense economic and financial pressure faced by rural land-based enterprises and those who manage them.

Figure 5  Public and private sector roles in the case studies

<table>
<thead>
<tr>
<th>Public</th>
<th>Private</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>5</td>
</tr>
<tr>
<td>9</td>
<td>4</td>
</tr>
<tr>
<td>14</td>
<td>3</td>
</tr>
<tr>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>11</td>
<td>4</td>
</tr>
<tr>
<td>10</td>
<td>6</td>
</tr>
<tr>
<td>16</td>
<td>13</td>
</tr>
</tbody>
</table>

39. The cross-case analysis highlights several trends and issues.

(1) Information, knowledge and learning

40. The cases show the importance of learning as the process by which people develop new knowledge. "Knowledge transfer" may be a convenient shorthand and label for a process at industry or sector level in which knowledge generated by research is integrated with technology used within the industry. At the level of the individual land manager, however, it should not mask the reality that knowledge is personal and cannot be transferred (Röling 1988). Schemes which facilitate learning, confidence building and motivation are particularly valued by clients (IAF, Landcare, and Monitor Farms, for example). Selection of methods and design of approaches must allow for these processes. They are particularly important where major changes in strategy are being considered or promoted (OCIS); where new skills are required before a change of strategy can be implemented (IAF, IFS); or where collective agreement or action is needed (Landcare).

41. Schemes which deliberately provide facilitation are more likely to lead to effective use of the information and advice they provide. The term facilitation in fact covers a wide range of support: from assistance to an individual farmer in completing an application for funding (e.g. Teagasc, SAC), to the building up of leadership capacities in communities (PPP, EZ/EC). In different ways, these represent efforts to empower the key actors in land management decision making.

42. The EZ/EC case shows how the design of project management tools can enhance learning. The Internet-based Benchmark Management System allows community groups to plan and monitor their work programmes online, data from which are then also available to the programme for overall monitoring purposes. Evaluations have shown that those groups who use the system develop greater competence in project management. These learning benefits were not anticipated: the tool was seen primarily as a means of monitoring: groups were required to file regular reports through the IT system. The same programme, in its first round of project proposals and funding, provided training in group processes - such as the responsibilities of being an office holder in a group.

43. Some decisions and land management strategies are inherently more information and knowledge intensive than others. This is especially the case when environmental objectives are strong. Organic farming, for example, requires local solutions and adaptations; and responses to information on crop, animal and soil status are less likely to be based on rule of thumb or prescription. The design of schemes needs to
take account of the knowledge and information intensity implied by the objectives and context (as in PPP, and Landcare).

(2) Means of service delivery

44. Twenty different information and advisory methods were identified in the sixteen cases (Table 2). These range from provision of information in printed materials, to intensive interaction in one-to-one advisory visits and group-based activities. Client evaluations and feedback highlight the effectiveness of the more interactive methods. These include internet-based tools, such as the CBSC on-line business planner.

Table 2 Means of service delivery within case studies

<table>
<thead>
<tr>
<th>Means of service delivery</th>
<th>Case studies using each as a significant element in their approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farm / site visit by adviser</td>
<td>1, 3, 4, 5, 6, 7, 13</td>
</tr>
<tr>
<td>Groups</td>
<td>4, 5, 7, 10, 11, 15, 16</td>
</tr>
<tr>
<td>Consultancy report</td>
<td>1, 3, 4, 5, 6, 13</td>
</tr>
<tr>
<td>Technical literature / newsletters</td>
<td>3, 4, 5, 8, 16</td>
</tr>
<tr>
<td>Training</td>
<td>2, 8, 14, 15, 16</td>
</tr>
<tr>
<td>Internet - access to information</td>
<td>3, 9, 14, 16</td>
</tr>
<tr>
<td>Internet - interactive service</td>
<td>4, 9, 14, 15</td>
</tr>
<tr>
<td>Telephone contact / helpline</td>
<td>1, 4, 5, 6</td>
</tr>
<tr>
<td>Demonstration site / farm / activity</td>
<td>2, 8, 16</td>
</tr>
<tr>
<td>Monitor farm / focus farm</td>
<td>5, 10, 11</td>
</tr>
<tr>
<td>Participatory R&amp;D</td>
<td>10, 16</td>
</tr>
<tr>
<td>Client monitoring / assessment</td>
<td>10, 11</td>
</tr>
<tr>
<td>Video</td>
<td>14, 16</td>
</tr>
<tr>
<td>Mass media</td>
<td>8, 15</td>
</tr>
<tr>
<td>Volunteers</td>
<td>2, 14</td>
</tr>
<tr>
<td>Lead farmers</td>
<td>2, 8</td>
</tr>
<tr>
<td>Self-assessment tools</td>
<td>2, 9</td>
</tr>
<tr>
<td>Telephone conferencing</td>
<td>10</td>
</tr>
<tr>
<td>Pro-active campaigns</td>
<td>5</td>
</tr>
<tr>
<td>Farm plans</td>
<td>7</td>
</tr>
</tbody>
</table>

45. The cases offer some very positive assessments of the effectiveness of group-based activities. Even within services which are focused clearly on business decisions by individual land managers, groups are increasingly being used to good effect (SAC, Teagasc, Monitor Farms). In DLV’s consultancy services, by contrast, commercialisation and privatisation have led to a decrease in the proportion of advisory time spent working with groups - although they do use group methods within programmes they implement under contract to government. Groups are a particularly effective way of facilitating learning, confidence building and the assessment of new technology and management options - as seen in the Monitor Farms initiative and in Landcare. Again, a key outcome of these processes is the empowerment of the group members, which is just as important as the learning of any technology or business management skill.

46. Decisions on what channels of information and methods of service delivery to include within a scheme must be based on an analysis of what the intended clients (a) can access, and (b) are confident with. The Internet and email would seem to offer very cost-effective opportunities for service providers. The ICL/ADAS (2000) report on e-business potential in UK agriculture identifies several promising ways in which ICTs could be used to inform and support those farmers with Internet access.
(53 per cent in a survey of 2000 farms). Many of the remaining 47 per cent are unlikely to acquire a computer in the near future. DEFRA's livestock Knowledge Transfer Initiative (Drew 2001) found that the Internet was not ranked highly by farmers as a preferred source of information. A recent report by IBM's Local Futures Group (2002) warns of a "new underclass of people in rural and remote areas who are being excluded from … online public services by lack of access to technology". ICT infrastructure will continue to evolve: interactive television may be a more accessible and user-friendly reality in the future than the conventional PC.

(3) Public and private goods

47. In practice, the distinction between public and private goods is not so clear cut as a purely conceptual analysis suggests. Governments still do fund what seem to be private goods (for example, business advice to individual SMEs - CBSC, SBDC), because these contribute to broader social and economic goals. Cost-sharing between client and government therefore makes sense. A successful business start in an area of low economic activity has multiplier effects which contribute to building a sustainable local economy and stabilising a rural community.

48. Several cases explicitly integrate business and environmental goals (OCIS, LEAF, FWAG, IAF, Landcare, IFS), but with differing emphases. OCIS, for example, is premised on the question: "does organic conversion make good business sense for my farm?"; while FWAG starts from the premise that the land manager wants to make a contribution to public environmental goods and helps him or her to identify affordable ways of doing so. Landcare, IFS and Profitable Pastures start from the assumption that the best options are not necessarily known and facilitate participatory research and development to develop them. Although this study deliberately did not cover many UK cases, it seems that there may be less facilitation of on-farm participatory technology development in the UK than in other comparable agricultural economies: this may be because the technological options are more circumscribed by regulation, or may simply reflect the dominant approaches that have so far been taken to technology development and "transfer".

(4) Process drivers

49. There is a clear trend towards more client-driven, or demand-driven, processes, even where the rationale of the schemes is that government wants land managers to change their behaviour in order to achieve public goals. This is indicated also in the trend towards "bottom-up" information flows. The cases identify implications of this for staff resources, and for the facilitation of client demand. The former are seen most clearly in organisations that have been through a process of commercialisation (SAC) and privatisation (DLV). Both SAC and DLV experienced considerable turnover of professional staff and recognised the need to invest heavily in re-orientation and training. In SAC's case, this included training in marketing, direct selling to farmers, and business development. DLV note the change in organisational culture, with advisers now more focused on efficiency and service quality. Other cases (e.g. Landcare, Monitor Farms) note the importance of skills in facilitation of learning, conflict resolution and communication.

50. The success of demand-driven services depends on clients' being able to articulate their requirements, and then being aware of and having easy access to services which they think can deliver them. Schemes therefore need to pay attention to marketing their services, and helping clients analyse their situation, opportunities and requirements. The cases provide examples of peer group discussion and analysis (Landcare, Monitor Farms, EZ/EC), self-assessment tools (LEAF, CBSC), and interactive internet tools (CBSC, SBSC) for the latter. Clients are more able to assess the potential benefits of a service, or of engaging with a process, where a scheme is more narrowly defined: more facilitation is needed in the broader
programmes where local solutions and opportunities are the starting point for decision and action. More careful facilitation is also required where the potential risk from an inappropriate decision is high.

51. Each scheme operates in an information rich environment; each inevitably adds to the amount of information and advice potentially available to a land manager. Schemes look very different from the perspectives of client, compared to the "champion" or supplier of the service. For the latter, the scheme is a clearly demarcated route to a public interest or commercial objective; to the former, it is one among many schemes, sources and channels of advice, all of which are competing for his or her attention. Schemes therefore need to address how to help potential clients or users assess whether this is an appropriate one for them. Schemes where this is designed into the structure are likely to be more helpful: an example is OCIS, with its structured levels of provision to help a farmer reach a decision on whether a particular course of action makes sense. The design of schemes also needs to take account of complementary, potentially overlapping, and gaps in provision. For example, if training is going to be needed so that land managers can make use of the services offered by a scheme, is it already available or should it be included as an element within the scheme? Schemes can also experience constraints if the professional resources required to deliver them are in short supply.

(5) Private sector delivery

52. The cases illustrate (Figure 5) the dominant role of the private sector in service delivery. Advantages of this from the funders' and clients' (who are obviously the same in many situations) perspectives include:

- efficiency: competition, and reductions in public funding, have led to significant cost savings (for example SAC and DLV, both of which report substantial reductions in overheads)
- flexibility: government and clients have a choice of service providers
- accountability: contractual relationships provide transparent criteria and levels of service.

53. On the other hand, it has been suggested (Teagasc) that a pluralist array of private sector providers jeopardises the synergy of a holistic, joined up knowledge and information system. This is echoed in recent UK reports (para. 9 above) referring to fragmentation of advice. Winter et al. (2000) suggest that fragmentation leads to confusion among farmers about where to go for information, duplication and wasteful competition among providers, and geographical imbalance in provision of services. There is little evidence from the cases as a whole that this is specifically a problem of a delivery system dominated by the private sector. Efforts by government or other actors to over-manage the system are in any case likely to be counter-productive. The cases do highlight the individuality and variety of land managers' situations: a pluralistic array of providers is exactly what is needed to meet their needs. The challenge is to ensure that (potential) clients - those who can make effective use of advice and information - can find their way around the array. Government can play a strategic role in identifying gaps in provision, and then seeking to fill them through a brokerage role or by contracting service providers.

54. Credibility comes through as an important consideration from the point of view of clients. In some cases, the fact that the service is delivered by the private sector, even when it is funded by government, is a positive feature. This may be more related to clients' assessment, from experience, of individual advisers' expertise and objectivity than any generic perception of private sector credibility. Credibility can be compromised by perceptions of commercial interests. On the other hand, if land managers perceive government as having a policy agenda which is against their interests, they are likely to be wary of government funded services - and particularly
of services delivered by government agencies. Those providing services may need to work at improving and maintaining credibility. In two USA cases, this is supported by accreditation (private crop consulting in Louisiana) or registration (SBDC - registration of volunteers).

55. It is interesting that the three non-agricultural cases (CBSC, SBDC, EC/EZ) are all delivered primarily by government agencies, albeit in collaboration with a multiplicity of national and local partners. Important here, though, is the deliberate absence of a central blueprint of how the services should be delivered locally, and what form local projects should take. In this respect, their approach is similar to that of the IFS, which is run by a not-for-profit organisation.

(6) Conflicts of interest

56. Where a service provider is delivering advice on a commercial or semi-commercial basis to clients and at the same time fulfilling a public interest role, there is a potential conflict of interest. A decision that is in the best business interests of the land management unit does not necessarily optimise the social returns to the community as a whole. In the end, it is the land manager who trades one off against the other, in the decisions he or she makes within the prevailing regulatory parameters. The intensity of potential conflict varies with the institutional arrangements. Where the client is receiving commercial and public interest advice from two (or more) different providers, there is no conflict. Where different sections or staff members of the same organisation are offering the two types of advice (as in the case of Teagasc), the conflict is minimised to the extent that clients recognise their different remits. With SAC, it is often the same adviser who will be delivering the public interest service under agreement with government, and at the same time the commercial advice under contract to the client. There is no evidence of concern among clients that objectivity may be compromised by conflicts of interest. At an organisational level, potential conflicts are minimised by a transparent recording of advisory inputs against specific contracts with individual clients and with government. What is clear, however, is that the credibility of advisers in the eyes of clients is based on perceived expertise, independence and knowledge of the local area and land use systems. This, in the end, may determine whether clients see conflicts of interest as a real issue. It is likely that conflicts of interest are a more significant consideration - in the minds of competitors for government contracts rather than in the minds of clients - in situations of greater competition among service providers. Careful drafting of contracts for delivery of publicly funded services can help to minimise the effect of conflicts of interest.

(7) Staffing issues

57. Advisory services vary in their staffing intensity. Direct comparisons are difficult because of differences in the nature of the service offered and the extent of the changes in land management which might be envisaged. Some schemes make effective use of volunteers to enable them to maintain activity levels above those that would be possible with their own professional staff (SBDC, with its Service Corps of Retired Executives; and LEAF). Others achieve the same by working with networks of collaborating institutions and individuals. This leverage of other staff resources not only contributes to overall efficiency: it enriches the service with a wider set of backgrounds, competencies, insights and enthusiasms.

58. There is no obvious correlation between intensity and impact: one scheme (IAF) relied on intensive one-to-one advice yet reached only 38 farmers with apparently little impact on surrounding farms. Figures for two cases which offer comprehensive advice to rural land managers on a national scale indicate advisory staff to client ratios of between 1:154 for all contacts and 1:73 (Teagasc) / 1:95 (SAC) for contract clients. It is reasonable to conclude from the cases that staffing intensity is not a
good indicator of the likely success of a scheme: those with high intensity are unlikely
to lead to sustainable change unless they are using their staff resources to deliver
empowerment. Managed in the right way, and with staff with the appropriate skills, a
lot can be achieved with relatively low intensity.

59. The staff who deliver a service need to have appropriate expertise, knowledge
and skills if they are to be effective and remain credible in the eyes of clients. Trends
towards commercialisation of public services, demand-driven processes, the search
for locally adapted solutions, and the need for negotiation within and between groups
for collective decision making require a considerable shift of mind-set and a much
wider range of knowledge and skills than commanded by most earlier generations of
agricultural advisers. At the same time, particularly where farmers are concerned, the
cases confirm the fundamental requirement of clients that advisers understand the
technology and economics of local farming systems. In some cases (OCIS, for
example), schemes have been constrained at least in the short term by a shortage of
appropriately qualified personnel. Service providers facing a radical change in their
environment have recognised the need to invest heavily in training and re-orientation
(para. 49 above).

(8) Cost-effectiveness

60. From the literature available, and despite intensive searching and follow up, it
was not possible to compare directly the cost-effectiveness of different schemes.
This is partly because there is very little data on the effects and, in particular, the
impacts of information and advisory services; and also because the schemes offer
very different services in different contexts - the old problem of comparing apples
with oranges. The literature review produced quantitative data on activity levels,
outputs and/or returns in only six case studies. Qualitative assessments were found
in a few other cases - in two cases, these were based on confidential in-house or
commissioned evaluations. In future evaluations or assessments of publicly funded
schemes, explicit attention should be paid to levels of impact (and the methodology
for assessing these) and measures of cost-effectiveness. It is also possible to design
the operation of schemes in such a way that much of the data needed for these
assessments is generated more or less automatically (as in the case of SBDC
deriving monitoring data from groups' use of on-line project management tools).

61. There are two clear lessons from the cases concerning specific methods of
delivery. First, qualitative assessments within the case study literature are emphatic
that groups are effective for learning, motivation and confidence building; and cost
effective in terms of resources expended per client (although no figures are available
for any of the case studies). Second, interactive internet services are very cost-
effective - CBSC gives a figure of less than 4.6 Canadian dollars per business plan
produced.

62. The limited quantitative data from the case studies do give some indicative costs,
and occasionally returns, for the services provided.

- Teagasc's advisory services produce a benefit cost ratio of 2.82 : 1, with
  annual benefits to farmer clients estimated as an average of €1270 and an
  increase in farm efficiency of eight per cent.
- The unit cost of a farm visit under OCIS is £297 and responding to a
  telephone enquiry costs £45; DEFRA estimates that about one in four of
  those who contact OCIS eventually enter land into conversion (Hansard
  written answers, 27 June 2001).
- The average cost of running a Landcare farmer group in Australia is A$ 5,000
  per year.
Monitor Farms in New Zealand yield an average benefit to group members of NZ$6,700 - which for the group as a whole represents a 20-fold return on an investment of NZ$25,000 per year; production on members' farms increases 8 - 37 per cent, and farm revenue by 13 - 31 per cent.

Advice to small businesses (SBDC) costs around US$172 per client counselled or trained; and US$1,544 for each business that created or retained jobs.

Restrictions on funding from government may have a positive effect of increasing the incentive to seek additional funds from other sources (EC/EZ) thereby maximising the leverage factor.

