

Rural change: issues for social research,
social assessment and integrated rural policy

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Discussion Paper



Centre for Resource Management

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PREFACE

This Discussion Paper draws ideas together from several years of research and social assessment work by students and staff at the Centre for Resource Management on aspects of rural social change. The expanding New Zealand and overseas literature on rural sociology, social science in resource management, and social impact assessment, of rural change is added to this review to provide indications of current trends in the social structure of agriculture, and to identify some areas for further applied social research.

Parts of the paper were initially presented as introductory remarks to a Panel Discussion on Social Impact Assessment of Rural Change: current issues and work in progress, New Zealand Sociological Association Annual Conference, University of Canterbury, December 3 1986; and also in a paper by Taylor and Abrahamson (1987) at the 49th ANZAAS Congress in Palmerston North. We acknowledge the useful discussions at these meetings, and with our colleagues in New Zealand and the United States, and thank in particular John Fairweather and Hilary Blake for their comments on earlier drafts. We also acknowledge the word processing assistance of Olga Cattanach and Nicki Judson. We are grateful for a grant from the Lincoln College Research Committee, and for the assistance of the US-NZ Education Foundation whose Fulbright Travel Grant allowed Dr Taylor to visit the United States during 1986.

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1. INTRODUCTION

In this paper we examine current issues for social research, social impact assessment (SIA) and policy making for rural areas. The central argument is that current economic restructuring and social change in New Zealand has important implications for rural areas. Changes such as relocation of rural employment and population, institutional reform including new roles for central government, and new strategies for economic growth which emphasise the use of local resources and entrepreneurship, are being promoted, as they are in several Organisation for Economic Cooperation and Development (OECD) member countries (OECD, 1986). We suggest that the longer term social implications of these changes are largely unknown, and require applied social science research. This information needs to be applied to the formulation of public policy and the management of change in rural areas.

The paper is part of a revived series of efforts by both social scientists and rural people to understand rural social change and the issues for public policy. We say revived, because it is a cause of some reflection to note that this is not a new endeavour. In fact, rural commentator Heather Little recently challenged social scientists in universities and government yet again about their practical contribution to rural policy (Little, 1986). What happened she, and we, ask to all the effort of the 1970s. With considerable input from both researchers and rural activists, questions were raised in the 1970s about rural social policy (Gillies, 1979). The major questions were: What sort of rural society do we want? Can we influence social change? What is the agenda for rural research? Currently we have a set of interrelated changes - which mostly can be described as "economic" in nature. This leads us to ask do we have a rural social policy or natural resource policy? To what extent are current efforts to assess the social impact of rural change both reactive and palliative? We seem, inevitably, to be caught up in work that does not tackle the need to analyse the underlying causes of current change, and has only a limited influence on the direction of change itself.

The thrust of our current work at the Centre is to integrate current knowledge, and to carry out a process of issue identification. The present phase of this work includes a review of international literature, primarily from the United States, where there has been considerable research by rural sociologists on changes in the social structure of agriculture. We have also reviewed New Zealand material on SIA relating to rural change, monitored the

media for rural social issues, conducted interviews with people managing the immediate effects of rural change, and those researching such change, and made some observations of national and regional responses to change, including farm and state-sector restructuring.

The most important part of this phase of work is to identify case studies which will be conducted in the next phase. The task of selecting case studies is especially difficult given the bewildering current demand for specific cases of SIA to be performed. These cases arise in reaction to specific policy changes and decisions. Ideally, we should plan and conduct social science work that is productive in terms of both social theory and rural policy. We need to prepare and refine a framework for understanding the wider implications of rural change and at the same time contribute to the management of change in specific cases. Given the institutional and practical constraints of the work environment of most SIA practitioners, there are three avenues to pursue to ensure this ideal does not simply remain just that! They are interrelated. One is social research to understand rural change. Another is the area of integrated rural policy, combining social and natural resource policy with economic policy. Finally, there is the need for an SIA process to manage social change, with the objective of increasing social benefits and reducing social costs.

In this paper we first review the conceptual basis of our work on rural change. We then examine briefly some aspects of change in the farming sector and present a framework for future research. Several areas for detailed research are outlined. Finally, we discuss the type of policy setting and process of SIA in which such research could be effective in the management of rural change.

2. CONCEPTUAL ISSUES

It is essential to develop an international perspective on the so-called farm or rural "crisis". Commentators and researchers are increasingly coming to a view that a rural crisis in many western countries reflects in fact problems inherent in the world economy of food production and distribution (de Janvry and LeVeen, 1986). It is possible to predict that similar patterns of change will be found in similar countries worldwide, notwithstanding local variations in economy, society, culture, or environment. Certainly, a world systems perspective applied in the past by social scientists to problems of development and underdevelopment has clearly illustrated the efficacy of such an approach to understanding rural change (Hobbs, 1980).

Our aim is to place changes experienced by individual farmers or members of a rural community into a larger context than simply the local community, or even the region. SIA in a particular locality has to consider worldwide issues, such as dumping of butter on the world market, natural resource policy issues such as sustainability of use, and local issues - the loss of one farm family in a remote valley. The necessary frame of reference for this approach is outlined elsewhere (Taylor and McClintock, 1984; Goodrich and Taylor, 1985). These papers emphasise the need in SIA work to understand local and macro issues within an environmental perspective. From this perspective, our interest focuses on:

- a) the extent to which an individual or group relies on a limited resource base, the sustainability of that base, the technology used, and levels of environmental degradation;
- b) the amount of economic diversification that exists, potential for new enterprises, and varying access by different social groups to opportunities for economic development;
- c) the degree of local political and economic autonomy, including the nature and extent of external decision making, and the exhibition of any external control in patterns of technology and social organisation.