5. Conclusions and recommendations

63. The review of recent literature and the analysis of the sixteen case studies leads to the following conclusions.

64. Approaches and programmes are not always directly transferable from a country or sector in which they have been successful. A programme will succeed not simply because of its design, but because of the coherence between its design and the environment in which it operates - which includes the resources available, the regulatory regime, patterns of incentives within the rural economy, and the skills and expectations of the various stakeholders. Successful implementation may also depend on the enthusiasm of an individual committed to promoting it within his or her particular institutional setting. Any proposal to try in England an approach which has been used elsewhere must be based on a careful comparison of the contexts and an assessment of whether the supporting factors which contributed to its success in another country are likely to be in place in its new setting.

65. Schemes and programmes must build in provision for facilitation, in order to maximise the effective take up of services particularly by those who face the greatest transaction costs or the greatest lack of skills and confidence. Facilitation may include training, design of user-friendly forms and self-assessment materials, and structured activities and processes with groups. The appropriate form will vary; in all but the most straightforward task of making information available, however, potential clients will need some assistance or support in using the information and advice which is on offer. The facilitation may be done by the same organisations and personnel as are providing the advisory service; or in more complex situations (such as capacity building within community groups) a separate provider may be appropriate. With publicly funded programmes, resources for facilitation can be put in the hands of community groups in order to ensure accountability of facilitator to client. Although "provision of advice and information" sounds inherently a one-way process, full interaction between providers and users at all stages from initiation to evaluation is essential to effective service delivery.

66. Integration can combat fragmentation. But integration can mean different things. In the present debate in England about provision of advisory services, integration can be said to cover the need:

- for synergy between business oriented advice and environmentally oriented advice;
- for inclusion of appropriate succession and retirement advice for farmers;
- for improved links and continuity between research, advice and training;
- for diminished fragmentation in geographic coverage and content of services;
for seamless delivery of the various government advice programmes - for example planning advice, conservation advice and farm business advice.

67. In all these forms of integration, the solution is not necessarily to bring all advice under one roof. As noted above (para. 9), services delivered by the public sector can be just as fragmented as those in the private sector. It is more important that it is clear to potential users what kinds of advice are available and from where; and that accessing the appropriate advisory services is straightforward. Whoever a potential user goes to should be in a position to help him or her identify - from the multiple sources available and accessible - which are the most appropriate and then help them make contact. Government should not try to manage the whole information system, but it can play an important brokerage role; and can identify (through research) market failures and gaps in public goods and public interest provision which can be plugged in various ways - including contracting private sector providers. The detailed specification of such contracts, together with professional codes of practice, can help to foster integration at the level of the individual user. For example, a requirement that those giving business advice should integrate it with appropriate advice on environmental and other public interest matters would help to ensure that the adviser provides a brokerage role between the client and multiple sources of information. In the end, it is the individual land manager who integrates advice in the decisions he or she makes in respect of the land management unit. Providers of information and advice can assist by making the links between business and environmental considerations explicit in all their materials and services.

68. Change takes time. A one-shot injection of information or generic advice will rarely lead to instant decisions and changes in land managers' behaviour. The more complex the change, the greater the perceived risk and the more people who need to be involved in the decision to change, the more time and support is likely to be needed. This has major implications for the design of advisory schemes: the more complex the change, the more the scheme will need to move beyond focusing simply on accessible provision of accurate and relevant information, to the kinds of facilitation referred to above (para. 64).

69. Advice will be more effective if it is based on a clear understanding of how and why land managers reach decisions. Schemes which are underpinned by a well-founded model of human learning and behaviour change are more likely to succeed than those which make unreasonable assumptions about the significance of information and knowledge constraints. Relevant questions to ask in a particular context are what are the constraints to change? what factors are driving land managers' decisions? how do land managers trade off business, social and personal factors? The answers to such questions will not be uniform: they will vary from farmer to farmer but there should be sufficient commonality within recognised categories of farmer to enable schemes to be designed accordingly. The kinds of decision or change which land managers may be expected to make will be relatively easy to identify if a scheme's objectives have been clearly specified - along with the criteria for determining whether they have been met and the means by which data will be compiled in order to make that assessment.

70. Training for staff involved in delivering services improves their performance and the overall effectiveness and efficiency of advisory schemes. It is particularly important for advisers who need to broaden their skills beyond the technical or scientific discipline in which they were trained, into areas of communication and facilitation. Training for clients may, in some situations, be an essential element of facilitation. But training will have little lasting effect unless supporting infrastructure and incentives are in place.
71. Surprisingly few of the advisory schemes and programmes studied in this review are premised on the once-dominant "technology transfer" model. Blueprint solutions have been discarded in favour of more client-focused, adaptive approaches. These have achieved considerable success - in identifying technical solutions to local problems, in capitalising on local opportunities for improving efficiency of production, and in galvanising local action to improve economic performance and quality of life. "Knowledge transfer" is a convenient shorthand expression for the processes by which new ideas generated by research become integrated into technology and practices used within an industry. It should not be taken literally to imply a top-down transfer of pre-determined technical solutions to local problems which have not yet been identified. There is still, however, scope for wide variation in the extent to which the range of possible decisions and behaviours is prescribed. The case studies - though these are not in any statistical sense representative of advisory schemes and programmes as a whole - suggest that land managers in Europe may be more circumscribed by regulation as to the range of decisions they can take than their counterparts in Australia, New Zealand and North America. An alternative interpretation is that government initiatives in Europe have been less open-ended and more prescriptive of the range of decisions and actions that can be taken.

72. This observation reinforces the first conclusion (para. 64) about the transferability of approaches from one environment to another. The conclusion is even more apt when the approach may be used for a different purpose than in its original context. A case in point is the Monitor Farm experience in New Zealand. In their original location, their focus is on group activity aiming to improve the farm business. In Wales, where ten monitor farms have been set up under the Welsh Sheep Strategy, the group processes are retained but the focus is also on the delivery of environmental goods and there is a greater presence of non-farmer stakeholders in the groups. In England, current discussions about the use of the model suggests that monitor farms are being seen as an instrument for the demonstration of technologies and management practices to individuals which will deliver environmental goods. In New Zealand, decisions on changes in management are made by members of the monitor farm group after discussion of current technical and business performance and consideration of options for improvement: the method will not necessarily work so effectively if it is used simply to demonstrate technologies which have been determined by someone outside the group. The reference in the Curry Report to "Demonstration farms on the New Zealand model" suggests such a change in the approach may be intended.

73. Credibility of those providing the service is a key ingredient to success. Conflict of interest is only likely to arise in the eyes of a client if the adviser mixes his or her roles when involved in delivering fee based services as well as public funded schemes.

74. Information and communication technology (ICT) can provide cost-effective interactive tools to support or complement the delivery of advice and information programmes. Where these tools enable users to carry out tasks more confidently and efficiently, such as the CBSC on-line business planner, they have shown high usage levels. Such tools can bring additional benefits in the form of confidence, learning and motivation. Static use of ICT to deliver information is much less effective. ICTs are certainly not a panacea, but may have a role to play. How big this role is for the majority of farmers will depend on how rapidly access to ICT facilities, infrastructure and skills in rural areas spreads in the future.

75. Structured access, through a series of filters, to different levels of service makes efficient use of scarce staff resources and expertise. Where these levels are delivered by different providers, however, good communication is required between them to ensure that the client experiences a seamless continuum of service.
76. It was not the intention of this review to generate specific recommendations on how advice and information can best be provided to land managers in England. However, the review does suggest some general principles on which future provision should be based.

(1) Integration of advisory services should not be at the expense of diversity. From a client perspective, diversity means a rich set of options from which their particular needs are more likely to be met than from a single integrated service. Integration does, however, require support to land managers in finding their way around the multiplicity of sources of information and advice.

(2) Government should continue to fund the provision of advice and information services, because there are significant market failures in the supply of and demand for advice and information. The boundaries between public and private goods, and between public and private interests, are not as clear cut in practice as in theory. Yet it is clear that land managers face significant transaction costs, risk and uncertainty in accessing and evaluating information, particularly where complex change and environmental issues are involved. Reducing these costs is likely to bring benefits to society as a whole.

(3) There should be a presumption against growing a public sector capability for delivering advice and information services: cost-effectiveness and flexibility are more likely to be achieved through contracting private sector organisations to deliver services with well defined goals and appropriate delivery methods.

(4) There should be a presumption against prescription of acceptable decisions and behaviours, in favour of broad principles and incentives and local development of solutions. It is necessary to balance this presumption with the need for accountability for the use of public funds, and the responsibility of government to deliver environmental, economic and social goals for the nation as a whole. But sustainable rural communities and economies are more likely to emerge from creative processes of identifying problems and opportunities, and developing strategies for dealing with them, than from the implementation of a package of measures developed by others.
References


Clark, J J and Hookham, D H (n.d.) SAC Electronic Information Service: keeping staff informed http://wcca.ifas.ufl.edu/archive/7thProc/CLARK/CLARK.htm


---

3 This list includes sources cited in the report, and published sources for the case studies in Annex 1.


www.defra.gov.uk/footandmouth/rural/taskforce/rtf.PDF


Drew, B (2001) Knowledge Transfer to the livestock industry. Progress in the new DEFRA initiative. ADAS/IGER/University of Bristol


Francis, J, Dauven, A, Roderick, D (2000) The measurement of the success of demonstration farms in Wales and to seek ways of improvement of the demonstration farms. ADAS report to NAWAD.


Garforth, C (2000) "R7500: Analysis of farmer decision making in pest management: Synthesis of findings". Reading, UK. Agricultural Extension and Rural Development Department, The University of Reading


www.defra.gov.uk/footandmouth/rural/taskforce/haskins.pdf


Small Business Administration (2001a) SBA Fiscal Year 2001 Annual Performance Plan Available on SBA website


DEFRA Research Project KT0110

Improving access to advice for land managers:
a literature review of recent developments in extension
and advisory services

Report to the Department for Environment, Food and Rural Affairs
by the School of Agriculture, Policy and Development at
The University of Reading, ADAS Consulting Ltd
and John Archer Consulting

Annexes
Annex 1. The Case Studies
Annex 2. Case Study Template

March 2002
### Annex 1: The case studies

<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Country</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Organic Conversion Information Service</td>
<td>England</td>
<td>Telephone helpline and on-site advice for farmers considering conversion to organic production.</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>LEAF - Linking Environment and Farming</td>
<td>UK</td>
<td>Not-for-profit farmer-led organisation promoting Integrated Farm Management through demonstration farms.</td>
<td>7</td>
</tr>
<tr>
<td>3</td>
<td>FWAG - Farming and Wildlife Advisory Group</td>
<td>UK</td>
<td>Not-for-profit organisation providing whole-farm conservation advice.</td>
<td>11</td>
</tr>
<tr>
<td>4</td>
<td>SAC - Scottish Agricultural College</td>
<td>Scotland</td>
<td>Provides research, advisory, education and training services to fee-paying clients and on contract to government.</td>
<td>15</td>
</tr>
<tr>
<td>5</td>
<td>Teagasc - Irish Agriculture and Food Development Authority</td>
<td>Ireland</td>
<td>Semi-state body serving as the research, advisory and training arm of the Department of Agriculture, Food and Rural Development.</td>
<td>19</td>
</tr>
<tr>
<td>6</td>
<td>DLV Adviesgroep NV</td>
<td>The Netherlands</td>
<td>Private consultancy company, created from the former government agricultural advisory service.</td>
<td>25</td>
</tr>
<tr>
<td>7</td>
<td>IAF - Integrated Arable Farming Project</td>
<td>The Netherlands</td>
<td>Government funded project to promote more sustainable farming practices among arable farmers.</td>
<td>29</td>
</tr>
<tr>
<td>8</td>
<td>Ferti-Mieux</td>
<td>France</td>
<td>National programme to mobilise voluntary action, through local projects, to reduce nitrate pollution, co-funded by government and the industry.</td>
<td>33</td>
</tr>
<tr>
<td>9</td>
<td>Online services of CBSCs - Canada Business Service Centres</td>
<td>Canada</td>
<td>Gateway to information for small businesses and start-up entrepreneurs, provided by Internet, email, phone, fax and face-to-face.</td>
<td>37</td>
</tr>
<tr>
<td>10</td>
<td>PPP - Profitable Pastures Project</td>
<td>Australia</td>
<td>Industry-funded project promoting participatory research and extension among local groups of dairy farmers.</td>
<td>41</td>
</tr>
<tr>
<td>11</td>
<td>Landcare</td>
<td>Australia</td>
<td>Voluntary groups work together to develop more sustainable local land management systems.</td>
<td>45</td>
</tr>
<tr>
<td>12</td>
<td>Monitor Farms</td>
<td>New Zealand</td>
<td>Farm of a group member used as a focus for learning how new systems and best practice.</td>
<td>49</td>
</tr>
<tr>
<td>No.</td>
<td>Title</td>
<td>Country</td>
<td>Description</td>
<td>Page</td>
</tr>
<tr>
<td>-----</td>
<td>-------------------------------------------------</td>
<td>---------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>13</td>
<td>Private crop consulting</td>
<td>USA</td>
<td>Fee-based private sector services which have replaced State Extension and chemical companies as farmers' main source of advice.</td>
<td>53</td>
</tr>
<tr>
<td>14</td>
<td>Small Business Development Centres</td>
<td>USA</td>
<td>Government (federal, state and local) funds 1,000 centres which provide advice alongside financial support to small businesses.</td>
<td>57</td>
</tr>
<tr>
<td>15</td>
<td>EZEC - Empowerment Zones and Enterprise Communities</td>
<td>USA</td>
<td>Competitive grant scheme to build capacity of low-income communities to move out of poverty.</td>
<td>61</td>
</tr>
<tr>
<td>16</td>
<td>IFS - Integrated Farming Systems initiative</td>
<td>USA</td>
<td>National network of learning communities built around the values of sustainable agriculture.</td>
<td>65</td>
</tr>
</tbody>
</table>
1. Introduction

This service provides both a telephone helpline and on-site advice for English farmers considering converting to organic production. OCIS is funded by Government and delivered by the private sector. It was started in 1996; since then over 15,000 calls have been dealt with by the helpline and about 5000 visits have been made. The service was evaluated for MAFF in 2000.

2. Policy and economic context

The UK market for organically produced food started to expand in the early 1990s and has grown substantially since then. The early expansion of the market was met mainly by imports. In 1994 Government introduced the Organic Aid scheme to help producers convert to organic production – a 3-year process on most land – by providing conversion grants. The market for organic food continues to expand and in 1996 OCIS was introduced to help UK producers decide whether to convert. The sector continues to receive grant aid for conversion through the Organic Farming Scheme and imports continue to fill much of the UK demand. Government commitment to the sector remains strong, for both market and environmental reasons.

3. Objectives

The service exists to assist farmers in coming to a decision on whether conversion to organic production is appropriate for them. This is a business decision and the service aims to ensure that the farmer takes account of all the relevant issues and information in reaching that decision.

4. Scale of operation

The service is available to any farmer or grower in England. The visit component is only available to those enquirers who satisfy the helpline operator that it is likely to be beneficial to them. The service started in 1996 and has been provided by the same contractors throughout. The helpline has dealt with about 15000 enquiries. These have lead to 4,956 visits being made up to the end of 2001.

5. Key actors and their inter-relationships

5.1 Funders
The service is fully funded by DEFRA.

5.2 Deliverers
The helpline contract is delivered by the Soil Association from their Bristol office. The visits contract is delivered by Elm Farm Research Centre using their own and sub-contracted staff.

5.3 Users
Any farmer considering conversion to organic production.

5.4 Relationship between funders, deliverers, users and other stakeholders.
The service is delivered free to the farmer by two well-respected organic farming organisations. This has ensured that the advice is valued by the many certification bodies. All organic produce produced in the UK has to be certified by one of these bodies.

6. **Means of delivery**

The telephone helpline service is staffed by qualified scientists who also do other work for the Soil Association and are familiar with the context of organic farming. Senior staff are available to help answer the few queries that the regular staff cannot answer. Enquirers are sent an advice pack about organic farming and conversion.

Requests for visits with some enterprise information are passed to Elm Farm. They use 35-40 advisers, mainly on a sub-contracted basis, to deliver visits throughout the UK. Firstly farmers get a half-day visit covering the background to organic production, standards, grants and markets. The adviser will also assess the physical and financial opportunities and any potential obstacles to conversion.

If the farmer wants to proceed, a further full day’s consultancy is available under the service to provide specific information on converting the farm. This is less prescribed – it addresses the site and enterprise specific issues of interest to the farmer. The farmer receives a written report after each visit which usually contains several elements.

7. **Model of information flow**

Information flows between the helpline and the farmers and between the advisers and the farmers. It also flows from the help-line contractor to the advisory contractor.

8. **Professional resources required**

Qualified scientists with experience of organic farming staff the helpline. Training on organic farming comes mainly from working for the Soil Association.

Adviser numbers have grown during the 1990s as the business opportunity has become available. Backgrounds of advisers vary and it has not been easy for the contractor to meet the demand for visits with experienced staff. Most have moved into the sector after working with conventional farming systems. Training opportunities have increased considerably in recent years.

9. **Costs and benefits**

ECOTEC (2000) calculate that the helpline service cost £45 per call and visits cost £297 each in 1999/2000. The latter are a mix of half and full day visits. They conclude that both farmers and certification bodies benefit from OCIS. Farmers who
use the service are at less risk of taking a decision to convert that turns out to be inappropriate. The certification bodies are less likely to be confronted with applicants who they subsequently have to reject. The free advice does not provide a detailed business plan or conversion plan. ECOTEC found that farmers’ expectations were often higher that the service was contracted to provide, particularly on details of producing specific crops.

10. Summary and advisory approach

This service is funded by Government and delivered by the private sector. It exists to assist farmers in England to decide whether to convert to organic production. The service consists of a telephone help-line and farm visits. The service helps an individual who has requested assistance to make a farm specific decision by providing information and general advice up to a maximum of 1½ days of consultancy time. The service is unusual in that no specific promotion is done as part of the contract. ECOTEC were concerned that the initial half day visit was used mainly to put across information that could be provided more efficiently by other means, such as a CD ROM or website.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>&lt;&lt;</th>
<th>&lt;</th>
<th>&lt;&gt;</th>
<th>&gt;</th>
<th>&gt;&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specificity of clientele</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Means of influence</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Programme objectives</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scale of decision</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scope of service</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Payment for service</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direction of information flow</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delivered by</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duration</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intensity</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

|            | business | X | social policy goals |
|            | narrow target category | X | broad or unspecified target |
|            | promote specific view | X | help client achieve own objectives |
|            | technology transfer | X | process |
|            | individual land management unit | X | group, community or area (i.e. collective decision) |
|            | information and advice | X | financial incentives within the scheme |
|            | clients pay | X | free to clients |
|            | top-down | X | bottom-up |
|            | public sector | X | private sector |
|            | short term campaign | X | ongoing |
|            | no one-to-one advice | X | all one-to-one advice |

11. Sources of information


OCIS helpline 0117 922 7707 Information Pack.

Roger Unwin, DEFRA (personal communication).
1. **Introduction**

LEAF is a charity set up in 1991. It is an industry run organisation with most of the input coming from unpaid members. Its main aim is to develop and promote Integrated Farm Management using over 40 LEAF Demonstration Farms distributed throughout Great Britain, with the main emphasis on arable farming. LEAF have developed and introduced an environmental audit to help farm businesses improve their environmental performance.

2. **Policy and economic context**

Farmers and others in the industry established LEAF as a response to the call for the industry to take a more responsible attitude towards its environmental performance. Integrated Crop Management was evolved as the way forward, enabling LEAF farmers to farm profitably while protecting and enhancing the environment. More recently LEAF has extended its activities to include animal production - Integrated Farm Management.

LEAF has always aimed to influence and involve not only farmers but also the wider industry including manufacturers, suppliers, Government and consumers. They are also involved in the European Initiative for Sustainable Development in Agriculture (EISA).

3. **Objectives**

The LEAF objectives are:

- to encourage farmers throughout UK to adopt Integrated Farm Management.
- to promote the benefits of Integrated Farm Management to consumers and raise awareness of the way many farmers are responding to current concerns.

The aim is for a balance between economic and environmental objectives, with the main emphasis on farmers helping one another to achieve this.

4. **Scale of operation**

LEAF currently has over 40 demonstration farms throughout the UK, over 1500 farmer members, 132 corporate supporters and 32 colleges and universities involved in its work. The activities continue to grow and are on-going. The organisation has an Executive Committee and a broadly drawn Advisory Group.

5. **Key actors and their inter-relationships**

5.1 **Funders**

Funding comes from farmer subscriptions, corporate organisations involved in agriculture, sponsorship, donations and an annual contribution from Government.

5.2 **Deliverers**

Full time LEAF staff, farmers as Demonstration farmers, farmers and others as Ambassadors and Supporters. Numerous organisations with an
agricultural interest are involved in LEAF activities. The BASIS/LEAF ICM training course is a certificated qualification for advisers.

5.3 **Users**

Farmers, Agronomists.

5.4 **Relationship between funders, deliverers, users and other stakeholders**

Funding covers the cost of a small national HQ team; others involved give their time without charge. The Executive Committee decides on policy with help from the Advisory Group. The Chief Executive is responsible for coordinating day-to-day activities.

6. **Means of delivery**

LEAF has developed practical guidance for IFM and the LEAF self-assessment environmental audit, both aimed at farmer members. The demonstration farms have been the main method of getting the message across to farmers and other groups. The principles of IFM have to be interpreted by farmers to fit their individual business.

Collaboration with a very wide range of industry bodies is a key feature of the way LEAF operates.

LEAF Ambassadors are mainly company staff and consultants who meet farmers in their day-to-day work and have taken on the task of promoting LEAF. LEAF Supporters more specifically promote the LEAF demonstration farms and audit. All do this on a voluntary basis.

Caroline Drummond has run the organisation since it was founded and her drive and enthusiasm has been a major factor in building LEAF influence during the 1990s.

7. **Model of information flow**

The techniques of IFM derive mainly from research with considerable on-going development taking place on the farms of LEAF members. Hence information flows from research to LEAF and then there is very active exchange of information with farmers. LEAF provides some feedback to researchers.

8. **Professional resources required**

All those with a formal involvement in LEAF activities are chosen for their expertise and experience. Demonstration farmers are carefully chosen to ensure they and their farming businesses are likely to help promote the LEAF objectives. All those formally involved are given media and other training and updating as appropriate.
9. Costs and benefits

The organisation runs on an annual budget of about £330k (in 2000). Half covers salaries of the HQ staff and the remainder is spent on associated office costs and on publications.

LEAF farmers manage over 15% of the cropped area of the UK. In the last few years, LEAF has worked more closely with the increasing number of commodity assurance schemes that have beset the industry. Some buyers now require their farmer suppliers to use the LEAF audit and LEAF is developing the LEAF Marque as an add-on environmental standard to some of the current farm assurance schemes.

LEAF has undoubtedly achieved a substantial uptake of IFM in the UK. But no data exist to quantify the changes in farming practices that have resulted or the environmental impact of these changes on the ground.

10. Summary and advisory approach

The LEAF approach relies on the interest and enthusiasm of a large number of people in the industry giving their time and expertise without direct payment. Their main impact has been in the arable sector. LEAF campaigning for IFM has achieved positive PR for the industry at a time when this has been in short supply. The organisation has well-established links with many conservation NGOs. No formal evaluation of the impact of LEAF has been carried out either on farmers or on the environmental impact on farms influenced by LEAF.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>&lt;&lt;</th>
<th>&lt;</th>
<th>&lt;&gt;</th>
<th>&gt;</th>
<th>&gt;&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus</td>
<td>business</td>
<td>X</td>
<td>social policy goals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specificity of clientele</td>
<td>narrow target category</td>
<td>X</td>
<td>broad or unspecified target</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Means of influence</td>
<td>promote specific view</td>
<td>X</td>
<td>help client achieve own objectives</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Programme objectives</td>
<td>technology transfer</td>
<td>X</td>
<td>process</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scale of decision</td>
<td>individual land management unit</td>
<td>X</td>
<td>group, community or area (i.e. collective decision)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scope of service</td>
<td>information and advice</td>
<td>X</td>
<td>financial incentives within the scheme</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Payment for service</td>
<td>clients pay</td>
<td>X</td>
<td>free to clients</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direction of information flow</td>
<td>top-down</td>
<td>X</td>
<td>bottom-up</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delivered by</td>
<td>public sector</td>
<td>X</td>
<td>private sector</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duration</td>
<td>short term campaign</td>
<td>X</td>
<td>ongoing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intensity</td>
<td>no one-to-one advice</td>
<td>X</td>
<td>all one-to-one advice</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

11. Sources of information


Website – www.leafuk.org

Caroline Drummond, LEAF Chief Executive (personal communication)
1. **Introduction**

FWAG was formed in 1969 by a group of farmers and conservationists keen to promote environmentally responsible farming. FWAG is a registered charity which provides conservation advice through its team of county based professional advisers. It concentrates on conservation topics – wildlife, landscape, archaeology, historic features and public access. FWAG advisers offer whole farm advice with an emphasis on cost neutral or cost positive options that are acceptable to the farmer. Initial visits are usually free; more detailed advice is fee based.

2. **Policy and economic context**

Many farmers are keen to improve the conservation value of their farm but do not have the expertise to do this themselves. FWAG has positioned itself to be the main provider of conservation advice to farmers in the UK. Some is funded by DEFRA and some is provided on a fee paying basis. FWAG advisers help farmers to apply for Government funded agri-environment incentive schemes. FWAG also receives Government and commercial funding to deliver more specific schemes on farms such as biodiversity action plans.

3. **Objectives**

The FWAG objective is stated in their literature as ‘FWAG exists to provide our national and international clients with the best opportunity for environmental gain through cost effective quality solutions’.

The emphasis is on affordable public good outcomes. FWAG works jointly with farmers to deliver conservation benefits on farms in the UK.

4. **Scale of operation**

FWAG currently has 83 Farm Conservation Advisers who work on a county basis throughout England and Scotland. FWAG is developing its activities in Wales. Nearly 6000 visits were carried out in 2000/2001. The programme was severely disrupted by the Foot and Mouth Disease outbreak in early 2001. Total staff is currently 141 (2001). The work is on-going and available to all farmers.

5. **Key actors and their inter-relationships**

5.1 **Funders**

Half the FWAG income is from central and local government; the rest is from fees, subscriptions from farmers and from commercial organisations.

5.2 **Deliverers**

Professional team of advisers.

5.3 **Users**

Farmers interested in conservation.

5.4 **Relationship between funders, deliverers, users and other stakeholders**
Government and other sponsors provide funding for specific services, notably the provision of an initial free visit. Fees are charged for more detailed services. FWAG work closely with partner organisations, particularly DEFRA, English Nature and the Environment Agency at local level, to ensure coordination of conservation objectives.

6. Means of delivery
Advice is delivered usually on a one-to-one basis on the farm, supported by technical literature. A full Landwise report gives a detailed assessment of the wildlife and habitat assets on the farm with recommendations for short and long term management. County advisers are supported by an HQ Technical Director. The FWAG website is being used increasingly to compliment the advisory service. It includes virtual farm walks based on the farms of winners of the Silver Lapwing competition run by FWAG. This is an annual competition to find the leading conservation farm in the country.

7. Model of information flow

The main inputs of information to FWAG are from research and from Government, particularly on incentive schemes. FWAG in turn provide some feedback to each on conservation problems and how each might contribute to their solution. Information on practical conservation measures on the farm flows freely in both directions between farmers and FWAG.

8. Professional resources required
FWAG advisers have a wide range of training and expertise in conservation topics. Many have a special interest in, for example, pond creation and this higher-level expertise is shared within the organisation.

9. Costs and benefits
ECOTEC Research and Consulting Ltd carried out an economic evaluation of free advice programmes funded by MAFF in 2000. This included the FWAG programme of free conservation advice. The consultants concluded that FWAG advice was cheaper that a comparable service delivered for MAFF by ADAS but that the method...
of funding FWAG activities made the precise unit cost of FWAG visits impossible to define accurately. FWAG expertise was generally well regarded by farmers surveyed by ECOTEC. But the only quantitative information available concerned numbers of visits and farmer attitudes to the advice received rather than impact on the environment.

FWAG turnover in 2000/2001 was about £3M half of which came from grants and the remainder from subscriptions, fees and donations.

10. Summary and advisory approach

FWAG provides both free and fee based conservation advice and services to farmers in the UK. The advice is part funded by central Government. The advice is delivered by a county based network of full time Farm Conservation Advisers who are experienced in providing cost effective conservation advice that can be implemented on commercial farms. The main emphasis is on whole farm assessment and advice to maximise the conservation gain on the farm while maintaining farm profitability. Most advice is delivered through farm visits, backed up by a written report and literature.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>&lt;&lt;</th>
<th>&lt;</th>
<th>&lt;&gt;</th>
<th>&gt;</th>
<th>&gt;&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specificity of clientele</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Means of influence</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Programme objectives</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Scale of decision</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Scope of service</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Payment for service</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Direction of information flow</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Delivered by</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Duration</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Intensity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

11. Sources of information


Website  [www.fwag.org.uk](http://www.fwag.org.uk)

Richard Knight, FWAG Technical Director (personal communication).
SAC combines research, advice, extension, education and training, and specialist services. Since 1985, it has moved from being almost wholly funded by government for all services, to a mixed economy where basic research along with some public interest extension and advice are grant-aided, but production and business advice, specialist services and applied research are largely paid for by clients. Integration of commercial with public interest advice offers synergy, but brings dual accountability.

Agriculture generates 1.2% of GDP (cf. 0.8% for UK as a whole) and accounts for 3% of total employment (figures for 1999, from SEERAD 2001). Scottish Executive policy for agriculture is that it should:

- focus on producing food and other products that the customer wants
- play a major role in sustainable rural development and help to maintain the prosperity of rural communities
- be a leading player in the protection and enhancement of the environment
- embrace change and new opportunities (Scottish Executive 2001).

Until 1985, the three Scottish Agricultural Colleges (independent institutions established as limited companies with charitable status) provided advice to farmers and crofters free of charge, funded by a grant from the Scottish Office. From 1986, funding for applied research and advisory services was "massively reduced" in line with the UK Government's view that more of the cost should be borne by individuals and companies which benefit directly. For example, the advisory grant was cut by 41% between 1986 and 1987. The Colleges responded by restructuring (number of advisers reduced from 102 in 1985 to 68 in 1986), commercialising services and, in 1990, merging to form a single entity - The Scottish Agricultural College, which is a charitable company limited by guarantee. Reduction in public funding continued through the 1990s, with a 26% cut in funds for advisory work over the three years 1996-1997 to 1999-2000. Currently, funding is keeping pace with inflation and is reviewed annually against contracted targets for levels of advisory activities.

SAC has a public good/public interest element to its objectives, to the extent that this is funded by government under its advisory service contract. Its main aim is to inspire "good business decisions" by its clients. It does not promote specific technology. One of the changes noted since 1985 is that the former tendency "to deliver to the client what the system wished" (Thomas 1998:264) has been replaced by a strong market and client orientation.

From the government (Scottish Executive) point of view, the objective of continuing to provide funding for advisory work is to facilitate uptake of schemes through which policy is implemented.

SAC covers the whole of Scotland; and is now also active in international projects. Services are available to all land managers. Specific client groups have been
identified through market research; services have become increasingly specialised since 1985 as SAC has sought to meet the increasingly diverse needs of Scottish agriculture. Advice covers business management, crops, livestock, woodlands and conservation.

5. **Key actors and their inter-relationships**

5.1 **Funders**

Government funds public interest advice; clients pay for technical, business management, environmental and woodland management advice.

5.2 **Deliverers**

The main delivery of services is by SAC local advisers, who have access to science and production specialists; clients can access specialists either through their local advisers or directly through specific contracts.

5.3 **Users**

An independent market survey (sample of 740) in 2002 showed 67% of Scottish farms claimed to be clients of SAC. In 2001, 6,678 farmers and crofters were members of one of SAC’s three subscription services (about 15% of farm holdings in Scotland, and 10,400 clients paid for services of one kind or another (Seton 2002).

5.4 **Relationship between funders, deliverers, users and other stakeholders**

The main relationships between funders and deliverers, and between deliverers and users, are based on contracts. SAC contracts with government to provide specific public interest services in return for grant-in-aid. Clients contract with SAC for the delivery of specified levels and types of service. Land managers can also obtain free advice from local SAC advisory offices on public interest matters (e.g. on how to apply for government-funded schemes, and on regulations).

Contractual relationships provide strong accountability. The fact that SAC also has a strong basic and applied research base means that its advisers have good access to up to date scientific knowledge. SAC argues that there is synergy in being able to integrate public interest advice with business advice (Gilmour 1998); market research suggests this has not damaged SAC’s reputation among clients for objectivity.

6. **Means of delivery**

The range of advisory methods includes the distribution of print material to clients (SAC technical bulletins, local advisory newsletters); telephone contact (initiated by clients who are members of one of the subscription services); demonstrations and group meetings for subscription service clients; and farm visits. Some services are available over the Internet (e.g. MilkNET). Most advice is offered in one-to-one settings; there is growing interest in group methods in the beef and sheep sectors.

Advisers seek to help clients reach decisions that are in the business interests of the enterprise, while taking into account public interest factors such as environmental and amenity considerations. In doing so, they provide information on government policy and social goals, but the main means of influence is through helping the client achieve his or her own objectives.

No data are available on intensity of activity. Thomas (1998) says that "cost-effectiveness has undoubtedly increased" since 1986; he also suggests that the
The switch to a competitive environment led to increased stress on staff which took its toll in the late 1980s.

7. **Model of information flow**

The initiation of the information flow between client and SAC lies with the individual land manager, through the local SAC office. Initial contact may lead to information flow through the standard subscription services, or through a more specialised individual consultancy contract. Information flow within SAC is key to SAC’s ability to meet client needs effectively. Considerable research and investment has gone into capability for electronic transfer of information between staff (through pdf files on the SAC intranet). On public interest matters, information flows from government (Scottish Executive Environment and Rural Affairs Department - SEERAD) to SAC and is mediated to clients through the advisory relationship.

8. **Professional resources required**

An intensive programme of staff training began in 1986, for advisers and specialists, to accommodate the required change in orientation. This covered "marketing, direct selling to farmers and business development aspects of commercialisation" (Gilmour 1998). The overall aim of this was to move the organisational culture from being "product driven" to being "client led".

9. **Costs and benefits**

SAC uses indicators of market share, repeat contracts and client satisfaction (expressed through market surveys) to assess its performance. The 1994 market evaluation of advisory services showed SAC has the biggest market share for both free and paid services; that its main strengths were seen by farmers as local knowledge, objectivity and practical advice; and that the main reason for choosing SAC was the quality of its advice. 1997 data suggest an adviser-client ratio of around 1:95.

10. **Summary and advisory approach**

SAC provides both fee-based services, and public interest advice funded by Government, to a wide range of land managers in rural Scotland. Dual accountability
- to client and to government - does not seem to create a conflict of interest in the minds of clients or of advisers. The increasing proportion of income derived from client fees has changed the mix of skills required of advisers.