As Newby (1986: 209) points out, there is a need to emphasise that the "rural sector" is an analytical construct. There is by implication no such thing as the rural economy, rural community or rural society which can be analysed independently from urban society. There are complex patterns of a social and

economic nature that can be found in rural localities and in rural regions. The concept of a rural sector does provide a useful basis for analysis of part of the whole process of economic restructuring at national and international levels. Thus, for example, recent British research has considered the effects of restructuring on both rural and urban areas and "the relationship between them" (Newby, 1986: 210). Similarly emphasis in our research should be placed on economic, political and social change as exhibited in specific cases.

We need to be able to focus spatially on provincial towns, and on resource uses other than agriculture. Nevertheless, we consider that the main issues in rural change hinge around changes in the social structure of agriculture and the nature of farming systems - especially the size and ownership of farms, types of land use and technology, management, and patterns of labour - and many other related changes in agricultural services and processing, and public administration.

In arguing for new sociological approaches to the understanding of economic restructuring in rural areas, Newby is arguing for a more holistic account than that provided by the "sociology of agriculture" or "rural community study", or most SIA. Our emphasis can therefore focus on analysing processes of social change, by elaborating on the theoretical and empirical issues for this analysis through rural case studies which may be conducted in specific localities or on specific topics. It may even be possible to take much SIA that at present can be categorised as basically reactive, and make it useful within this wider study approach. Without such an overall effort to analyse rural change and develop rural policy, current SIA will at best be palliative and at worse counterproductive.

3. CHANGES IN FARMING AND THE RURAL SECTOR

In the world economy there are surpluses of food resulting from increased use of new technology and policies of subsidisation of food production. The drive for self-sufficiency in food in most countries has created some surpluses and changed the pattern of demand for imported food. In the United States in 1984 the equivalent area of the United Kingdom was taken out of wheat production in an attempt to reduce the world surplus of grain. There are similarly large surpluses of dairy produce, beef and other food products.

New Zealand farmers were recently subsidised by land development and encouragement loans and supplementary minimum price schemes. The rationale behind these agricultural policies (Stonyer, 1979) was support of pastoral farming through "certainty of basic income". It was intended that farmers should plan improvements in productivity "without serious interruptions when prices decline". The national objective was to increase exported produce. The result was an increase in prices for land and, over- production. Market signals indicating surpluses and falling prices for our meat and dairy products were hidden by these subsidies. This trend ended with the present drop in land prices and a move to lower returns once the subsidies were removed. With greater servicing and processing costs now also borne by the farmer, there is an insufficient margin for many operations. It is difficult for farmers to expand production to increase their profitability when further increases in production may aggravate the problem, particularly in the dairy industry. Surplus dairy products are almost unsaleable on the world market, and domestic prices of butter (in the United States, Canada, Japan and the E.E.C.) can be two to four times the international price, (Johnson et al., 1985).

Meanwhile, manufacturing industries have been protected by tariffs and quotas, causing relatively high prices of inputs to farmers. Although these tariffs are being removed the effect on input prices will not be apparent for some time. There has been criticism from farmer representatives that the restructuring of the farming industry is progressing too fast, with serious social consequences compared with those in the industrial sector, and a more even-handed approach has been called for. However, the comparative severity of the restructuring in each sector would be difficult to measure.

Other aspects of change in New Zealand agriculture include considerable inflexibilities in the labour market. Meat marketing and processing systems are changing with new technology, changes in the ownership and control of the industry, and some shift in reliance on bulk commodity trading shifts to more specific products and marketing. The annual rate of inflation is relatively high, but some products can be produced more efficiently than is at present possible in overseas markets. High interest rates have maintained our exchange rate at a high level, further reducing returns to the farmer. Diversification into options such as deer, goats, and farm forestry are possible options where financial positions are sound and managerial skills are available.

Many farmers are estimated to be experiencing economic difficulties at present. Their usual reaction is to reduce spending on farm inputs, causing a major disinvestment in agriculture and associated industries. Some will leave farming altogether. The General Manager of the Rural Bank noted (Straight Furrow, 18 February 1987) that in the year from January 1986 the Bank had experienced an increase in accounts in arrears from 3182 (worth \$7.5 million) to 5481 (worth \$23.2 million). He estimated that one quarter of New Zealand farmers held around 62% of total farm debt, and a similar ratio applies to the Bank's clients. A "very substantial number of farmers" have debts close to, or exceeding, their assets, and are at "risk". The Press (13 February, 1987) reported that 5000 farms (10% of all farms over 20 ha) had applied for debt restructuring, with 150 (12% of those dealt with) being refused to date. By the end of March the rate of refusals had increased substantially. There had then been 6133 applications, of which 2174 had been processed. Of these, 449 (21%) were declined, with around two thirds being refused because they were unviable. The Rural Bank is not forcing sales at this stage, and it is not clear how many refusals are leading to eventual farm sales. There was an increase in urban and rural mortgage sales from 133 to 229 between 1985 and 1986 (The Press, 13 February, 1987). The few mortgagee sales held by private lenders since then have received considerable publicity due to protests by farmers. It can be predicted that overall the economic downturn will seriously affect rural communities, and some areas report an expected decrease in spending of 30-40%. Fertiliser, cartage, stock and station firms, and fertiliser spreading have all been seriously affected (Anon, 1985).

The so-called "farm crisis" can be viewed as a current phase of rapid change in the social structure of agriculture. An indication of the nature of this change is provided by the United States case. There the total number of farms is declining, but more importantly there is an increase in small and

large farms, and a decrease in middle-size farms typical of family farming. Ownership and farm labour are being separated, with corporate units, tenancy and sharecropping increasing. Control of agriculture is shifting to the investment-financial sector and businesses providing agricultural infrastructure. They are taking an active role in farm management decisions (Lasley, 1986). An important characteristic of the farm crisis is its effect on younger farmers with high debt, low-equity, but enthusiasm and skills (Campbell et al., 1984). A parallel issue is that young people are discouraged from entering farming, including both the children of farmers and those who already faced difficulty breaking into the structure of agricultural ownership. Family farming and associated rural communities are seen by many rural sociologists to be under threat (Heffernan and Heffernan, 1986), with a decrease in their otherwise disproportionate political influence (Molnar and Beaulieu, 1984).

Data reported by Fairweather (1985) point to similar trends in the structure of New Zealand agriculture. Farm numbers declined between 1951 and 1971. After that, the statistics become confused because of the types of land included. Basically farm numbers went up a little through the '70s, but most important is the change in distribution of size of farms. The number of small holdings (<20 ha) increased a little, and middle-sized holdings declined. In the early 1980s the trends have continued. There were large increases in holdings up to 60 ha, and some increase in numbers in the 200 to 800 ha bracket. Numbers of middle-sized farms, the size usually associated with family farming, declined again.

Current changes in patterns of land holding in New Zealand appear to result from a number of interrelated factors. Of immediate relevance is the effect of low commodity prices, withdrawal of farming subsidies, inflation and high interest rates. Falling land prices, increased debt loads, tighter margins and loss of equity have forced many farms to be uneconomic. But the effect of these changes can vary with social factors such as the stages of a farmer's life, and the influence of these stages on equity, income and spending patterns, or attitudes to technical and financial change. Other social factors include family composition and size, and desire to hand farm property on to sons or daughters. So, while government policies may be directed overall at increased farm efficiency, they can affect the wrong farmers, or cause unforeseen effects. Young competent farmers may be forced to leave farming, for example, while inefficient, "cruising" farmers remain. Furthermore, would-be young farmers may be discouraged from entering farming. Thus mortgagee sales are not necessarily an indicator of changes in

social structure. This change is more likely happening by attrition, as family farming is slowly replaced by new forms of economic organisation. Parallel changes in rural social structure are likely to reinforce these trends. Agri-business, for example, could be expected to have increased political influence compared to family farmers. Recent suggestions that a new rural political party should be formed to contest the 1987 general election reinforce the suggestion that many rural people perceive that they have reduced political power, and that class relations in rural areas are changing.

Underlying the immediate indications of "rural crisis", there are long-term patterns of social change which match the longer-term trends in changes to farming systems and land ownership. Two indications are population change and technology change.

Depopulation was a common concern for rural social policy in the 1970s, but it is now clear that patterns of rural population change are complex. Cant (1986) has shown that there have been patterns of both increase and decrease through different rural areas in the early 1980s. Where there is population decline, there is pressure on social services and social life, and there are likely to be exaggerated impacts of economic restructuring. These trends have been particularly important in regions where state-sector restructuring takes place in addition to problems with farming, including Northland, the Central North Island, the East Cape, West Coast and Southland.

A recent study in Geraldine (Taylor et al., 1984) illustrated that current social and economic changes need to be viewed over time and linked to national demographic trends such as an aging population. Rural areas around Geraldine had a major loss of population in the 1960s when new technology, decreased demand for farm labour and farm amalgamation took effect. In contrast, the Geraldine Borough has steadily increased in population size since 1951. Major demographic change has occurred in the Borough, a centre for retirement, with an increase in people over 60 years of age in 1981 to 28.7% of the population - twice the national average. The study also showed that despite the fact that some new businesses and industries have been established, there had been a series of closures, mergers and winddowns in the business and service sector. Along with reduced expenditure in farming, these changes had contributed to a gloomy business outlook, and problems with social vitality.

Technology is another clear element in rural change with obvious effects

already since the 1950s. New types of technology will continue to be key factors which are linked to changes in the concentration of capital and the formation of new social structures in rural areas. Wall (1986) suggests that in the United States farmers who are slow to adopt new technology, ranging from micro-computer and information systems to genetic engineering, will be forced out, especially "small and medium-sized farmers". She suggests larger operators are more likely to have the capital and expertise to adopt new technology. Similar suggestions are made by Buttel (1986) regarding new biotechnology, and by Audirac and Beaulieu (1986) in their research on the adoption of micro-computers in agriculture. These authors also indicate the importance of examining the institutional basis and control of the process of technological change. Four large companies dominate the United States on-farm computer market, for example, and these are the same companies which also dominate other economic sectors that are experiencing change because of new information technology. Public agencies also play an important role in technological change. In New Zealand, restructuring of government agencies for agricultural research and technological change (Ministry of Agriculture and DSIR) should therefore be considered in conjunction with agricultural restructuring.