The position on many of the dimensions reflects the dual funding of advisory work: advisors are fulfilling SAC's public interest function at the same time as they are helping clients meet their business goals.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>&lt;&lt;</th>
<th>&lt;</th>
<th>&lt;&gt;</th>
<th>&gt;</th>
<th>&gt;&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus</td>
<td>business</td>
<td>X</td>
<td></td>
<td></td>
<td>social policy goals</td>
</tr>
<tr>
<td>Specificity of clientele</td>
<td>narrow target category</td>
<td>X</td>
<td></td>
<td></td>
<td>broad or unspecified target</td>
</tr>
<tr>
<td>Means of influence</td>
<td>promote specific view</td>
<td>X</td>
<td></td>
<td>help client achieve own objectives</td>
<td></td>
</tr>
<tr>
<td>Programme objectives</td>
<td>technology transfer</td>
<td>X</td>
<td></td>
<td></td>
<td>process</td>
</tr>
<tr>
<td>Scale of decision</td>
<td>individual land management unit</td>
<td>X</td>
<td></td>
<td></td>
<td>group, community or area (i.e. collective decision)</td>
</tr>
<tr>
<td>Scope of service</td>
<td>information and advice</td>
<td>X</td>
<td></td>
<td></td>
<td>financial incentives within the scheme</td>
</tr>
<tr>
<td>Payment for service</td>
<td>clients pay</td>
<td>X</td>
<td></td>
<td></td>
<td>free to clients</td>
</tr>
<tr>
<td>Direction of information flow</td>
<td>top-down</td>
<td>X</td>
<td></td>
<td></td>
<td>bottom-up</td>
</tr>
<tr>
<td>Delivered by</td>
<td>public sector</td>
<td>X</td>
<td></td>
<td></td>
<td>private sector</td>
</tr>
<tr>
<td>Duration</td>
<td>short term campaign</td>
<td>X</td>
<td></td>
<td></td>
<td>ongoing</td>
</tr>
<tr>
<td>Intensity</td>
<td>no one-to-one advice</td>
<td>X</td>
<td></td>
<td></td>
<td>all one-to-one advice</td>
</tr>
</tbody>
</table>

11. Sources of information

Clark, J J and Hookham, D H (n.d.) SAC Electronic Information Service: keeping staff informed [http://wcca.ifas.ufl.edu/archive/7thProc/CLARK/CLARK.htm](http://wcca.ifas.ufl.edu/archive/7thProc/CLARK/CLARK.htm)


Seton, J (2002) personal communication (Head of SAC Advisory Service)


SAC's website, which gives information on the range of services and service levels available: [http://www.sac.ac.uk](http://www.sac.ac.uk)
1. Introduction

Teagasc is a "semi-state organisation" which provides integrated research, advisory and training services for the agriculture and food industry in Ireland. Its Board is appointed by the Minister for Agriculture and Food. Thirty two per cent of the budget goes on advisory services, which have both a farm business and a national social policy remit. The case represents one approach to integrating client and national needs within a single advisory relationship.

2. Policy and economic context

Agricultural policy has switched from production goals (productivity, technical efficiency) to the current emphasis on environmental goals; in line with changes in EU policy, financial support to farmers has moved during the 1990s from price support to direct payments, including payments for (voluntary) environmental schemes. Agriculture is now seen in the broader context of rural development policy, the main objective of which is to have vibrant rural communities. In this context, the trend towards more part-time farming is seen as a positive contribution to the rural economy and the stability of the rural population (Frawley and Phelan 2002).

Average farm size rose from 28.2 to 33.6 hectares 1991 - 2000. The number of viable (i.e. full time) farms is projected to decline by 70% 2000 - 2010. Farming currently accounts for 8 percent of employment in Ireland. Around 30% of farm households are living below the poverty line. Agriculture is therefore expected to contribute to (a) the national economy; (b) sustaining the rural economy (as one component in a mix of rural enterprises); (c) social policy (i.e. improvement in rural living standards); and (d) environmental goals.

Investment in advisory services has increased in the last ten years. Number of advisers fell from 600 (1980) to 350 (1993) due to cutbacks in government funding. They have now grown to 550 (of whom 100 are on contract as Rural Environment Protection Scheme advisers).

3. Objectives

The focus of the advisory programme has a mixture of business and public good elements. For full time, commercially viable farms, the focus is on improving business efficiency; for non-viable farms, the focus is on achieving social goals through diversification and ensuring farmers can get maximum benefit from EU-funded rural development and environmental protection schemes.

There is still a "technology transfer" flavour to the way the organisation itself talks about its advisory work. In each sector, Teagasc has specific technologies it is promoting, and target levels of productivity and efficiency which it aims for. For example in the crops sector, the aim of tillage advice is to produce cereal grain at €83 per tonne through using the latest information from research to optimise yields and reduce costs. In dairy, "a growing number of farmers are successfully implementing the Teagasc breeding and management technologies aimed at increasing milk protein levels from 3.2% to 3.5%". In the sheep sector, there are farm level stocking and production targets of 10 ewes per hectare and at least 1.5 lambs per ewe. (http://www.teagasc.ie/publications/innovation1999/paper5.htm)
4. **Scale of operation**

Teagasc offers services throughout the country; it has advisory offices in each county. It differentiates two broad categories of client/user: the "full-time and more commercial" farmers; and those "farming businesses that are under pressure to improve the viability of their farms". [http://www.teagasc.ie/aboutus/teagasc2001-2006.htm](http://www.teagasc.ie/aboutus/teagasc2001-2006.htm). In its forward planning (2001-2006), it identifies four programmes: improved competitiveness (for the former), rural viability and diversification (for the latter), sustainable farming (for both) and food safety and quality (for both).

5. **Key actors and their inter-relationships**

5.1 **Funders**

Funding for Teagasc as a whole comes from a government grant (44%), EU structural funds (33%) and the balance from clients (23%). Client fees represent about 30% of the cost of the advisory service.

5.2 **Deliverers**

Delivery is by Teagasc's own staff, based in county offices and regional centres.

5.3 **Users**

Around 85,000 farmers have contact with Teagasc each year (the number has been growing in recent years) - i.e. around 58% of the country's farms. About 40,000 of these have advisory contracts with Teagasc, which gives them a defined level of service. The rest are presumably "one-off" contacts, including those who seek help in completing forms and applications for EU and other schemes. Within the total, 7,000 each year receive advice from Teagasc's Rural Enterprise Advisory Service, 60% of whom were women in 2000.

5.4 **Relationship between funders, deliverers, users and other stakeholders**

There is a close institutional link between funding and delivery: although not a government department *per se*, Teagasc is answerable through its Director and Board, to government. Teagasc advisers do not administer payments to farmers, but are key links in the process of application. Charges for advisory services are on a sliding scale: the cost of the service increases as the scale of the farm business increases. In this way smaller farmers are guaranteed access to services at lower rates while larger commercial farmers pay significantly higher charges.

6. **Means of delivery**

A mix of individual, group and media methods is used for delivering information and advice. There are no data on the proportion of time or effort devoted to each, but there is a strong trend towards putting more advisory time into group methods - through discussion groups and monitor farms. "The use of discussion groups and monitor farms as key mechanisms for transferring technology to farmers has gained huge momentum in recent years. Around 500 discussion groups are now [2001] in operation [up from 300 in 1998]. Discussion groups are linked to monitor farms where the latest research results are implemented and adapted to local conditions. Typically each group consists of 15-20 dynamic farmers who need the latest technology in order to optimise their incomes. Discussion group members meet about once each month on the farm of one of their members. Each member's current level of performance is reviewed before the farm being visited is examined in detail."
Members make suggestions for improvement and come up with answers to the problems identified (http://www.teagasc.ie/advisory/index.htm). Teagasc claims "research has shown that these discussion groups are by far the most effective method of encouraging farmers to adopt new technology".

An advisory contract gives clients intensive on-farm advice, local monthly newsletters and a bi-monthly national Teagasc magazine - Today's Farm. Within this relationship, there is a mixture of helping clients achieve their business objectives (e.g. in the Rural Enterprise Advisory Service) and wanting to enable clients to meet targets or adopt technology identified by Teagasc.

Pro-active advisory campaigns are also mounted - e.g. recent campaigns on "Clean Livestock Policy" regulations, and cattle traceability.

Figures for discussion groups (above) imply an average of one group per advisor.

7. Model of information flow

Overall flow of information seems more top-down than bottom-up, although this is shifting to some extent (e.g. through discussion groups). Government gives information about policy and schemes to Teagasc. Within Teagasc, flow of technical and scientific information is mainly from the research service to the advisory service - through conferences, technical bulletins, and personal/professional contacts. There is two-way exchange between adviser and farmer, though Teagasc's emphasis on productivity targets and promotion of technology suggests the flow from advisor to farmer is the more dominant. There is a conscious effort to transfer technology from research, as a way of maximising the return from investment in research (Kirley 2000). Information also flows from research and advisors to the training arm of Teagasc, which runs training events and activities for farmers.

8. Professional resources required

Of Teagasc's 1500 research, advisory and training staff, 550 are advisors and regional specialists. "Advisors are graduates in Agriculture, Horticulture or Forestry who work as part of a local team to develop agricultural resources in the area."
Contact is made with farmers through farm visits, discussion groups, office and phone consultations and training courses. They play a vital role in ensuring that farmers can participate in development schemes such as the Rural Environment Protection Scheme (REPS) and assist with applications for EU and national programmes to support farm incomes.” (from the Teagasc website)

9. Costs and benefits

Teagasc uses farm level indicators of technology adoption, productivity and efficiency, and business performance to assess the effectiveness of its advisory activities. For example, “We have now clear evidence that active participants in our discussion group programme are benefiting substantially through reduced costs, better animal breeding practices, improved returns from higher value output as well as better financial control” (Teagasc Annual Review 2000)

More generally, “an evaluation of the effectiveness of the Teagasc Advisory Service, undertaken in 1999, showed a benefit to cost ratio of 2.82 and annual benefits per farm of the order of €1270. Further to this, a more recent comparative analysis of the Teagasc clients, relative to non-clients, shows that contact with the advisory services increased farm efficiency by 8%”. (http://www.teagasc.ie/advisory/index.htm)

Figures cited earlier imply ratios of advisory staff to clients of 1:154 (for all contacts) and 1:73 (for contracted clients).

10. Summary and advisory approach

Through Teagasc, advice and information are provided largely as public goods, reflecting the key place that agriculture still has in government policy and in the well-being of rural communities. Close affiliation to government enables them to integrate business advice with advice on social/environmental matters. On the other hand, Teagasc has faced less market pressure (than, for example, SAC, DLV and ADAS) to become more client-focused and “bottom-up”.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>&lt;&lt;</th>
<th>&lt;</th>
<th>&lt;&gt;</th>
<th>&gt;</th>
<th>&gt;&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus</td>
<td>business</td>
<td>X</td>
<td>social policy goals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specificity of clientele</td>
<td>narrow target category</td>
<td>X</td>
<td>broad or unspecified target</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Means of influence</td>
<td>promote specific view</td>
<td>X</td>
<td>help client achieve own objectives</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Programme objectives</td>
<td>technology transfer</td>
<td>X</td>
<td>process</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scale of decision</td>
<td>individual land management unit</td>
<td>X</td>
<td>group, community or area (i.e. collective decision)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scope of service</td>
<td>information and advice</td>
<td>X</td>
<td>financial incentives within the scheme</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Payment for service</td>
<td>clients pay</td>
<td>X</td>
<td>free to clients</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direction of information flow</td>
<td>top-down</td>
<td>X</td>
<td>bottom-up</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delivered by</td>
<td>public sector</td>
<td>X</td>
<td>private sector</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duration</td>
<td>short term campaign</td>
<td>X</td>
<td>ongoing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intensity</td>
<td>no one-to-one advice</td>
<td>X</td>
<td>all one-to-one advice</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
11. **Sources of information**


Kirley, T (2002) personal communication (Head of Advisory Services, Teagasc)


DEFRA Project KT0110: Improving access to advice for land managers
Case Study 6: DLV Adviesgroep NV, The Netherlands

1. Introduction

The Netherlands government began the process of privatising its national agricultural extension service in 1993. Privatisation was complete by 2001. As a consequence, the service has become much more demand-driven. Government influence on farmers' decisions is through regulation and financial incentives (subsidies and tax breaks). The result has been a cost-effective, competitive advisory service which clients recognise as being unbiased and completely independent of government.

2. Policy and economic context

Agriculture remains a major sector in the national economy. The "agri-food complex" (van den Berg 2001) contributes 10% of GDP and 75% of production is exported. Until the mid-1980s, knowledge, information and advice in support of production was seen as a public good and therefore a legitimate arena for public funding, although farmers had to pay 50% of the cost of advice on technical matters. Policy shifts from the mid-1980s included:

- a shift in goals from maximising production to minimising environmental damage
- a de-linking of agricultural policy (and policy making) from farmer and industry interests
- a shift from knowledge being seen as a public good, to a private good which is traded in the market like other inputs to the farm business
- a general ideological shift away from the state being involved directly in service delivery.

3. Objectives

The objective of DLV, as a commercial company, is to maintain and increase its market share; and to grow through continued expansion into overseas markets (through its international consultancy group). It seeks to do this by remaining competitive in terms of cost and quality of service to clients. The focus of the services it provides is firmly on the success of the client's business. DLV has no specific technology transfer objectives: when the client identifies a need or opportunity for new technology, the adviser will help him or her access and apply it successfully. The objectives of the privatisation were to reduce government expenditure and to require farmers to pay for knowledge inputs.

4. Scale of operation

DLV provides an ongoing service. Its intention is to be a permanent actor in agricultural advice and consultancy. All services to clients are the subject of contracts: these range from a one-off contract to provide a specific piece of advice, to a long-term contractual relationship with annual workplans and agreed targets and monitoring arrangements.

5. Key actors and their inter-relationships

5.1 Funders

Demand-led advice is 100% funded by clients. DLV also tenders for the delivery of public good information and advice; for example it was the
leader of a five partner European consortium which won a EC contract in 1997 for raising awareness of integrated farming (http://europa.eu.int/comm/environment/funding/list.htm#list1). It competes for Netherlands government contracts to provide public good/public interest information and advice. (The Ministry of Agriculture, Nature Management and Fisheries has an annual budget for extension, which it allocates to projects with clear objectives which respond to the priorities of the government and which will not be "picked up" by the market - Wielinga 2000). Funding from government represents around 30 per cent of it advisory work in The Netherlands (Leeuwis 2002).

5.2 Deliverers

Information from the sources is unclear. There is reference to 900 staff before privatisation, of which only 245 remained; but reference also to recruitment and expansion. Proost and Duijssings (2002) refer to "selective changes in personnel"; Tacken (1998) mentions that 60% of the pre-1993 staff had been replaced by 1997.

5.3 Users: there are no data on number of clients. Tacken (1998) suggests the client base has become more specialised. It has also become broader, to include land managers other than farmers.

5.4 Relationship between funders, deliverers, users and other stakeholders.

According to Tacken (1998), privatisation - and an overall reduction in public funding for agricultural knowledge and information functions - has created competition within the national agricultural knowledge system. This hampers communication between the different elements of the system (research, education, farmer organisations, private consultants, sales representatives of suppliers). On the other hand, relationships between advisers and clients have improved. Relationships between DLV and clients, and DLV and government, are governed by contracts. DLV advisers have their own networks and informal linkages into other elements of the knowledge system. A lot of emphasis is now put on "knowledge management" and the maintenance of the company's intranet as a tool for advisers to keep up to date and to exchange ideas and information within the company.

6. Means of delivery

Between 1993 and 1997, mass and group communication dropped by 50% (Tacken 1998), with 80% of all business activity conducted through individual contacts (phone, face-to-face). There are no data on levels of activity.

7. Model of information flow

Privatisation has completely changed the orientation of information flow from supply-driven to demand-driven. Because clients are paying for all advice, the overall information flow is less open than before (Proost and Duijsings 2002). The effectiveness of the demand-driven information flow depends on the client being able to formulate an appropriate question and being aware of the available sources of information.

The main information flows are between DLV and clients (bearing in mind that land managers have a wide range of private sector providers to choose from). DLV invests (staff time, ICTs) in keeping its staff up to date with available scientific knowledge; and also in anticipating new demands and developing new information and knowledge products and services.
A simplified model of information flow is:

```
Clients make their needs/demand known to DLV advisers (a); if DLV cannot meet those needs from existing knowledge, it takes them to the research and development sector (b), which then supplies the information to meet these requests to DLV (c), who in turn convey the information to their clients (d).
```

8. **Professional resources required**

Privatisation created a change in culture within DLV, which led many staff to leave. Advisers are now much more orientated towards service quality, efficiency and effectiveness. Management and economics have become as important as technical expertise. A flatter organisational structure has emerged.

9. **Costs and benefits**

DLV reduced its overhead, in the first few years after 1993, by 40% to 50% (Proost and Duijsings 2002; Tacken 1998). Tacken lists the benefits of privatisation as: increased efficiency, increased quality of service, better value for money, increased job satisfaction for staff, more interaction between client and adviser. On the negative side, he notes a decline in co-operation/collaboration between DLV, research and education (a point echoed more generally by Leeuwis 2000).

Leeuwis (2000) acknowledges the opportunities created by the development of the market in agricultural knowledge, advice and information; but suggests that it might also jeopardise the ability of the knowledge system as a whole to respond to the challenge of making agriculture more ecologically sustainable.

DLV’s primary indicators of success are client satisfaction (through market research and client surveys), market share and business growth. No data on budgets, or staffing ratios, are available.

10. **Summary and advisory approach**

The DLV experience has been very similar to the privatisation of ADAS in England and Wales. DLV provides an efficient, competitive service to its clients. For business-orientated decisions on individual land management units, it provides value for money. Inevitably, however, the privatised company will only provide public good information, and advice on matters of public interest, where these are demanded by clients (e.g. in order to comply with government regulation) or where they are contracted by government (or other bodies) to do so.
### Dimension Table

<table>
<thead>
<tr>
<th>Dimension</th>
<th>&lt;&lt;</th>
<th>&lt;</th>
<th>&lt;&gt;</th>
<th>&gt;</th>
<th>&gt;&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus</td>
<td>business</td>
<td>X</td>
<td></td>
<td></td>
<td>social policy goals</td>
</tr>
<tr>
<td>Specificity of clientele</td>
<td>narrow target category</td>
<td>X</td>
<td></td>
<td></td>
<td>broad or unspecified target</td>
</tr>
<tr>
<td>Means of influence</td>
<td>promote specific view</td>
<td>X</td>
<td></td>
<td></td>
<td>help client achieve own objectives</td>
</tr>
<tr>
<td>Programme objectives</td>
<td>technology transfer</td>
<td>X</td>
<td></td>
<td></td>
<td>process</td>
</tr>
<tr>
<td>Scale of decision</td>
<td>individual land management unit</td>
<td>X</td>
<td></td>
<td></td>
<td>group, community or area (i.e. collective decision)</td>
</tr>
<tr>
<td>Scope of service</td>
<td>information and advice</td>
<td>X</td>
<td></td>
<td></td>
<td>financial incentives within the scheme</td>
</tr>
<tr>
<td>Payment for service</td>
<td>clients pay</td>
<td>X</td>
<td></td>
<td></td>
<td>free to clients</td>
</tr>
<tr>
<td>Direction of information flow</td>
<td>top-down</td>
<td>X</td>
<td></td>
<td></td>
<td>bottom-up</td>
</tr>
<tr>
<td>Delivered by</td>
<td>public sector</td>
<td>X</td>
<td></td>
<td></td>
<td>private sector</td>
</tr>
<tr>
<td>Duration</td>
<td>short term campaign</td>
<td>X</td>
<td></td>
<td></td>
<td>ongoing</td>
</tr>
<tr>
<td>Intensity</td>
<td>no one-to-one advice</td>
<td>X</td>
<td></td>
<td></td>
<td>all one-to-one advice</td>
</tr>
</tbody>
</table>

#### 11. Sources of information


Leeuwis, C (2002) Personal communication


1. Introduction

Integrated arable farming systems “comprise a multi-functional crop rotation that supports crop protection and nutrient management strategies” (de Buck et al, 2001: pg 153). The Dutch IAF project is an interesting example of a government funded attempt to promote more sustainable farming practices among arable farmers.

2. Policy and economic context

Conventional arable farming, characterised by its intensive use of external inputs, has been widely practiced in the Netherlands since the 1960s. However, by the late 1980s increasing public concern about the environmental impacts of such practices led the Dutch government to pass various environmental laws, such as the Multi-Year Crop Protection Plan (1991) which demanded a reduction in the use of pesticides. However, such laws did not specify how farmers were to achieve the targets set out, nor were specific funds provided other than for experimental research and innovative projects. Education and training were envisaged as the main policy instruments for promoting the adoption of more sustainable farming practices.

Van Weperen et al (1998) state that the change to IAF systems has 3 motivations for farmers: a) the need to be permitted by government policy and public sentiment to continue to farm; b) the need to obey national laws; and to a lesser extent c) the need to take into account environmental considerations.

3. Objectives

Firstly, “to take the IAF approach to regular farmers, and to monitor the results, experiences and feasibility under farmers’ conditions; at the same time, to develop region-specific IAF technologies”. Secondly, “to introduce IAF in the farming community in order to enhance transfer of knowledge and practical experience, to evaluate farmers’ interest and adoption rates, and identify bottle-necks in the technology” (van Weperen et al, 1998: pg 105).

At the beginning of the project the emphasis was on introducing the complete ‘package’ of IAF activities that had been developed on experimental stations. This was resisted by farmers, who were then encouraged to adopt elements of the ‘package’ that most suited them. Although the project involved the promotion of different technologies, it was also concerned with the process of farmers learning a whole new set of farming skills.

4. Scale of operation

38 farmers from various parts of the Netherlands were involved in the project. This number represents all those farmers who responded to an open invitation in the national farming press for volunteers. The project ran from 1990 to mid-1994.

5. Key actors and their inter-relationships

5.1 Funders

Government (the Ministry of Agriculture, Nature and Fisheries)

5.2 Deliverers
Specialised advisors from DLV (the privatised national extension service).

Farmer training was provided by the Experimental Station for Arable Farming and Broad Acre Vegetable Crops, and the Information and Knowledge Centre (i.e. government organisations).

A guidance committee, made up of all these and other involved organisations, managed the project.

5.3 Users

38 arable farmers, divided into 5 regional groups. These farmers represent the total number that volunteered to be in the project.

5.4 Relationship between funders, deliverers, users and other stakeholders:

The project was funded by government, and delivered through the privatised extension service (DLV) with some training inputs for farmers from government organisations. The DLV advisors acted as facilitators, aiding farmers’ learning processes as well as providing them with specific technical information (either directly or through consultation with the relevant government research centres).

No financial incentives were provided to participating farmers.

6. Means of delivery

Farm plans, detailing farming activities, were developed by discussions between the advisors and the participating farmers. Counselling visits were made a few times a month by the advisor throughout the growing season. The project used methods and equipment which made the environmental effects of farming practices visible.

Farmers were divided into 5 regional groups, and these acted as study clubs, where farmers could exchange information and experiences.

7. Model of information flow

The information flow was two-way between the advisors and the project farmers. Farmers and advisors together devise the farm plan (a), and farmers receive training in technical aspects from the experimental research centre (b). Farmers and advisors communicate regularly, and advisors are backstopped by the research centres if farmers have information demands that they themselves cannot fulfil (c).
8. **Professional resources required**

Extension staff are required to be ‘facilitators of learning’, i.e. they have to understand the learning process the farmers are going through and encourage them to continue learning. Staff also need the communication skills required for group formation and mobilisation, as well as the technical skills involved in integrated arable farming methods and techniques.

9. **Costs and benefits**

Many farm technical and economic data were monitored, such as the amounts of different chemicals used (e.g. herbicides, growth-regulators, etc) and the crop yields achieved. These show that at the farm-level participating farmers compared favourably with their neighbouring farms – economically they had similar or better results, and the application of IAF practices enabled participating farmers to reduce their use of chemical inputs.

The participating farmers evaluated the project in their last meeting by completing a questionnaire. Farmers reported that the intensive guidance received was a major incentive to participate in the project in the first place, and once involved it made them more confident to experiment. They also evaluated the study clubs positively, stating that the group discussions helped their overall learning process.

The project was highly intensive in terms of extensionists and researchers input, and the input of the participating farmers.

The project is considered to have had only a limited impact on surrounding farms, and many participating farmers think the project needed more publicity (A follow-up project, Arable 2000, was later implemented with 500 arable farmers in order to encourage diffusion of IAF).

10. **Summary and advisory approach**

The IAF project relied heavily on farmers receiving intensive guidance from specialised advisors, and despite having had positive effects it is uncertain how successful this experience would have been without such high intensity extension inputs. Another important feature of the IAF project was the realisation that it is inappropriate to promote a ‘complete package’ of farming practices, but that farmers should be offered options of different, effective combinations of practices from which they can select those most suited to their specific requirements and situations.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>&lt;&lt;</th>
<th>&lt;</th>
<th>&lt;&gt;</th>
<th>&gt;</th>
<th>&gt;&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Specificity of clientele</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Means of influence</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Programme objectives</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scale of decision</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Scope of service</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Payment for service</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Direction of information flow</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>
11. Sources of information


1. **Introduction**

Ferti-Mieux (literally translated meaning ‘better fertilisation’) is a national effort to mobilise farmers into taking voluntary action to reduce the problems of nitrate diffuse pollution from agricultural land. Ferti-Mieux itself is a label that can be attached to different activities to show that they conform with a set of national environmental standards.

2. **Policy and economic context**

From the 1950s French agricultural policy was aimed at increasing production in order to achieve national food security. This focus led to the high use of external inputs, for example the use of nitrogen fertilisers increased 5-fold between 1960 and 1990. At the beginning of the 1980s there was increasing concern by water consumers and farmers about the quality of water. This resulted in the creation of CORPEN, the national Committee for the Reduction of Water Pollution by Nitrates, which established a set of national requirements for the prevention of nitrate diffuse pollution from agriculture. Ferti-Mieux was developed by the National Association for Agricultural Development (ANDA) in response to requests from the Ministry of Agriculture and other professional agricultural organisations to tackle this issue further. ANDA is a national association, made up of equal numbers of representatives from government ministries and professional agricultural organisations, and financed by compulsory levies on arable crops.

3. **Objectives**

Ferti-Mieux is the name under which regional (nitrate pollution) advisory campaigns are promoted and quality controlled. As a national programme it aims to:

- significantly reduce the risk of nitrate diffuse pollution from agriculture,
- encourage local initiatives by providing grants,
- inform the general public,
- and mobilise all the various stakeholders.

The Ferti-Mieux programme attempts to motivate as many people as possible to take voluntary action to solve problems of declining water quality due to nitrate diffuse pollution from agricultural land.

The Ferti-Mieux label provides a guarantee to farmers that they will receive coherent technical support from all the relevant local organisations, and to the general public that farmers have acted to reduce pollution hazards.

4. **Scale of operation**

Ferti-Mieux was officially launched in May 1991. There are almost 50 Ferti-Mieux projects, in 39 departments, involving 27,000 farmers and covering 1.9 million hectares of land (ANDA, 2001). Ferti-Mieux activities are focused on areas that are classified as being ‘nitrate vulnerable zones’ under the EU Nitrates Directive. A Ferti-Mieux project can cover between 1,000 and 100,000 hectares (the average being 25,000 hectares) and can include from 50 to 3,000 farmers.

5. **Key actors and their inter-relationships**
5.1 **Funders**
The National Association for Agricultural Development (ANDA), CETIOM (a private technical organisation for French oilseed producers), and the Ministry of Agriculture and Fisheries.

5.2 **Deliverers**
The Ferti-Mieux programme is delivered to users through a structure of national and local steering and technical committees, which incorporate a wide range of stakeholders (public and private) at both the national and local levels. These committees are described in section 5.4.

5.3 **Users**
All those who choose to be involved in the local Ferti-Mieux groups.

5.4 **Relationship between funders, deliverers, users and other stakeholders**
At the national level there are two committees. The national Steering Committee sets the overall direction of the Ferti-Mieux programme and awards the Ferti-Mieux label to approved projects. It has 20 members from the Ministries of Agriculture and Environment, private industry (e.g. manufacturers of fertilisers), the Water Agencies, and professional agricultural organisations. The national Scientific and Technical Committee, is comprised of 25 scientists (from research institutions, public services and extension organisations), who evaluate the technical side of local projects. There is also a national Technical Secretariat which links the national level authorities with the local level activities. This is mainly composed of ANDA employees.

The organisation of local Ferti-Mieux action is also based on two committees. The local steering committee provides general direction for local activities and ensures the participation and co-operation of all the relevant local stakeholders (the agricultural community, including research and education organisations; water consumers; and local authorities). This committee is presided over by a farmer. The second local committee is the technical committee, which implements the technical activities and involves all farmers and technical staff who work in the project area. This committee is also responsible for disseminating technical messages and training farmers. The facilitation of both these local committees is usually undertaken by a councillor of the departmental Chamber of Agriculture.

6. **Means of delivery**
Many steps have to be taken in order to obtain a Ferti-Mieux label. For each proposed project partners have to be formed into local steering and technical committees in order to demonstrate the active commitment of all the relevant stakeholders. The project area has to be delineated and a diagnosis of the agricultural situation undertaken. This provides an understanding of the diversity of the farming systems in the project area and of the major and minor sources of nitrate pollution. It is then possible to define priorities to modify the most harmful farming practices. A communication strategy also has to be developed at this stage to show how local farmers will receive information about project activities and results. Farmers are fully involved and are consulted at all stages.

Once it has been examined by the national Scientific and Technical Committee, the national Steering Committee can assign the Ferti-Mieux label for a renewable period of 1 or 2 years.
Advice about Ferti-Mieux activities reaches farmers through: mass media, training of ‘leading farmers’, demonstration experiments, and technical letters as well as individual communication with farmers in the most risk-prone areas. ‘Messages’ are adapted according to the audiences and the local situations, and are transferred by local actors who are known and trusted by the farmers.

7. Model of information flow

Information flow is essentially bottom-up, with needs, priorities and possible solutions being driven by the local-level committees. Locally developed proposals are delivered to the national committees, which are then evaluated and either approved or declined. Once an action is approved most of the information flows are local, between the two committees and the relevant local stakeholders they contain.

8. Professional resources required

No information was found relating to specific skills required of people involved in Ferti-Mieux initiatives.

9. Costs and benefits

A survey of farming practices is carried out before each project starts in order to assess the effects of the project on pollution reduction. The long-term indicator of a Ferti-Mieux project’s success is the improved quality of the water, but as this takes between 5 and 50 years to be evaluated, the main measure of success is the evolution of farmers’ agricultural practices (i.e. their nitrogen management behaviour). These have been seen to be favourable, e.g. farmers have reduced the amount of nitrogen applied, and reduced the amount of ground bare in autumn and winter before spring planting. For more details on evaluation methods and results see http://www.anda.asso.fr/prog_actions/fertimieux/ffm_resultats.htm. The results that
have been obtained on the effects of projects on water quality have also been positive (ibid).

The human and financial resources invested each year in a local Ferti-Mieux project are approximately 0.58 million francs (1999). The annual budget (of ANDA) for the running of the national level authorities is approximately 2 million francs. ANDA also contributes 50,000 francs annually for the assignation of pre-labels. CETIOM contributes 0.15 million francs each year to the Ferti-Mieux programme, and the Ministry of Agriculture and Fisheries 0.1 million francs each year.

10. Summary and advisory approach

The Ferti-Mieux is an interesting example of widespread collaboration between a diverse group of stakeholders, who are arranged in national and local committees, in order to achieve the specific national goal of reducing nitrate diffuse pollution from agriculture. It is a programme based on stimulating farmers’ voluntary action, rather than forcing their compliance with a rigid set of national regulations, and Barbezant & Fleury (n.d) state that it is “proof that voluntary and collective actions about a problem are more efficient and sustainable than the legislative approach alone” (Barbezant & Fleury, n.d: p. 2).

<table>
<thead>
<tr>
<th>Dimension</th>
<th>&lt;&lt;</th>
<th>&lt;</th>
<th>&lt;&gt;</th>
<th>&gt;</th>
<th>&gt;&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus</td>
<td>business</td>
<td>X</td>
<td>social policy goals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specificity of clientele</td>
<td>narrow target category</td>
<td>X</td>
<td>broad or unspecified target</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Means of influence</td>
<td>promote specific view</td>
<td>X</td>
<td>help client achieve own objectives</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Programme objectives</td>
<td>technology transfer</td>
<td>X</td>
<td>process</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scale of decision</td>
<td>individual land management unit</td>
<td>X</td>
<td>group, community or area (i.e. collective decision)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scope of service</td>
<td>information and advice</td>
<td>X</td>
<td>financial incentives within the scheme</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Payment for service</td>
<td>clients pay</td>
<td>X</td>
<td>free to clients</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direction of information flow</td>
<td>top-down</td>
<td>X</td>
<td>bottom-up</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delivered by</td>
<td>public sector</td>
<td>X</td>
<td>private sector</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duration</td>
<td>short term campaign</td>
<td>X</td>
<td>ongoing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intensity</td>
<td>no one-to-one advice</td>
<td>X</td>
<td>all one-to-one advice</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

11. Sources of information


Ferti-Mieux web resources available via the ANDA website http://www.anda.asso.fr.
1. **Introduction**

The Canada Business Service Centres (CBSCs) are a gateway to a range of information on government services, programmes and regulations for business people (particularly those with small businesses and start-up entrepreneurs) in Canada. Information and advice are offered to users by telephone, fax, mail, e-mail, in person and on the internet. The network of CBSCs is now well established as a model of quality service, with a reputation for adapting to the changing information needs and modes of access of Canadian businesses.

2. **Policy and economic context**

The CBSCs were initially established as pilot projects in 1992 and were aimed at solving persistent problems of low awareness and lack of access to government programmes and services. In 1994–95 a national expansion of the CBSC initiative was funded as part of the government’s Jobs and Growth Agenda, recognizing the important role of small businesses and entrepreneurship in economic development and job creation.

3. **Objectives**

The mission of the CBSCs is to:

- improve the start-up, survival and growth rates of small and medium-sized enterprises (SMEs) by giving business people in every part of Canada access to accurate, timely and relevant information and referrals
- reduce the complexity of dealing with various levels of government by consolidating business information from the clients’ perspective in one convenient service
- enable clients to make well-informed business decisions in a global economy
- encourage business success through sound business planning, market research and the use of strategic business information (CBSC, 2000).

4. **Scale of operation**

At present there is a CBSC in each province and territory, i.e. there are 13 in total. There are also more than 300 regional access partnerships (see below). CBSC services are available to anyone, in the official language of their choice.

5. **Key actors and their inter-relationships**

5.1 **Funders**

  Government.

5.2 **Deliverers**

The CBSC initiative is a cooperative arrangement among 37 federal departments, provincial and territorial governments and, in some cases, the private sector, and academic and research organisations. The participants and managing organisations vary among the different areas (for details of these see the CBSC website: [http://www.cbsc.org](http://www.cbsc.org)).
Each CBSC also establishes access partnerships which give local organisations (business and community development corporations, local chambers of commerce and municipalities) a mandate to provide services to small businesses in their communities. The regional access partners are connected to the CBSCs through special access to information resources specifically designed for partners, as well as through the public CBSC website.

A National Secretariat (organisationally a part of the government's Industry Canada) is responsible for supporting all the centres and for maintaining the information databases, products, and website.

5.3 **Users**

Business people. Services are open to all.

5.4 **Relationship between funders, deliverers, users and other stakeholders**

Core services are provided free of charge.

### 6. Means of delivery

Each centre offers a range of products and services, tailored to the needs of its particular client base, to ensure clients get accurate and comprehensive business information.

On the central website ([http://www.cbsc.org](http://www.cbsc.org)) a range of services are provided to users. These include: information on popular business topics, business information guides, information on government business programmes and services, information on government programmes and services targeted at aboriginal business people, links to other sources of business information, as well as two interactive business tools – the Interactive Business Planner and the Online Small Business Workshop. The Online Workshop ([http://www.cbsc.org/osbw/workshop.html](http://www.cbsc.org/osbw/workshop.html)) guides users through a series of sessions, each focussed on a particular area of running a business. It provides techniques and information for developing your business idea, starting, marketing and financing a new venture and improving an existing small business.