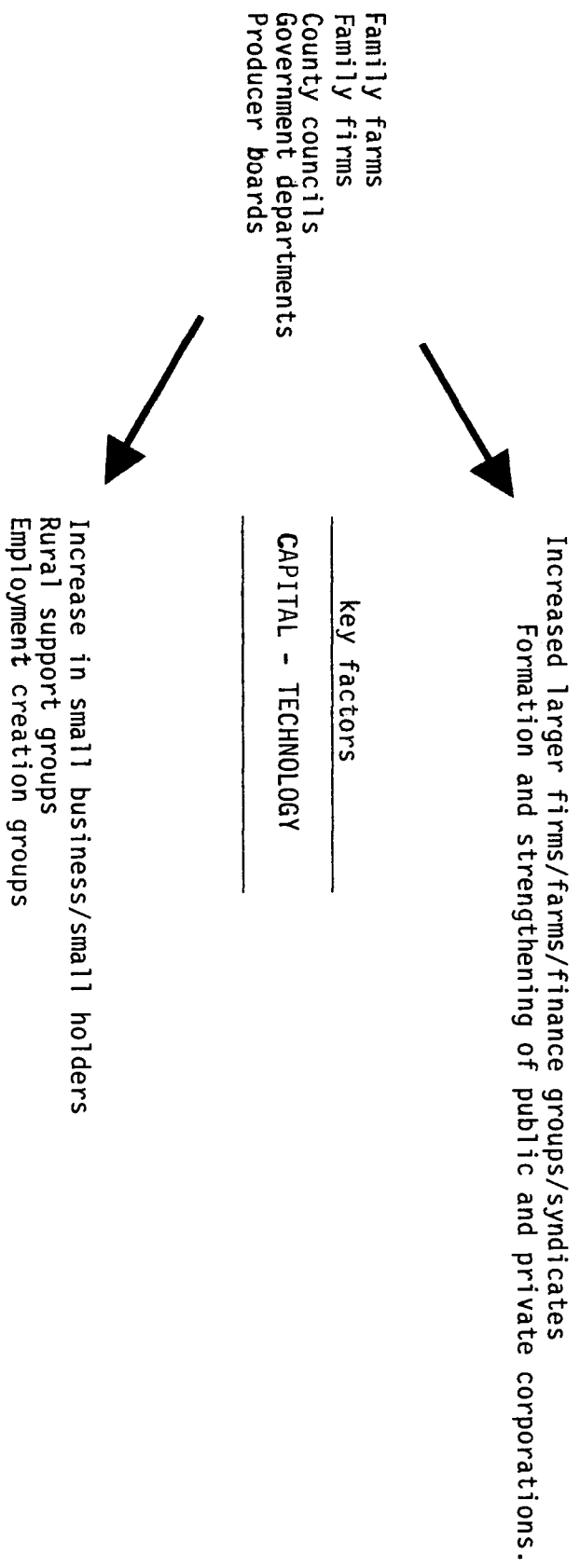
The changes in the rural sector outlined above indicate that there are continuing changes in the social structure of agriculture. Aspects of this change include changes in the world food economy, new public policy in New Zealand, and rapid technological change. Although city capital has long been an important factor in the structure of New Zealand agriculture, current changes appear to be marked by new patterns of investment by new city investors and public companies. These investments are often focused on opportunities provided by new technology and diversification of traditional farming systems. Meanwhile, family farming systems are under considerable economic pressure.

These changes can be the object of applied social research. Blake (1986) provides a framework for social research on the agricultural sector. She considers that there are three necessary elements to this work: "a description of the social structure of the sector", the identification "of the social groups which comprise this social structure" and the assessment of effects "of change in the agricultural economy on the social groups". Blake proposes that the analysis should consider changes in ownership, such as the separation of ownership and occupation; the relationship between management, labour and skills, and the separation or otherwise of these factors in production; and the

role of technology within these social processes.

An initial framework for considering capital and technology in the context of social-structural changes in agriculture is presented in Figure 1. We are using this framework to draw out below a set of research questions and hypotheses on agricultural and rural change. Issues for public policy and management are outlined in the final section.

Figure 1. Economic restructuring and agriculture



4. ISSUES FOR SOCIAL RESEARCH

From consideration of the trends outlined above, we consider it is important to consider research into the links between capital, technology and the trend towards larger units and new types of management such as corporate farming and syndicates. We suggest that these changes will involve new patterns for managing land and labour, and associated new patterns of social organisation and community life will be found in rural areas.

Our ongoing research programme will include further literature review, and also obtain and interrelate data from at least three main sources:

- a) secondary statistics and reports such as MAF economic monitoring, Rural Bank statistics, and Statistics Department data, with an emphasis on analysis of structural change in agriculture;
- b) recent SIA work such as United Council reports on aspects of rural change, work on plant closures and industrial restructuring as in the meat industry, and central government SIA work as with the assessment of impacts of state owned enterprises.
- c) a series of case studies to obtain specific data on the topics addressed. These case studies could focus on different types of farming systems in selected localities, or on selected farming systems in different localities, depending on the outcomes of preliminary case-study research.

Several topic areas for detailed case-study research have been adopted in our work to date. They will help to test and refine our framework and contribute useful information for rural policy and management of social change. They have also been selected for relevance to the wider Centre for Resource Management work by staff and students on social and environmental change. The topics, discussed below, are a) technological change in farming systems, b) changes in conservation practices, c) locality-based strategies for social and economic development.

Technological change in agriculture

We suggest three areas for case studies in this topic: technological change in two different farming systems - pastoral and horticultural - and the use of computer technology in farm management.

Technological change in pastoral farming is an important aspect of current restructuring in New Zealand agriculture as pastoral farmers adjust to new

public policy. Two aspects of change can be considered: changes in grazing management practices for sheep production, and diversification into new types of livestock - mainly deer and goats.

A major technical change in pastoral farming involves the subdivision of grazing blocks. Squire (1986) concluded that subdivision is beneficial to management; it allows farmers to ration and allocate feed to priority stock. Early identification of feed surpluses and deficits is possible, and utilisation of pasture is improved, where subdivision is increased. When farms are amalgamated and run as a large business, these new management strategies may be more necessary as efficient grazing management is practised. In comparison, smaller family farms can be managed more by "good stockmanship", or managerial skills which appear to be able to substitute for the capital inputs of fencing required for subdivision. High levels of production can be achieved with minimum levels of subdivision provided that these skills of grazing management are present (Parker and McCall, 1986). So recent announcements of corporate interest in purchasing "low-priced" hill country farms to run as business enterprises, including several new public companies and major financial institutions such as insurance societies, could mean that many skills associated with the management of family farms are lost.

Probably the most important moves into pastoral farming by corporate interests will be based on new types of livestock. At present these moves involve primarily deer and goats, which are common forms of livestock on small units, and have been used by farmers of medium-sized farms for diversification. But major developments to establish venison and goat fibres on world markets require new technical procedures, especially in breeding and costly access to new genetic stock. Both established companies and newly listed companies are moving into these types of livestock farming. Links to changes in the stock and station industry and control of the bloodstock industry will also be particularly important.

Another area of technology change is the move to horticulture in traditional dairying and arable farming areas. Blake (1985) has studied farm families in Canterbury who have moved into horticulture in association with irrigation. Her research showed that these families experienced unanticipated changes in lifestyle, including their patterns of work, leisure, and community involvement, and experience of financial stress. The changes achieved increased income and employment both on and off farm, especially part-time and seasonal work.