The Interactive Business Planner (IBP) ([http://www.cbsc.org/ibp/home_en.cfm](http://www.cbsc.org/ibp/home_en.cfm)) is a business planning software product developed specifically for the web, that enables users to create a 3-year business plan for a new or existing business. The IBP has 11 sections and each section has several topics. Users are taken through each of these, and interact through a question and answer format. Example business plans are explained, and are used as the basis for users developing their own plans; users provide information from which financial projections are made by the IBP; and users are enabled to research their business plan using resources available on the internet (through lists of information sources and direct web links from the IBP site). As users may take some time to develop their business plan these are automatically saved on the CBSC system, using an individual password (if plans aren’t updated after 60 days they are then deleted from the system). For more information on the Business Planner see [http://www.cbsc.org/ibp/doc/intro_ibp.cfm](http://www.cbsc.org/ibp/doc/intro_ibp.cfm).

Through the CBSC websites clients are also able to use e-mail to request and obtain business-related information. They are assured a response within one business day.

The CBSC website also offers an interesting initiative to help users find their way to the information they require. The ‘Talk to Us!’ initiative began as a pilot in 4 provinces in summer 2000, and is an internet service which, when users click on it, connects them directly to a business information officer, who can then simultaneously search the CBSC website with them for the information they require.
Information on the website is regularly updated, depending on developments in the business world and the emerging interests of small businesses. The CBSCs are connected to each other and exchange information.

7. **Model of information flow**

The flow of information is two-way, with users requesting information from the service centres (either at the national level through the main website, or at the local level through the local centre contact or the local centre’s website) which the centres then provide. The local centres are all networked together and so there is an efficient two-way flow of information between them.

8. **Professional resources required**

Staff must be able to work in a constantly changing environment, and must be knowledgeable about emerging areas of business interest. Running the centres also involves considerable management skills, due particularly due the complex collaborative arrangement involved.

9. **Costs and benefits**

The CBSC has government funding of $75 million over five years (from 1999–2000 to 2003–04). This is distributed proportionately among the different managing organisations.

CBSC’s work is measured in terms of client interaction. National tracking systems monitor performance locally and nationally, and allow CBSC to develop a clear profile of their clients. For internet use, monitoring systems show that between 1999-2000 there were over 1.75 million visits to the website. In 1999–2000, over 26,000 CBSC clients developed business plans using the IBP. Feedback on this service has been exceptionally positive. As IBP use increases, the unit maintenance cost of the product is reduced. At less than $4.60 per plan, the IBP is an excellent example of cost-efficient service (CBSC 2000).

Every 24 months the CBSCs are evaluated, using a consistent national framework. Between such evaluations, other monitoring tools are also used for mid-term assessments. In 1999–2000, the national website was redesigned. The redesign included an improved layout, highlighting key national products and facilitating instant switching between English and French documents, as well as an enhanced accessibility function for clients using text browsers or braille readers. These changes were based on focus group feedback, Web site comments, and the changing requirements of the federal government.
10. Summary and advisory approach

The Canada Business Service Centres are a government-funded initiative to provide timely and accurate business information to people throughout Canada. A range of options (telephone, fax, etc) to access this information is available to users, and the internet is used to provide a wide range of information as well as to offer the use of interactive tools for business development and planning. Feedback from clients has led to the further improvement of the web services, and the Internet Business Planner in particular has been well used and received by CBSC clients.

It is worth noting that the Marches Farm Enterprise Programme (MFEP) (funded by DEFRA and the European Union), which was developed to help people set up new business enterprises on farms, also assisted users in business planning with information provided via the project’s website (http://www.mfep.co.uk). However, the MFEP business plan is not interactive and nor does it provide links (directly or otherwise) to other sources of information for the user.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>&lt;&lt;</th>
<th>&lt;</th>
<th>&lt;&gt;</th>
<th>&gt;</th>
<th>&gt;&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specificity of clientele</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Means of influence</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Programme objectives</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scale of decision</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scope of service</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Payment for service</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direction of information flow</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delivered by</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duration</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intensity</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

11. Sources of information


CBSC website http://www.cbsc.org
1. Introduction

The full title of the Profitable Pastures Project (PPP) is ‘Improving profitability through effective pasture based feeding management in the NSW dairy industry’. It is an industry-funded project that works through local farmers groups. Participatory research and extension activities are carried out locally and results and experiences are shared between 12 different regional groups of dairy farmers.

2. Policy and economic context

In the mid 1990’s the Dairy Research and Development Corporation (private organisation for the dairy industry) initiated mechanisms to provide funds to farmer groups through local structures (e.g. the Dairy Industry Development Company – DIDCO- in New South Wales; this is a private organisation and receives some core funding from DRDC and funds research through a combination of funds from DRDC and cash and in-kind support from government agencies and commercial organisations). Regional dairy groups were then asked to prepare project applications for funding.

It was at this time that the New South Wales (NSW) milk market was deregulated and farmers faced reduced income. As feed was a major cost to farmers most of the funding applications in NSW were focused on the management of the feed base. As the applications were so similar DIDCO called a meeting to see if a single project could be developed from them, and this was the basis of the PPP.

PPP operates alongside other extension services provided by government agronomists, private consultants, agribusiness, and other industry supported projects. At the state level PPP is one of the larger projects supported by DRDC and DIDCO.

3. Objectives

Objectives of the PPP include:

- establish the range of feed base management systems and enable farmers to identify current limitations and issues confronting these systems
- conduct farmer-participatory research to address specific feed base issues
- improve farmer confidence to assess the suitability of various practices for adoption in order to improve profitability
- enhance farmers’ ability to contribute, both directly and indirectly, to the dairy industry’s agenda for research, development and extension.

The aim is that farmers’ groups pursue their own learning agenda through observation, investigation, action and reflection. The project is driven by an action research philosophy.

4. Scale of operation

The PPP started in February 1999. The first phase of funding ended in September 2001 and the project is currently under review for continued funding.
There are 12 active farmer groups across the central and south coastlands and the
dairying areas west of the Great Dividing Range.

5. Key actors and their inter-relationships

5.1 Funders
Dairy Research and Development Corporation (DRDC), Dairy Industry
Development Company (DIDCO), NSW Agriculture (state department),
Charles Sturt University (Wagga Wagga) and the University of Western
Sydney (Hawksebury).

5.2 Deliverers
A leadership team, made up of representatives from a range of different
institutions (NSW Agriculture, university staff, DIDCO and DRDC) as well
as farmers, is responsible for the running of the project. This team of
project staff was established at the original meeting convened to develop
the project, and includes representatives from all the original funding
applicants.

5.3 Users
PPP group members. PPP dairy farmers have herds of less than 500
cows, and most have between 80 and 250 cows. Large dairy farmers do
not choose to participate in PPP (possibly because they are more able to
access the information they require from the appropriate sources).

5.4 Relationship between funders, deliverers, users and other stakeholders
The funding organisations are represented in the leadership team.
The 12 groups of dairy farmers are made up of 6 legally incorporated
Regional Dairy Groups that are officially linked to DIDCO - so they can get
insurance, monies, etc – but most groups are split in two due to distance,
so there are 12 groups in practice.
The groups are offered funds to improve their on-farm practices and
profitability. Whole groups are given AS$10,000 a year (so split groups
share this 50-50) and are responsible for deciding how this money gets
spent. Some groups employ a facilitator to help with group meetings and
data collection.

6. Means of delivery
The project is structured into 4 phases.

- Phase 1: Ask. Regional Dairy Groups (RDG) are established. These groups
  then consider the management practices that work and don’t work in their
  region.
- Phase 2: Watch and Measure. Farmers assess current management
  practices, and define the ‘best practice’ for their local area.
- Phase 3: Investigate. Farmers define research priorities.
- Phase 4: Act. New or adapted practices are trialed and evaluated on local
  farms, and findings are disseminated to other farmers.

Project activities, as decided by the farmers, include: workshops (on soil analysis,
nutrient budgeting), field days, undertaking research trials (e.g. comparing pasture
mixes under differing grazing regimes), or establishing focus farms. The latter have
monthly meetings where farmers and others – including government representatives, agribusiness and dairy co-operatives – discuss whole farm issues as well as specific pasture management practices.

Farmers themselves monitor their activities and plan future activities on the basis of these evaluations. Groups are encouraged to exchange information with each other through telephone conferencing.

7. Model of information flow

Information flows primarily take place between farmers within the individual Regional Dairy Groups (RDGs). RDGs also exchange information and experiences with each other (C) through telephone conferencing, and may request specific information from either the leadership team or other sources of specialist expertise (A) which can then be fed back to the group (B).

8. Professional resources required

Members of the PPP leadership team must possess good communication skills, in order to effectively communicate with all the stakeholders involved in the project. Other skills required include: mid-large project management, facilitation, negotiation (with government and the private sector), technical expertise, skills for the formation and maintenance of farmer groups, and reporting and evaluation skills.

9. Costs and benefits

The project has been evaluated positively by the farmers involved, with over 80% of them wanting the project to continue (Roberts, 2001).

DRDC (via DIDCO) provide approximately AS$450,000 over 5 years. The in-kind contribution from the universities and NSW Agriculture is similar.

Project expenditure is approximately AS$80,000 p.a. and the average cost of running each farmer group is approximately AS$5,000 p.a.

Measures of success of project activities include: very good attendance at local meetings, commitment by farmers to be involved in the project and farmers selection of the issues for investigation. Measures of success of project outputs include: each group has identified major local issues, prioritised them and planned actions to address them.

10. Summary and advisory approach

The Profitable Pastures Project has adopted an action research approach in order to facilitate local level commitment and learning among dairy farmers. Although the
project is relatively young it can be seen to have had many positive effects on the motivation of farmers to become actively involved in finding solutions to the problems they face.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>&lt;&lt;</th>
<th>&lt;</th>
<th>&lt;&gt;</th>
<th>&gt;</th>
<th>&gt;&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specificity of clientele</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Means of influence</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Programme objectives</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scale of decision</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scope of service</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Payment for service</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direction of information flow</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duration</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intensity</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

11. Sources of information

Friend, M (2001). Personal communication.


Jennings, J (2001). Personal communication.


1. **Introduction**

Landcare groups are very diverse, but broadly speaking they are voluntary groups of people who work together to develop more sustainable land management systems. By working as a co-ordinated group people are able to tackle problems (e.g. erosion, salinity, and nature conservation) on a catchment and regional level that could not be dealt with effectively at the individual level.

2. **Policy and economic context**

Australian farmers face declining terms of trade without the protection of agricultural subsidies. At the same time the government is undertaking a programme of ‘rationalisation’ with effects on the provision of many rural services and declining investment in infrastructure. Many farmers are leaving the land, and those that remain are farming greater areas with fewer people and increasing levels of debt and stress. The environment is also under stress, with mounting problems of resource depletion and degradation.

The National Landcare Programme (NLP), formed in 1992, is a government programme for resource management which promotes a holistic, systems approach. The NLP “underpins the Australian government’s strategies for maximising the contribution of rural industries and regions to the economic and social well-being of the country” (http://www.landcareweb.com/landcare.html).

3. **Objectives**

“The goal of the national Landcare program is to develop and implement resource management practices which enhance Australia’s soil, water and biological resources. These practices are to be efficient, sustainable, equitable and consistent with the principles of ecologically sustainable development” (Natural Heritage Trust, 2000).

Support to community groups is aimed at promoting self-reliance through stimulating awareness, understanding, education and skilled abilities.

4. **Scale of operation**

Landcare activities started in the 1980s. Landcare now involves approximately 5,000 Landcare groups and over one-third of Australian farm families. Groups often number 20 - 30 members (although some may be much bigger) and cover areas between 500 to 15 million hectares.

5. **Key actors and their inter-relationships**

5.1 **Funders**

Landcare receives financial, technical and administrative support from all levels of government and business as well as farmers’ and environmentalists’ lobby groups. In 1997 the national government created the Natural Heritage Trust to provide funds for Landcare and other natural resource management programmes throughout the country.

5.2 **Deliverers**
Each state has a Landcare programme that is run by the ministries responsible for agriculture and/or natural resources. Each state has its own land management legislation and therefore the support given to the Landcare programme varies considerably among states.

5.3 **Users**

Community members of Landcare groups.

5.4 **Relationship between funders, deliverers, users and other stakeholders**

The National Landcare Programme (NLP) provides most of the grant assistance to Landcare groups, and most of the technical support for Landcare groups comes from the state government land management ministries.

There are partnership agreements between the national government and the states and territories which specify the terms and conditions for which national funds are provided, defining the natural resource management conditions desired, the activities to be carried out, any institutional reforms needed and the performance indicators to be used.

NLP funding to Landcare groups is given on a competitive project basis, with proposals assessed by a range of stakeholders (Landcare groups, government and community members) according to a developed set of criteria.

Landcare facilitators and co-ordinators (and their training) are usually funded by the NLP. Facilitators are usually located within state land management agencies, which provide infrastructure, training and administrative support. Community coordinators are usually employed by active Landcare groups (normally with NLP funds) with the aim of helping groups develop and implement projects. Coordinators are often former group leaders, who are paid on a part-time basis to do a job they used to try to do voluntarily.

Some projects are run on a cost-sharing basis. For example, Webb et al (2000) report on the Tod River Catchment Salinity and Water Quality Management Project where the percentage contribution given to the farmers (up to 50%) depended on the nature of the activities undertaken, and whether they would have mostly on-site benefits to the individual landholder or mostly off-site benefits to the wider community.

Tax incentives (a deduction of 34 cents in the dollar for capital expenditure on treating land degradation and on facilities for conserving and conveying water) are available for Landcare related activities (where taxpayers have a taxable income of AS$20,700 or less). However, Campbell (1998) states that as most farmers make an economic loss each year the tax deductions are not useful incentives to undertake land conservation activities.

6. **Means of delivery**

Different Landcare activities include: demonstration projects, development of catchment land management plans, monitoring programmes, research and development trials, and production of educational literature. Many projects involve either addressing land degradation issues and/or adopting improved resource management practices. Facilitators act a link within the Landcare group and the community, and between the group and external sources of information and advice.
7. Model of information flow

There is two-way information flow within the individual Landcare groups, assisted by the community level co-ordinator. There is also two-way information flow between the group and their facilitator. If the group has information demands that the facilitator cannot meet, these can be obtained from external sources (by the facilitator).

8. Professional resources required

Facilitators and coordinators need energy, enthusiasm and the ability to work well with people, including a sufficient understanding of group processes and dynamics. Other required skills include: conflict resolution, negotiation, honesty, good organisation skills, listening skills, and planning, networking and public relations abilities. They should also be effective ‘bureaucracy busters’.

9. Costs and benefits

As an example of costs, the Property Management Planning Programme, supported under the NLP, aims to promote the linkages between productivity, environmental and economic outcomes. In 1999-2000 the national government contributed A$10.2 million to this programme, which was matched by state and territory governments (National Heritage Trust, 2000).

There has been no formal assessment of the Landcare programme.

Marsh and Pannell (1998) praise the Landcare approach for increasing awareness of conservation issues and enabling the sharing of information and resources between farmers. But they also criticise governments and funding bodies for relying on this extension approach too much, and state that many large environmental problems will not be effectively solved using the Landcare approach as solutions lie beyond their experiences and technical knowledge. Pannell (1999) goes on to state that despite the widespread promotion of the Landcare programme farmers’ adoption of sustainable farming practices has been lower and slower than that hoped for.

10. Summary and advisory approach

The Landcare programme is a national initiative that has been running for several decades, and which now involves a large number of Australian farmers. Despite its emphasis on group activities for the promotion of sustainable natural resource management, it has been criticised by some for failing to achieve more. This is because some environmental issues are beyond the abilities of farmers to solve on their own, which calls for additional assistance from other sources.
### Dimension

<table>
<thead>
<tr>
<th>Dimension</th>
<th>&lt;&lt;</th>
<th>&lt;</th>
<th>&lt;&gt;</th>
<th>&gt;</th>
<th>&gt;&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>social policy goals</td>
</tr>
<tr>
<td>Specificity of clientele</td>
<td></td>
<td></td>
<td>&lt;</td>
<td>&gt;</td>
<td></td>
</tr>
<tr>
<td>Means of influence</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>help client achieve own objectives</td>
</tr>
<tr>
<td>Programme objectives</td>
<td></td>
<td></td>
<td></td>
<td>&gt;</td>
<td></td>
</tr>
<tr>
<td>Scale of decision</td>
<td></td>
<td></td>
<td>&lt;</td>
<td>&gt;</td>
<td>group, community or area (i.e. collective decision)</td>
</tr>
<tr>
<td>Scope of service</td>
<td></td>
<td></td>
<td></td>
<td>&gt;</td>
<td>financial incentives within the scheme</td>
</tr>
<tr>
<td>Payment for service</td>
<td></td>
<td></td>
<td></td>
<td>&gt;</td>
<td></td>
</tr>
<tr>
<td>Direction of information flow</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>bottom-up</td>
</tr>
<tr>
<td>Delivered by</td>
<td></td>
<td></td>
<td></td>
<td>&gt;</td>
<td></td>
</tr>
<tr>
<td>Duration</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Intensity</td>
<td></td>
<td></td>
<td></td>
<td>&gt;</td>
<td></td>
</tr>
</tbody>
</table>

#### 11. Sources of information


DEFRA Project KT0110: Improving access to advice for land managers
Case Study 12: Monitor Farms, New Zealand

1. Introduction

Monitor farms are farmer-owned community run groups who elect one member to be a central monitor farm for three years. This farm is then used as an example to motivate other group members and to improve farm performance in the local group area. The aim of this approach is to make farmers more aware of the manageable factors which affect their business and to use new systems, techniques, best practices to improve their farm profitability.