But the management system on these farms became more complex, especially in labour management.

In addition it appears that irrigation systems for horticulture are different technically, economically and socially to those used in arable farming. It can be suggested that these systems are in fact more suited to corporate types of farming enterprise (Blake and Taylor, 1985). In Canterbury this proposition is supported by the predominance of large-scale syndicates in major horticultural developments. Social research should concentrate further on the differences between small and large-scale horticultural developments. These studies could focus on the constraints to family farms diversifying into horticulture, and examine the social implications of large-scale corporate horticulture. For instance, mechanisation, and labour requirements and management of the new syndicates, would be of particular interest in public policy making.

The use of computers in agriculture is another area of technological change that could be a productive topic for social research. New information technology in the form of micro-computers and agricultural software has arrived in New Zealand farming, especially since the early 1980s. Whilst we hear and read about the impact this technology has had overseas and in sectors of New Zealand society other than the rural sector, there has been little research on the relationship between the introduction and adoption of new computer technology and rural social change.

If the adoption of new computer technology follows the model used by many rural sociologists, i.e., a normal distribution with early adoptors and laggards at the extremes (Rogers, 1983), then we can enquire as to the current stage of adoption. At what stage of adoption are different farming groups? What are the factors determining the rate of adoption by groups, and, how is adoption affecting rural life? If the model used by sociologists to understand the diffusion of a new idea does not explain current trends in rural New Zealand, then we may need to extend the analysis to examine the relationship between changing social structure and patterns of adoption.

The widespread adoption of computers on the farm which was anticipated does not appear to have been realised. It is difficult to analyse existing statistics on the number and characteristics of farmers adopting new information technology because they represent only a small proportion of the farming population. In an October-December 1984 survey of 3200 full-time New Zealand farmers who were farming properties greater than 20 ha, only 4.2%

owned a computer. Some 12.4% of surveyed farmers planned to purchase a computer in the next three years (Pryde and McCartin, 1985). By 1985, only 4.5% of 3700 surveyed farmers replied that they planned to spend money on a home computer in the next two years (Pryde and McCartin, 1986).

Whilst hardware is available at a reasonable cost to farmers (\$3000-5000), it appears that software for some particular aspects of farm management is not readily available (Wright, 1980; Lay, pers.comm.). Urban areas are serviced better by computer companies because it takes less time to satisfy the simpler requirements of urban customers, who are more accessible to service, adopt quickly, and represent a larger and more profitable market (Nuthall, pers. comm.).

Wealth does not appear to be a major issue in the willingness of farmers to adopt, nor does previous academic qualifications, practical experience or age. However, the value an individual places on information and how much they are willing to pay for that information is an important factor in adoption. At some point there is a trade-off between costs and personal benefits (Nuthall, pers. comm.).

The requirement to store large quantities of information, combined with a need to manipulate that data and examine outputs under different inputs and management practices, are important factors in adoption (Hutchinson, 1983). Stud farmers, those involved in horticultural ventures and some arable farmers appear to benefit most because they have such needs, specific management options and clear objectives. Transfer to new technology is easier if the standards of current management practices and accounting procedures are high.

Dexter (1978) relates rate of adoption to the level of farm profits which depend in part on the state of the market and the decisions of the government. The current Labour Government's economic policy has meant that many New Zealand farmers face a new business environment. Thus, while farmers with certain types of properties and management options embrace the new technology, many more farmers seem set to continue consulting their farm accountant and MAF farm consultants for information and advice on managements. In the 1984 survey cited above, 96% of farmers replied that their accounts were prepared by a member of the New Zealand Society of Accountants in public practice. It remains to be seen how the impact of user pays philosophy for services obtained from MAF will affect the

rate of consultation between farmers and their advisors.

From the framework suggested in this paper for understanding technological change as part of changes in the social structure of agriculture, we propose that larger farms, syndicates and corporations supported by shareholders or partners may readily adopt new information technology. It is also proposed that these types of properties are in a position to gain maximum benefit from the technology. Small family farmers are less specialised, however, and have limitations on labour units, and hence the time they can afford to put into activities such as computerised record-keeping. They appear less likely to adopt the technology or, having adopted, gain benefit from the investment, especially in improved management. Laver (1980: 20), in a discussion of the impacts of information technology generally, warns that: "The advance of information technology could...make the information rich even richer, and widen the gulf between them and the information-poor".

Issues arising from the unequal distribution of information technology within the rural community have not yet been widely addressed. Dillman (1985a) predicts that new information technology might reduce the localisation of activities in a community. He warns that in rural situations, new information technology may overcome the last bounds of locality. Those community groups which provide advice on and general evaluation of products, prices, machinery, are predicted to be patronised less as people rely more on external sources of information received through computer links. This process could lead to changes in local organisations and institutions that are by-passed by farmers dealing directly with the centralised providers of information services (Dillman, 1985a).

Dillman further raises the point that new information technology will allow individuals to have their personal information requirements met more specifically. There is potential for this type of change in New Zealand; a national New Zealand survey of recipients of a Kellogg Farm Management Unit newsletter indicates that the needs of farmers for up-to-date, detailed and accurate information on markets, finance, weather and other matters are not met fully by radio, television, newspapers and journals. As a result of adoption of new information sources, however, consensus within rural communities may be reduced as diverse needs are catered for (Dillman, 1985b). Outside influence in rural community structures may be changed by use of computers to rely on information from distant and centralised sources. It may also be more difficult to represent local needs to decision makers, and

Dillman calls for strengthened community development to counteract these changes.

Research on the impact of information technology on New Zealand agriculture and rural communities needs to focus on particular communities rather than national samples of computer owners. This focus will allow changes in communication patterns and activities within rural communities to be examined, and the relationship between new information technology and changes in social structure to be described. These patterns also need to be researched in relation to other aspects of new technology and agricultural restructuring.

Conservation practices in farming communities

A number of questions can be identified regarding the effect of agricultural restructuring on conservation practices. These practices include the conservation or protection of natural areas such as wetlands or native bush, and the conservation of soil and water resources. Factors involved in changing attitudes and practices for conservation include availability and cost of labour, and institutional changes as in the reform of state-sector trading operations, environmental administration, and soil and water subsidies and administration.

One proposition for consideration in research would cover the question of "landship". As Swaffield and O'Connor (1986) point out, it is useful to identify the presence of "landship" as a feature of the "contemporary community-on-the-land in New Zealand". Landship refers to the cultural unity between a community, their social patterns, and their environment. It is likely to have most strength in small, "clearly defined communities". Swaffield and O'Connor suggest that rural people will usually practice conservation in a local sense, conserving those features most important to local landship.

As changes in the structure of agriculture imply changes in ownership, labour, technology and social structure, we can expect changes in landship. As landship changes under new types of management, it will involve changing attitudes to natural areas protected either officially or by local consent, as well as changes in farm management. Although farmers in a locale may not necessarily share the same values regarding conservation in their land management as an urban-based conservation group, this does not mean that they do not have such values. Felling of natural bush, for instance, will

reflect a combination of financial, technical and environmental considerations which are likely to be shared by farmers in a locality. A recent example in North Canterbury relates to the protection of natural vegetation, in this case the largest remnant of podocarp forest in the region, with species rare throughout the Eastern South Island. The Press (29 January 1987) reported that local residents had moved to stop logging initiated by a merchant bank. As mortgagee, the bank had taken control of the land on which the forest stood, and was felling the trees prior to sale. The local people eventually succeeded in obtaining a botanical report on the forest and stopped the logging.

Another important topic for research covers the area of soil and water conservation practices. Likely effects on changing practices will include new patterns of capital and technology, and new institutional arrangements for soil and water conservation.

Practices for control of soil erosion attempt to conserve soil, protect water quality and affect runoff patterns. These practices include tree planting, improved stock management, usually with improved fencing, and control of wild animals. Reasons for a lack of such conservation practices can include shortsighted and narrow views of land use; the land manager's "private rate of discount" may "diverge from the social rate" (Hide and Sharp, 1986). Management practices may result in downstream costs (externalities or social costs may exist). Poor practices can also result from poor knowledge, either of long-term or external impacts, or of up-to-date practices and land-management technology. In addition, poor soil conservation practices may result from previous public policy such as the encouragement and subsidy of increased agricultural production on marginal lands.

The greatest problem in the adoption of conservation practices is probably the ability, or inability, of farmers to pay for them. Hide and Sharp suggest (1986), "Thus, the problem for soil conservation policy may be the chronic inability of farmers to pay for the soil conservation they want to undertake." Structural changes in agriculture imply first that many medium-sized farms, often on marginal land types, will be in economic difficulty. In contrast, larger amalgamated units, or corporate farms, may have the access to capital, technology and paid labour to implement new practices. The United States literature suggests that larger operators are often more willing to adopt but they will be primarily interested in returns on such investment. Social costs or downstream impacts, or community pressures to conform to a local land

ethic, are likely to be of little interest to them. Conservation practices will most likely change with new ownership. It is possible that increasing numbers of smaller and part-time farmers, another result of structural changes, may be willing to adopt conservation practices. But in New Zealand these smaller holders are usually located on less erosion-prone land. Their landship and investment patterns are inclined anyway towards tree cropping, use of shelter, and horticulture.

Research on the complex problems surrounding changes in farm conservation practices would provide a further dimension to our analysis of rural change. Field work will probably need to focus on different farming systems in a number of different ecological areas, or districts, as discussed by Swaffield and O'Connor (1986). It will require thorough cultural ecological analysis and the use of ethnographic research methods.

Locality-based strategies for rural development

The research framework outlined in this paper is based on the important proposition that change in the structure of agriculture is moving in two directions. There is the concentration of capital in larger farms, associated changes in ownership, new organisation of labour, new technology, different approaches to management and changes in the service industries. There is also likely to be some development of smaller farms, businesses and new social organisations in rural areas that are not widely funded by the state or by large-capital firms. These new organisations may have the potential to fill the "gap" in supply of rural services left by mergers of stock and station firms or corporatisation of organisations for managing state land, and the resulting close down operations in small centres.

The sociology of development literature provides some rationale for studying these trends as part of a process of under-development, rather than development. Constraints of capital and technology, important to the shape and direction of the primary path of development, also shape the nature of under-development. Research questions to consider relate to the role of state and private institutions in reinforcing current trends at national, regional and local levels, rather than fostering genuine alternative and local strategies for both economic and social development.

We suggest three topics involving local strategies for development: alternative employment creation, entrepreneurship and small business development, and organisation of social support. Others not included at this stage include the

development of small holdings, and new organisations conducting their own technical research, such as the New Zealand Tree Crops Association.

Employment issues predominate in assessment of social change in rural areas. The rural economy tends to be unstable (Wilkinson, 1985), usually exhibiting a series of booms and busts which can be experienced both on a regional level, or by specific sectors or social groups. Some groups of workers are affected in particular: farm workers, smaller farmers who require additional employment, and workers involved in resource-dependent industrial construction such as energy facilities. United States research shows that high farm debt places extra pressure on rural employment as it increases demand from farm families for off-farm work (Leistriz et al., 1985). Unemployment and poor conditions of work in New Zealand are a feature of rural life in particular localities and for groups in the population such as women, youth and ethnic minorities, in patterns of inequality that can be highly pronounced.

Since high levels of unemployment in the 1970s, a number of locality-based employment groups have been formed, usually as cooperatives or community trusts. Although considerable state resources have been directed to these groups, mainly through programmes of the Department of Labour, the trend recently has been to cut this sort of funding, to reduce state intervention in direct employment creation and to encourage local initiatives. Funding is being directed into welfare assistance and work-skills programmes. Nevertheless, rural restructuring will mean there is a continuing demand for community initiatives. It will be useful for public policy making to examine how these groups respond to new policies and structural changes. For example, the experience of these groups in relation to new farming systems such as horticulture and new demands for horticultural labour, and their own attempts to establish down-stream production ventures such as the supply of planting stock, could be considered.