2. Policy and economic context

In the mid 1980s New Zealand farmers faced problems of low profitability, uncompetitive exchange rates and high bank interest rates. They also needed to find solutions to the problems they were experiencing following the removal of farm subsidies and free advisory services. Farmers and advisory agencies responded by establishing a number of local farm monitoring and group initiatives.

3. Objectives

The objectives of the monitor farm programme are to motivate local group members to improve their farm efficiency through a schedule of monitoring that allows them to assess the reasons for success (and failure) on other farms and compare their own technical and economic performance with that of their neighbours (and understand the causes of any differences).

4. Scale of operation

There are 26 official monitor farms (e.g. those sponsored by Meat NZ, an industry body funded by livestock producers through levies on all the beef, sheep and goats slaughtered in NZ), as well as an unknown number of private, farmer-funded groups. Monitor farms are distributed evenly throughout the 2 islands of New Zealand. Monitor farms predominate in the beef and sheep farm sectors. Some groups have been operational for more than 10 years.

5. Key actors and their inter-relationships

5.1 Funders

Meat NZ provides funding to monitor farms included in the Meat NZ Monitor Farm Programme. Other private monitor farms are funded by group members, often with contributions in cash or time from the agricultural supply industry.

5.2 Deliverers

Groups are assisted by facilitators (usually an agricultural consultant). The farmers select their facilitator, who are local people that are known and well liked and respected by the local group.

5.3 Users

Groups have between 25 – 70 members (who are local farmers, vets and other members of ancillary industries).

5.4 Relationship between funders, deliverers, users and other stakeholders
There is no institutional link between the facilitators and the monitor farms. Each Meat NZ monitor farm facilitator gets NZ$25,000 each year which has to cover their salary, any analytical work and external assistance. As a consequence of this arrangement, few facilitators are adequately covering their costs and many are motivated to do as much of the work they can themselves (with little input from specialists).

Facilitators help the groups to monitor and record farm performance and identify ways in which this can be improved. They organise meetings, facilitate discussions and provide technical advice.

Farmers in the Meat NZ Monitor Farm Programme do not pay to participate but fund it indirectly through Meat NZ levies (when they sell an animal).

6. **Means of delivery**

In order to set up a monitor farm Meat NZ calls a public meeting, at which interested local consultants can offer to be the group’s facilitator. The farmers then vote as to whom they prefer. For a private monitor farm, farmers decide together to establish a group and choose and contact their preferred agricultural consultant.

The local group of farmers chooses one of its members to be the central monitor farm. The strengths and weaknesses of this farm are then analysed and a business plan for the next three years drawn up, setting out financial and physical targets for the farm as well as personal goals for the monitor farmer.

Farmers monitor and record a lot of farm information and this forms the basis for decision making and assessing farm progress. It also allows other farmers to compare their own performance against that of the monitor farm.

7. **Model of information flow**

Information flow is very open and 2-way between the monitor group farmers, and between them and their group facilitator. If facilitators cannot meet farmers’ information demands then they can seek external sources of expertise who can then provide the required advice to the farmers (either directly, or via the facilitator).

8. **Professional resources required**

Facilitators need to be proficient organisers with sound, all-round technical abilities. They must also be someone well respected within the local area.

9. **Costs and benefits**
An evaluation study (Baker and Associates, n.d.), which surveyed farmers involved in three monitor farms, reported that farmers involved in a typical monitor farm would each benefit by NZ$6,700 each year (approximately £2,100 at current exchange rates, but more realistically equivalent to £4000 given the lower cost economy in NZ). This represents a twenty-fold return on the $25,000 invested each year by Meat NZ in each monitor farm. Another study (of 9 monitor farms) has also indicated increases in production of 8 to 37 per cent and in farm revenue of 13 to 31 per cent.

A MAF NZ report (1999), which includes detailed examination of a private monitor farm, provides information on its sources of annual funding: NZ$12,200 (21 per cent of total) is provided by the Ministry for the Environment; farmers organisations contribute NZ$10,000 (12 per cent of total); MAF Policy contribute NZ$5,000; consultants and scientists contribute NZ$13,560; and finally group members and their time, which makes the biggest contribution representing 27 per cent of total monitor farm funding.

The costs involved in running the private monitor farm include: running the community group (members’ time and administration costs) NZ$15,600; monitoring activities NZ$ 15,000; and facilitator and consultancy fees of NZ$13,600.

Other benefits of monitor farms cited by Riddell (2001) include: farmers acquired skills in monitoring and benchmarking, improved farmer confidence through shared decision making and planning, increased motivation and enthusiasm, healthy competition, and networking and social cohesion.

Baker and Associates (in Riddell, 2001) state that the achievements of the monitor farm programme in relation to its objectives include: raised awareness of manageable factors affecting farm business; farmers motivated to set realistic targets and develop action plans; important links established with the scientific community which has led to valuable demonstration and research activities; and excellent diffusion channels established.

10. Summary

The monitor farm approach has proved to be very cost effective and has resulted in a much more focused, efficient and business-like approach to farming in New Zealand.

It is an approach that can be replicated elsewhere as it is a simple format that can be adapted to the specific circumstances or problems of any area, and it is a concept that appeals to farmers due to the co-operation and social benefits of group membership. Riddell (2001) sums up that UK farmers “need to follow their lead in developing simpler farming systems which maximise production whilst minimising potential problems through a better understanding of how our enterprises are actually performing” (Riddell, 2001: 2).

The monitor farm approach is now being tried in Wales, with funding from the Welsh Sheep Strategy, the Welsh Development Agency and the Welsh Office. There are 10 official Welsh monitor farms (mostly in Environmentally Sensitive Areas), and these appear to have got off to a positive start, with much interest from local farmers. Each of these farms have a steering group, a common agenda and a benchmarking process to monitor progress and involve a group of representative farmers, consultants, vets and scientists (WSS, 2000). The Scottish Executive’s Forward Strategy also proposes using the NZ Monitor Farm approach in Scotland (Riddell, 2002), although funding strategies for such an approach have still to be finalised. The Curry report (Cabinet Office, 2002) also recommends the establishment of a number of demonstration farms based on the NZ model.

There is therefore a lot of current UK interest in the potential of developing programmes of monitor farms, based on the NZ experience, and Riddell (2002)
claims that at numerous presentations of this approach – to mixed audiences, including staff of various agricultural organisations as well as farmers – the response has always been positive.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>&lt;&lt;</th>
<th>&lt;</th>
<th>&lt;&gt;</th>
<th>&gt;</th>
<th>&gt;&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specificity of clientele</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Means of influence</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Programme objectives</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Scale of decision</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scope of service</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Payment for service</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direction of information flow</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delivered by</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duration</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intensity</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

11. Sources of information


Riddell, I (2002). Personal communication.

1. **Introduction**

Within the last 50 years private consultancy advice to cotton farmers in Louisiana USA has gone from supplementing the services provided by the state and by chemical companies, to becoming farmers’ most important source of information. This service is fee-based with farmers paying for the particular services they request.

2. **Policy and economic context**

The environment for cotton growers is changing fast, and they have to face technological complexity, environmental stewardship issues and regulatory controls. Education and information needs are still supplied by the university-based extension system, but this was insufficient to meet the growing demands of cotton producers, and farmers’ demand for specialised information led to the rapid growth of the private consultancy business. There are now national and state associations of crop consultants (e.g. the National Alliance of Independent Crop Consultants, [http://www.naicc.org](http://www.naicc.org); and the Louisiana Agricultural Consultants Association, [http://www.louisianaagconsultants.com](http://www.louisianaagconsultants.com)).

3. **Objectives**

The objectives of the private consultant are to provide useful, specialised, timely and cost effective information to farmers. Consultants offer a range of advice, including budgeting, farm planning, land evaluation, government regulation compliance, as well as agronomic advice about the selection of crop varieties, use of growth regulators, etc.

4. **Scale of operation**

In 1999 there were more than 100 professional consultants in Louisiana providing contractual services to the majority of the state’s cotton farmers. Consultants operate as private independent businesses. Some work as individuals, while others may work as a group, or within a consultancy company.

5. **Key actors and their inter-relationships**

5.1 **Funders**

Farmers pay for the services they receive.

5.2 **Deliverers**

Private consultants. Some of these are completely independent (and therefore impartial), whilst others are connected with agribusiness firms that supply farmers.

5.3 **Users**:

Farmers.

5.4 **Relationship between funders, deliverers, users and other stakeholders**:

Farmers are the funders and users of private consulting services. Farmers pay for the services they receive. Fees vary from $4.50 per acre to $16.00 per acre depending on the services provided.
6. **Means of delivery**

Consultants undertake regular field inspections, and submit relevant reports of these visits including their recommendations to the farmers. Producers permit consultants’ access to their fields and follow the recommendations provided.

7. **Model of information flow**

Farmers request assistance from private consultants (a) who then supply information to farmers in the form of recommended farming practices (b).

8. **Professional resources required**

Consultants need to be able to offer a variety of professional services, including budgeting, farm planning, land evaluation, awareness of government legislation, appropriate use of chemical inputs, etc. Before consultants can practice they need to be tested and certified by the State Department of Agriculture and Forestry. This is a legal obligation in most US states. In Louisiana the consultant must go through a recertification process every three years. Anyone not adhering to these regulations is subject to heavy penalties. This certification also gives the consultants credibility with clients and helps them gain insurance to protect their business.

Consultants need professionalism, good communication skills and technical competency to be successful. They must be well educated and keep up to date with new developments and technology.

9. **Costs and benefits**

Barnett and Verma (2000) state that the main impacts of the private consulting business have been: 1) the increase in the acreage under cotton production and 2) the increase in the number of cotton farmers using the services of professional consultants (in 1999, 90% of the land under cotton production was under contract to consultants). “At an average of $10 per acre, the gross income of the consulting business from cotton alone was over $10 million” (Barnett and Verma, 2000: pg 3).

There has been a steady return business from farmers over the years, implying that farmers are both satisfied with the services they receive from consultants and view their investment in professional advice as economical in terms of the returns they receive by following consultant recommendations.

There have been positive effects on the environment, as the indiscriminate spraying of chemicals has stopped and aerial applicators now have to follow consultants’ recommendations following field inspections of insects, weeds and pests (although this is not a legal obligation).

10. **Summary**

By being able to provide farmers with the specialised advice and information they require private advisory services have filled the gap left by the state’s extension
services, and have become the dominant source of information for cotton farmers in the state of Louisiana. Farmers are prepared to pay for the services they receive as these are considered cost-effective, evidenced by the amount of repeat business the consultants attract.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>&lt;&lt;</th>
<th>&lt;</th>
<th>&lt;&gt;</th>
<th>&gt;</th>
<th>&gt;&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus</td>
<td>business</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specificity of clientele</td>
<td>narrow target category</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Means of influence</td>
<td>promote specific view</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Programme objectives</td>
<td>technology transfer</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scale of decision</td>
<td>individual land management unit</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scope of service</td>
<td>information and advice</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Payment for service</td>
<td>clients pay</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direction of information flow</td>
<td>top-down</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delivered by</td>
<td>public sector</td>
<td>X</td>
<td>private sector</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duration</td>
<td>short term campaign</td>
<td>X</td>
<td>ongoing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intensity</td>
<td>no one-to-one advice</td>
<td>X</td>
<td>all one-to-one advice</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

11. **Sources of information**


National Alliance of Independent Crop Consultants website, [http://www.naicc.org](http://www.naicc.org)

1. **Introduction**

The Small Business Development Centres, which exist across the entire US, are managed through the Small Business Administration (SBA), a US government agency. The SBA has served US small business for over 48 years. The Office of Small Business Development Centres (SBDCs) plays a major role in delivering management and technical assistance, economic development and management training to existing and prospective small businesses. This delivery is primarily accomplished through co-operative agreements with lead SBDCs working with universities, colleges, community colleges, vocational schools, chambers of commerce and economic development corporations to deliver small business counselling and training. This network consists of approximately 1,000 lead centres and sub-centres throughout the United States.

As well as administering a range of financial grant, loan and marketing programmes, the SBA provides a technical assistance programme that is managed by the Office of Business and Community Initiatives. A key element is the relationship with the Service Corps of Retired Executives (SCORE) and private consultants.

2. **Policy and economic context**

As the engine for economic growth, small businesses produce a majority of new innovations and create a majority of new jobs. According to US Census Bureau statistics, there were about 6.5 million firms with employees in 1999. All but 16,000 of those firms had fewer than 500 employees and could be considered to be small firms.

3. **Objectives**

The SBDCs work within the SBA goals:

**Goal 1: Help Small Businesses Succeed**
- **Strategy 1: Access to Capital and Credit**
- **Strategy 2: Access to Procurement Opportunities**
- **Strategy 3: Access to Business Development**
- **Strategy 4: Serve as a Voice for Small Business**

**Goal 2: Disaster Assistance**

Each centre develops services in co-operation with local SBA district offices. Services include, but are not limited to, assisting small businesses with financial, marketing, production, organisation, engineering and technical problems, and feasibility studies. Special SBDC programmes include international trade assistance, technical assistance, procurement assistance, venture capital formation and rural development.

4. **Scale of operation**

The programme is on-going and has been running for many years. It is available throughout the US and is targeted at small and medium size enterprises (SMEs).
5. **Key actors and their inter-relationships**

5.1 **Funders**

US Federal funds though the Small Business Administration, supplemented by State and local government funds.

5.2 **Deliverers**

Universities, colleges, chambers of commerce etc. form the SBDCs in a range of collaborative arrangements with the SBA.

5.3 **Users**

Small businesses throughout the US in rural and urban centres.

5.4 **Relationship between funders, deliverers, users and other stakeholders**

The SBDCs are the delivery point for the main SBA programmes. 90 per cent of the SBA funding available for small businesses is delivered through the SBDCs.

The range of services varies from location to location to meet specific regional and local needs, and to allow for specialisation in particular areas of expertise. In many cases centres are co-located with academic institutions. They also work with other specialist providers for example the SBA sponsored Women’s Business Centres. Other partners in the process are state and local governments and the USDA (US Department of Agriculture) Rural Business Co-operative Service (RBS).

The RBS is responsible for the Rural Business Enterprise Grant and loans but a memorandum of understanding (MOU) with the SBA, allows RBS borrowers to obtain needed technical assistance from the SBDCs. The MOU also provides for opportunities for both agencies to carry out activities to foster job creation and economic development in rural areas.

SBDC staff, private sector consultants and volunteer counsellors (from SCORE) deliver the services. The volunteers from SCORE are not formerly part of the SBDCs but the centres rely heavily on their expertise.

Delivery is mostly free although there are proposals for part fee paid services.

6. **Means of delivery**

The programmes delivered include counselling, training and technical assistance in all aspects of business management as well as outreach and development work.

The service has a wide range of tools available including video and access to software and shareware from the internet.

The primary focus is on helping clients achieve their own goals.

There is evidence of the SBA encouraging the SBDCs to use the Internet more for providing distance learning, one-to-one on line counselling and information. Primarily the SBDCs provide one-one and group advice and training as well as the use of media for information transfer.
7. **Model of information flow**

Policy information is fed to the SBDCs via the SBA, the SBDCs also draw on a wide range of academic, commercial and other policy and regulatory information. SBDC staff, volunteers or consultants then interpret this in the context of the individual SME.

SMEs approach the SBDCs as a result of general knowledge of their services or in response to specific campaigns.

8. **Professional resources required**

A wide range of skills in all aspects of managing business are available. Some are based on professional qualifications and others on experience for example through SCORE.

9. **Costs and benefits**

In 2001, 610,000 clients were counselled or trained by the SBDCs, of which 186,000 were start-ups; there have been a total of 8 million clients over the last 20 years. The SBA estimates for the 2000 fiscal year that the SBDCs assisted 68,000 businesses to create or retain jobs: an earlier evaluation showed 58,000 in 1998.

In 2001 the core funding grants for training, counselling and education were SBDC US$85 million, SBDCs specifically for Native Americans US$3 million, WBCs (Womens Business Centres) US$12 million, and SCORE US$5 million. [Note: WBCs provide similar services targeted at women in business].

The number of core staff is hard to assess but the SBA staffing has reduced from 4,000 ten years ago to 3,200 in 2001. SCORE has 11,500 volunteers on its books.
10. Summary

The SBDCs have the benefit of being part of a long established programme, refreshed through new programmes and the evolution of specialist centres and activity. A wide range of clients uses them from both rural and urban communities. The structure fits within the wider US model of formal partnership between agencies (e.g. the RBS and SBDC MOU) and the academic focus of extension activity. The in-depth and wide experience of volunteers from SCORE is seen as a strength. SCORE as a not for profit resource partner of the SBA provides focus and accountability for this volunteer resource. Also the ability to draw on specialist skills from the private sector through consultants ensures that sufficient breadth is available to meet client needs.

Based on the figures available at para 9 above, the core cost of the SBDCs amounts to only $139 per client – the use of the SCORE volunteers will be one way these costs are kept low. Whilst the focus is on individual businesses the balance between in-depth one to one advice, group training and information provision is not clear.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>&lt;&lt;</th>
<th>&lt;</th>
<th>&lt;&gt;</th>
<th>&gt;</th>
<th>&gt;&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social policy goals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specificity of clientele</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>narrow target category</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Means of influence</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>promote specific view</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Programme objectives</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>technology transfer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scale of decision</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>individual business unit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group, community or Area (i.e. collective decision)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scope of service</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>information and advice</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial incentives within the scheme</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Payment for service</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>clients pay</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Free to clients</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direction of information flow</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>top-down</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bottom-up</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delivered by</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>public sector</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private sector</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duration</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>short term campaign</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ongoing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intensity</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>no one-to-one advice</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>all one-to-one advice</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

11. Sources of information


Small Business Administration website: [www.sba.gov.sbdc](http://www.sba.gov.sbdc)

Small Business Administration (2001a) SBA Fiscal Year 2001 Annual Performance Plan Available on SBA website


1. **Introduction**

The programme is focused at developing designated rural and urban communities. This new US federal policy towards low-income communities began in 1993, with the first Zones and Communities designated in 1995. The areas are designated for a period of ten years. The programme provides flexible long-term financing with strategic planning and performance benchmarking. Based on the performance of the Round 1 projects further designations were made in 1998 and 2001.