Another aspect of local responses to new opportunities in the farm sector is the question of entrepreneurship and small business development. Increased unemployment, especially of skilled people with some capital, loss of services, and centralising and merging of businesses could create opportunities for new entrepreneurs. But the structural changes involved also suggest that there will be problems for entrepreneurs in gaining access to capital, technology, managerial expertise and urban markets - all common problems for small-business development.

The state could help to foster rural entrepreneurs and small businesses, but our framework suggests that this intervention will be strictly limited in effect, and more likely to arise from regional government. In the agricultural areas of the United States, for instance, economic policy makers have argued the need for reindustrialisation in regional centres within commuting distance of prospective workers in small towns and farming areas. They consider the larger centres (population 15 000+) have good infrastructure for encouraging such business (Stone, 1986). But in New Zealand, there is a considerable lag, including much local resistance, in the reform of local and regional government to match the other structural changes. There is not sufficient capital or expertise in economic and social planning at this level of public management. Community colleges and adult education programmes for re-skilling are not strong, although there have been some policy changes in this area. Ironically, there are also strong non-market, land-use planning regulations promoted by local councils that restrict many small businesses and small farmers by placing constraints on subdivision and land use.

A current case for analysis of these problems is the SIA work on state-sector restructuring. The central government Social Impact Unit has been involved in studies of the use of assets to be released by the new state Forestry Corporation, and has provided information on new business opportunities to employees facing redundancy. An example of local initiatives in response has been the Tapawera Rural Enterprise Committee in Nelson. The small Tapawera community has faced dramatic loss of forestry employment, but a number of local moves have been made to utilise old facilities for new enterprises, and maintain levels of employment.

In addition to the production sector, effects of rural restructuring are being experienced by the social service sector. Reduced employment and business, loss of social services such as post offices and maternity hospitals, and pressure on rural schools through loss of working families and reduced rolls, for example, combine with increased levels of financial, personal, family and community stress. Local initiatives in response include a variety of rural support groups, "hotlines" for counselling and informal efforts to encourage community action. In some cases these moves have obtained central government support, such as the establishment of "rural guides" to counsel farmers in financial difficulty, and the provision of a Rural Resource Kit. Overall, however, neither existing SIA work nor local efforts have been sufficient to foster clear cases of social development in contrast to "welfare" types of assistance.

There is a continuing need for SIA work to monitor social needs at the locus of rural change, to improve social services and encourage social development, and also to provide further understanding of the process of change itself. But this SIA work needs to be linked into a system of rural policy and public management, so that all alternatives for development can be properly examined.

5. ISSUES FOR RURAL POLICY AND SOCIAL IMPACT ASSESSMENT

For social science research on the above topics to be applied effectively, it is necessary to have a satisfactory means for making rural policy and managing change through SIA. SIA can provide an institutional link between research and policy. Researchers then are not so likely to chase endlessly the mythical tails of improved concepts and methods, devoid of the good empirical data needed for both sound policy and good theoretical constructs. Policy makers have a flow of information from social research and monitoring to use in public management.

Integrated rural policy

Social assessment which is proactive and orientated towards rural development requires a rural policy framework. But New Zealand, like most OECD countries, has only a limited basis for formulating rural policy as a basis for public management. As the OECD (1986) points out, while agricultural policy provides the main thrust, other natural resource policies, including energy, can be important. Most agricultural policy is, however, too limited in scope to give an integrated approach to social and economic development in rural areas. Yet many of the traditional approaches used to move beyond agriculture policy, such as the development of rural infrastructure and direct support of new industries by central government, have been unsatisfactory as a basis for public management. In some cases the immediate appeal of job creation, including construction workforces, has obscured the need for a longer-term strategy.

The most important aspects of a rural policy are natural resource policy and social policy. Neither is specifically rural in focus, but both would address themes pertinent to rural areas, such as sectoral and regional variations in processes of development and under-development. Some issues a rural policy in New Zealand could address are:

a) Dependency/autonomy

reliance by communities on a narrow resource base,
levels of economic diversification,
nature and control of technology and technological change,
outside control of decisions;

b) Regional development

social desirability of regional assistance,
improved national economic efficiency through stimulation of regional growth,
improved targetting of assistance,
diseconomies of concentrated national growth;

c) Rural employment

the stability of the rural economy and labour market,
effects of instability on particular groups such as farm workers and the Maori population,
equity issues,
patterns of work and social organisation;

d) Small business development

research and development assistance for small entrepreneurs,
improved access for rural businesses to centralised infrastructure and resources,
reindustrialisation in provincial centres with good housing and infrastructure;

e) Community viability

leadership development,
maintenance of social services,
costs of infrastructure such as transport and roading,
links between community viability and agricultural productivity,
community participation and the need for processes of social development.

All five areas lead into the issues of social vitality and social development in rural areas. Here, it is important to consider the extent that rural groups can participate in formulating rural policy. Wilkinson (1985: 348-349) reminds us that rural communities might once have been described as "close knit" and "self-sufficient". Although this may never have been entirely accurate for much of the United States, or New Zealand, we could now certainly consider social relations in many places as loose-knit and dependent. Diverse and fragmented communities, plus regional variations in cycles of boom and bust, pose problems for "bottom-up" formation of policy. In fact, part of a national rural policy should be aimed at mobilising resources for a variety of

rural groups as a basis for local and regional inputs back into that policy. Economic planners make claims that provincial (rural) areas should use their own resources for development, without major subsidy. (How can government pick winners, etc?). This attitude reflects little understanding of the social processes of development and under-development. Under-developed areas and groups can have neither the social nor economic resources for responding within such a policy framework, a framework which has been formed without broad assistance from rural groups.

A recent study (Taylor et al., 1985) of land development for farm settlement by the Department of Lands and Survey at Butler's Block on the West Coast illustrates these problems. In the Hokitika-Ross localities near Butler's there has been considerable concern about community viability. Discussion was to the fore in 1984 as changes to regional health services saw wards and facilities closed in the Hokitika hospitals. A local ad hoc organisation, the Hokitika Forum, attempted to draw out a local and regional response within a rural development framework. They were concerned for the "precarious" balance between resource development, levels of population and provision of social services.

The Coasters saw land development for farm settlement as a vital step to counteract current effects of resource dependency in their communities, particularly for forestry and mining, and related cycles of boom and bust. Although land settlement may not appear "economic" from a narrow accounting stance, the study showed that land development and settlement could make an important long-term contribution to social and economic viability in the Hokitika-Ross area. But it was also shown that this contribution would vary depending on approaches taken to such questions as land-use options, social characteristics of farm settlers, settlement pattern, and social development in general. In fact, it was clear that social problems could arise from poor management and lack of social assessment (Taylor et al., 1985).

The study of land settlement illustrated the need to carry out integrated rural development within a rural systems approach. This approach requires rural (natural resource and social) policy, a regional planning framework, and mechanisms to involve local groups in setting and achieving social objectives. It also requires an ongoing process of social assessment to feed information into practical actions at local, regional and national levels (Taylor, 1986).

The SIA process

SIA is a process of research, planning and management to deal with social change arising from intended and current policies and projects. It is focused on individuals, groups, communities and sectors of society affected by change. It is a process that uses social analysis, monitoring, and methods of public involvement (Conland, 1985). One goal is to anticipate any social effects of change so that they can be managed as early as possible. Another goal is to involve all social groups affected by change so that differential distributions of costs and benefits of change can be managed in a positive process of social development.

While this process has mainly been used in New Zealand to deal with major development projects, and some plant closures, it is now being used to assess more diffuse impacts resulting from economic restructuring, as anticipated by Renouf and Taylor (1984). An example is the current work on social impacts of state-sector restructuring through corporate organisation of government departments. Another potential area of application is structural change in agriculture.

The Taranaki United Council (1986) have made a useful effort to broaden SIA work into agricultural change. They have attempted to deal with the social problems of the Eastern Taranaki hill country. The Taranaki Hill Country monitoring report sets out to complement economic monitoring data, such as MAF reports, with social data. The aim is to "provide decision makers with an understanding of the human context within which economic events are occurring and provide hill country communities with a means of conveying their views and aspirations to decision makers". The monitoring questionnaire, in addition to census and employment data, documentary, and qualitative information, provided information on the use and adequacy of social services, and identified areas for improvement. The monitoring work did not set out to redress these problems, beyond its recommendations. Although the Taranaki United Council has had considerable experience with SIA through energy projects and plant closedowns, it is not clear whether an ongoing SIA process, linked to social/rural development strategies, will be implemented for the hill country.

An SIA process to deal with rural change will require a number of essential elements, as described below. SIA practitioner would usually be required to work at all of the levels of activity described.

- a) Central government agency coordination, policy formation and research strategy. SIA work, and single agency responses, need to take place within the framework of social, rural and natural resource policy outlined above. But there is no indication that such an approach is being taken at present amongst the numerous agencies with responsibilities in rural public management, including the Ministry of Agriculture and Fisheries, Ministry for the Environment or Town and Country Planning Directorate of Ministry of Works. At best, efforts at Central government level are fragmented and limited to largely economic matters, land-use planning and provision of social services and welfare. There is no agency responsible for social policy, or for integrated rural policy. Research on rural change is infrequent, and has little direction of the type suggested by Blake (1986). There has been no collection of a national data base on social aspects of rural change or natural resource management.
- b) A regional planning strategy and social impact task groups. Unfortunately United Councils vary considerably in their effectiveness at regional planning. There is often a need to reinforce capacity for management as part of the move to decentralise government (OECD, 1986: 80). Strength in social planning, employment strategies and a business development programme at a regional level will assist SIA work. In this context a regional group can be formed to coordinate work on social effects of rural change. Such a group is essential to link between more policy or project-specific work such as regional groups dealing with state-sector restructuring or farm foreclosures. These groups exist in Canterbury with no direct links. Yet in meetings they have raised similar questions relevant to regional responses regarding employment, business development, and the viability of social services and community life in rural areas. Without a regional focus there will be little appreciation of cumulative effects of rural changes, and many inadequacies in more local or specific responses.
- c) Task groups to coordinate local monitoring community development and social service responses. Task groups have formed, or been specifically set up as with the state-sector restructuring, to deal with particular areas of rural change. In Canterbury the group dealing with the state-sector changes comprises mainly government department representatives and some unions. The farm group has a

wider representation including Federated Farmers, counselling and social service organisations, women's groups, Lincoln College, and finance and stock and station firms. A clearer understanding of SIA processes is needed. Objectives are unclear. In addition to the difficulties in links to effective regional and national structures, there are also difficulties in achieving links to local social development. Existing local programmes such as the Rural Education Advisory Programme, District Councils of Social Services, local-body community workers and rural support groups become vital in this context where they are available and active.

6. CONCLUSION

New Zealand is facing rapid social change in rural areas as the economy is restructured. Like the other OECD countries we require a stronger move towards an integrated rural policy framework, with new approaches to public management in rural areas. The main requirements are improved identification of social issues in rural areas, more information on which to base rural policy, and a commitment to action at national, regional and local levels (OECD, 1986.)

With a base of applied research, a framework of rural policy and the type of SIA process described above, SIA practitioners will be able to carry out more proactive work. Ongoing activities such as monitoring (data collection), use of participatory methods, issue identification, information brokering and coordination and management of change will all be improved. Links will be made into research, and into national and regional economic, resource and social policy and decision making. SIA work will be able to move away from reactive and palliative activities.

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