2. **Policy and economic context**

Prior to this programme the US had relied on tax relief benefits for businesses in designated areas to stimulate development in ‘enterprise zones’. This initiative was a marked departure focussing on accountability, harnessing citizen action, long-term strategic planning, performance measurement, comprehensive development and significant community involvement.

The Round 1 Empowerment Zones and Enterprise Communities (EZ/EC) Programme was enacted as part of the Omnibus Budget Reconciliation Act of 1993. The Round 2 designations were enacted under the Tax Payer Relief Act of 1997.

3. **Objectives**

Strategic plans have to be developed reflecting four key principles:

- Economic opportunity
- Sustainable development
- Community-based partnerships
- Strategic vision for change.

Within this framework specific objectives are set by the partnerships developing the plan.

The objectives of the USDA (US Department of Agriculture) were not only to provide flexible funding, but also to act as a tool to develop the capability of communities to raise themselves away from poverty. The programme was designed to enhance local decision making processes, and build local leadership and organisational capacity that would benefit the community beyond the ten year designation period.

4. **Scale of operation**

The EZ/EC programme is competitive. In Round 1, 180 rural communities who had been mobilised by the programme but had failed in the competition were designated Champion Communities and received a much lower level of funds.

There are 3 rural EZs and 30 rural ECs from Round 1 and a further 5 rural EZs and 20 rural ECs from Round 2. In 2001, a further 10 rural ECs were designated under Round 3. In total there are now at least 8 Rural EZs and 60 Rural ECs. In July 2000 the average size of rural communities supported under this programme was 15,000 residents.

Criteria for Round 1 eligibility were: population up to 30,000, area up to 1,000 square miles, poverty rate minimum 20% overall, 25% in 90 per cent of census tracts, 35%
The University of Reading, ADAS Consulting Ltd and John Archer Consulting

in half census tracts, area with a character of pervasive poverty, unemployment and
general distress. Round 2 had lower criteria: maximum poverty rate was reduced to
25%.

5. Key actors and their inter-relationships

5.1 Funders

Primary funds are provided in the form of grants from the USDA. These have levered in funds from other state and local sources as well as from the private sector. EZs have on average only one or two funders; ECs may have up to six.

5.2 Deliverers

The EZ/EC programme is part of the Rural Development Mission of the United States Department of Agriculture (USDA). It is delivered through the Office of Community Development (OCD) which is one of 4 areas in this mission, the others being the Rural Utilities Service, the Rural Housing Service, and the Rural Business Co-operative Service. A further linked programme delivered by the OCD is the Rural Economic Area Partnership (REAP) Zones. These appear to have similar goals to the EC/EZ programme but are funded differently and are focused at especially remote areas in the North Great Plains which have declining populations rather than low incomes.

The staff of the Rural Development Mission are part of the USDA Combined Service Centres along with the Farm Service Agency (FSA) and the Natural Resources Conservation Service. Direct technical assistance is provided by the OSD staff. Other in-depth training, advice and support for communities will be available from the Extension Service.

5.3 Users

The users are the Community Based Partnerships and the communities they serve.

5.4 Relationship between funders, deliverers, users and other stakeholders

The primary relationship is essentially a contractual one between the partnership and USDA. Members of the partnership may bring funding from their respective organisations. The partnership manages the way funds are used by organisations and individuals for the benefit of the community's development and within the plan agreed by USDA.

Two elements are seen as a key to success; the training received by board members, and the Benchmark Management System. Communities maximising their use of both these had higher leverage of other funds and faster draw down of funds and thus more rapid action on the ground. They also relied less on the USDA grants to effect their actions.

6. Means of delivery

The programme is innovative for the communities involved and key actors face a steep learning curve. Support is provided by community development specialist staff of the USDA who provide technical assistance in community processes, leadership and project management skills, and transfer of best practice.

Most support is carried out one-to-one or in the group context. In the Round 1 application period (6 months) workshops were held. USDA provided training in
responsibilities of being a 'board member' for groups from relevant areas. For round 2 communities training was by video, national radio conference and one-to-one facilitation by USDA staff. There are also annual conferences for EZ/EC staff.

A key tool in the process has been the internet based Benchmark Management System. This enables the communities to manage their work plans on line, whilst at the same time providing USDA with current data on their activities. After the first five years this mechanism was tracking 2000 work objectives and over 6000 specific activities in 57 EZ/ECs. The process aids local management and also provides accountability and evaluation data in one process. Champion communities and REAP zones also use this software.

The nature of the programme is such that whilst USDA has a very wide view of development, the communities devise the way to get there within the broad framework of the programme.

7. **Model of information flow**

These programmes work with a range of partners, including the Co-operative Extension Service funded by USDA, which provides training and information support across a wide range of social, economic and environmental issues.

![Diagram showing information flow between USDA, Private Agents, EZ/EC Partnership, and Community Beneficiaries](image)

---

**Professional resources required**

Members of partnerships are not required to have any specific skills. USDA staff are professional but exact qualifications not evident from the literature.

9. **Costs and benefits**

Round 1 eligible funding of $40 million for rural EZs and $2.95 million for rural ECs was available for the programme as a block grant. For Round 2 the available figures were $2 million for Zones and $250,000 for Communities for year 1. Businesses in EZs also receive tax credits and other tax incentives.

After five years of Round 1 and one year of Round 2, overall fund leverage was 9:1 against the EZ/EC grants.

Actual spend after five years Round 1 and one year Round 2 is given in the Table below. The conclusion is that where funds are more limited the incentive to seek funds elsewhere is greater and in the process a much wider range of partnerships is developed. Also communities which took part in the training programme had less reliance on the USDA grants and better leverage ratios.
Funds received by Rural EZ/ECs July 2000 (US$millions)

<table>
<thead>
<tr>
<th>Funds</th>
<th>EZ round 1</th>
<th>EC round 1</th>
<th>EZ round 2</th>
<th>EC round 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>EZ/EC grants</td>
<td>69.4</td>
<td>61.8</td>
<td>1.9</td>
<td>0.9</td>
</tr>
<tr>
<td>Other funds</td>
<td>253.7</td>
<td>759.1</td>
<td>44.3</td>
<td>154.7</td>
</tr>
<tr>
<td>Av / community</td>
<td>84.6</td>
<td>26.2</td>
<td>8.9</td>
<td>7.7</td>
</tr>
</tbody>
</table>

10. Summary

This programme has many attributes not dissimilar from the Objective 1, 5b, 2 and LEADER approaches. Key issues of merit to the UK situation are the emphasis on local empowerment through training and the Internet based Benchmark Management System. The process has stimulated these communities to look within and work cooperatively to develop their own sustainable solutions with support and technical assistance from professional USDA staff. A further important issue is that the programmes have a long timeframe of ten years. Finally the process does not take place in isolation. The resources of the CSREES (Co-operative State Research, Education and Extension Service) exist to support some of the detailed extension work required.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>&lt;&lt;</th>
<th>&lt;</th>
<th>&lt;&gt;</th>
<th>&gt;</th>
<th>&gt;&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus</td>
<td>business</td>
<td>X</td>
<td>social policy goals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specificity of clientele</td>
<td>narrow target category</td>
<td>X</td>
<td>broad or unspecified target</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Means of influence</td>
<td>promote specific view</td>
<td>X</td>
<td>help client achieve own objectives</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Programme objectives</td>
<td>technology transfer</td>
<td>X</td>
<td>process</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scale of decision</td>
<td>individual land management unit</td>
<td>X</td>
<td>group, community or area (i.e. collective decision)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scope of service</td>
<td>information and advice</td>
<td>X</td>
<td>financial incentives within the scheme</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Payment for service</td>
<td>clients pay</td>
<td>X</td>
<td>free to clients</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direction of information flow</td>
<td>top-down</td>
<td>X</td>
<td>bottom-up</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delivered by</td>
<td>public sector</td>
<td>X</td>
<td>private sector</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duration</td>
<td>short term campaign</td>
<td>X</td>
<td>ongoing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intensity</td>
<td>no one-to-one advice</td>
<td>X</td>
<td>all one-to-one advice</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

11. Sources of information


DEFRA Project KT0110: Improving access to advice for land managers
Case Study 16: Integrated Farming Systems (IFS), USA

1. Introduction
The Kellogg Foundation is a US-based philanthropic, non-profit organisation. Its grant-making programme is focussed on 3 main areas of concern: health, education, and food systems and rural development. The food systems component is concerned with community-based, economically viable, and environmentally responsible food production systems and their contribution to the health and well-being of people and communities. The rural development component is concerned with the economic and social sustainability of rural communities.

The Integrated Farming Systems initiative represents an attempt to create a national network of learning communities that are built around the values of sustainable agriculture.

2. Policy and economic context
Conventional farming practices in the USA have led to increasing environmental degradation and declining food quality. Many farmers face reduced economic viability and rural communities are witnessing an overall economic and social demise. This has led to recognition of the need for change in the nation’s food and farming systems, and for the promotion and adoption of more sustainable farming systems.

3. Objectives
The IFS projects aim to “help people develop and adopt more-sustainable farming practices and systems, and to help people and their communities identify and overcome the barriers to sustainable agriculture” (Fisk et al, 1998: 217). They address the issues of agricultural viability and productivity as well as environmental protection, and focus on developing partnerships between different community groups and on fostering leadership capacities among community members.

4. Scale of operation
The IFS projects are located across the USA and are linked together at the national level by the IFS Network. This work was started in 1993. The IFS initiative is now in its final dissemination stage and will be completed later this year (2002).

5. Key actors and their inter-relationships

5.1 Funders
The W. K. Kellogg Foundation

5.2 Deliverers
Each project is delivered by a local organisation, which includes the relevant local stakeholders: farmers, environmental and conservation organisations, agricultural consultants and organisations, state universities and other academic institutions, and consumer groups. Details of all the 18 projects are provided on the Kellogg Foundation’s website (http://www.wkkf.org).
5.3 Users

Project members.

5.4 Relationship between funders, deliverers, users and other stakeholders

Each of the 18 IFS projects has a different organisational set-up, depending on the problem being addressed. For example, one of the supported projects is Michigan Integrated Food and Farming Systems (MIFFS), which is a collaborative venture between the main stakeholders in the state to create and support more sustainable food and agricultural systems for producers and consumers. It in turn supports a range of smaller innovative projects (currently there are 15 of these), which are developed and run by teams of farmers and others (details of these local projects can be found on the MIFFS website: http://www.msu.edu/~miffs/projects/projects.html).

Another example is the Kentucky Leadership and Agricultural and Environmental Sustainability (KLAES) project, which is a joint project between the University of Kentucky and the Community Farm Alliance (a grassroots farmers organisation), with participation from the Kentucky State of Agriculture, the Centre for Sustainable Systems and the Kentucky Farm Bureau Federation. Fourteen local and regional groups (of farmers, local extension agents and others) are involved in a range of different activities (e.g. organic apple production, diversification of production) focused on developing more sustainable production systems (For more information see http://www.uky.edu/Ag/KLAES.)

6. Means of delivery

Eighteen community-based demonstration IFS projects are run in different areas of the USA. Each project develops or tests a resource efficient technology, such as using intensive rotational grazing as an alternative to confinement livestock systems, and using alternative crop rotations to create more sustainable farming systems. Many projects include farmer-driven research and education, with farmers conducting on-farm research, educating other farmers and community members, and demonstrating the potential of IFS to policy makers. Other methods involved in IFS projects include field days, newsletters, participation in discussion groups, innovative environmental education events to encourage adoption, and leadership training for project members.

All the local projects are linked together by the IFS Network which facilitates the exchange of information and experiences and advocates changes to national policy. Networking conferences are held every six months, hosted by an individual project and attended by members from each of the other projects, who are then able to feedback all information to the rest of their project team on their return.

The IFS projects undertake formative evaluations throughout the course of the projects, helping to document the project’s progress as well as direct the project into the future.

7. Model of information flow

The main information flows are internal to the individual IFS projects, with 2-way communication between all the relevant project stakeholders. Local projects also feed information up to the national network of IFS projects, and receive information
back from the national network about the progress and experience of IFS projects elsewhere in the country.

8. **Professional resources required**

No information was available on the specific skills needed by staff working within the IFS programme, although it is expected that sound communication and organisational skills would be required in order to effectively work with such a broad range of stakeholders.

9. **Costs and benefits**

No overall information was available about the costs involved in the IFS programme. However, some figures were provided by individual projects. For example, one project (Future Harvest, in Washington DC) received over US$800,000 for a four-year project. Another IFS project in Kentucky was granted just over US$1 million for a 5-year project.

It would appear that project funds are sometimes used to develop state-wide networks/organisations that continue functioning once Kellogg funding stops.

10. **Summary**

The Integrated Farming Systems programme, supported by the Kellogg Foundation, is a broad-based national initiative to create learning communities based upon the principles of sustainable agriculture. The programme supports 18 regional projects, which in turn support a variety of local projects, encompassing a wide range of regional and local stakeholders and a large diversity of activities.

Each regional project is linked to the national IFS Network which facilitates the exchange of information and experiences, as well as advocating changes policy at the national level.
Case Study 16

<table>
<thead>
<tr>
<th>Dimension</th>
<th>&lt;&lt;</th>
<th>&lt;</th>
<th>&lt;&gt;</th>
<th>&gt;</th>
<th>&gt;&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specificity of clientele</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Means of influence</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Programme objectives</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scale of decision</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scope of service</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Payment for service</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direction of information flow</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delivered by</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duration</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intensity</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

11. **Sources of information**


KLAES website [http://www.uky.Ag/KLAES](http://www.uky.Ag/KLAES)

Mertz, B (2001). Personal communication.

MIFFS website [http://www.msu.edu/~miffs/introduction.htm](http://www.msu.edu/~miffs/introduction.htm)

Annex 2: Template for case study descriptions

1. **Introduction**

2/3 sentences to briefly introduce the case study, mentioning its main features.

2. **Policy and economic context**

To include:

- National policy goals (i.e. what national problem does the case study example aim to address?)
- Any relevant national regulations/legislation
- National economic context (i.e. what are the main trends in the rural economy?)
- If the case study is local in scope, this section should also describe the local economic context, and any relevant local history (including previous projects).

3. **Objectives**

The specific, stated objectives of the programme/project.

Should also state whether the programme/project has a business or 'public good' emphasis (i.e. its 'focus' dimension), and whether it is concerned more with transferring technology or with the process of developing farmer/community capacities (i.e. its 'objectives' dimension).

4. **Scale of operation**

The geographical area covered by the programme/project, and its duration (short-term or ongoing). Where relevant, provide a start date and an end date. Should also include information on how user groups have been defined (i.e. how/if users have been targeted).

5. **Key actors and their inter-relationships**

5.1 **Funders** description of who they are

5.2 **Deliverers** ditto

5.3 **Users** ditto (include number if possible, and state whether this represents the total targeted or just those who were interested)

5.4 **Relationship between funders, deliverers, users and other stakeholders.**

Describe the nature of the links between the different stakeholders - organisational and financial. E.g. Do funders provide financial incentives, such as grants, to users? Do users pay for the services they receive (in full or in part)?

Include some comments on the features of the relationships described above, such as success factors or constraints and problems.
6. Means of delivery

Describe the extension methods/tools used, and comment on the balance and complementarity of these.

Describe the programme/project in terms of its location on the ‘means of influence’ dimension (i.e. from promoting a specific view to helping the client with what they want to achieve).

Provide information, if available, on the quantification of the intensity of delivery (e.g. how many training sessions each facilitator organises, etc).

7. Model of information flow

Provide a simple model of the information flow within the programme/project, and comment on the direction of the flow (i.e. top-down or bottom-up).

For example, a simplified model for DLV would look like:

```
Farmers make their needs/demand known to DLV (a); DLV takes these demands to the research and development sector (b), which then supplies the information to meet these requests to DLV (c), who in turn then convey the information to the farmers (d).
```

8. Professional resources required

Comment on the staff skills required, the level of training, etc.

9. Costs and benefits

Include information, where available, on the costs and benefits of the programme/project, including a description of the indicators that are used to measure them. If available, include budget details.

Include information about staffing ratios (i.e. the density of staff to clients).

State whether users have evaluated the service; do measures of success include client input and are clients involved in evaluation processes?
10. Summary

Briefly summarise, and reflect on the main highlights of the case study.
Mention the scope for replication within the UK.
Complete the ‘extension dimensions’ table for each case study.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>&lt;&lt;</th>
<th>&lt;</th>
<th>&lt;&gt;</th>
<th>&gt;</th>
<th>&gt;&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus</td>
<td>business</td>
<td></td>
<td>social policy goals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specificity of clientele</td>
<td>narrow target category</td>
<td></td>
<td>broad or unspecified target</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Means of influence</td>
<td>promote specific view</td>
<td></td>
<td>help client achieve own objectives</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Programme objectives</td>
<td>technology transfer</td>
<td></td>
<td>process</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scale of decision</td>
<td>individual land management unit</td>
<td></td>
<td>group, community or area (i.e. collective decision)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scope of service</td>
<td>information and advice</td>
<td></td>
<td>financial incentives within the scheme</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Payment for service</td>
<td>clients pay</td>
<td></td>
<td>free to clients</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direction of information flow</td>
<td>top-down</td>
<td></td>
<td>bottom-up</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delivered by</td>
<td>public sector</td>
<td></td>
<td>private sector</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duration</td>
<td>short term campaign</td>
<td></td>
<td>ongoing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intensity</td>
<td>no one-to-one advice</td>
<td></td>
<td>all one-to-one advice</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

11. Sources of information

List all information used (websites, contacts, published literature, etc).