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Changes in Drought Policies in New Zealand

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Drought Characteristics

New Zealand, lying in the South Pacific Ocean approximately 1,200 miles east of Australia, is subject to recurring droughts. Its two main islands are long and narrow, with high mountain ranges and hill country bisecting them from north to south. The predominant westerly winds, along with the mountain ranges and hill country, produce a marked orographic effect. Thus, the western side of the country, in general, records significantly higher annual average rainfall totals than does land on the eastern side.

The country has experienced a number of severe droughts throughout its history, especially in the east, where a number of extended periods of low rainfall have severely affected pastoral agriculture (historically New Zealand's major industry). Droughts that extend across autumn and/or spring are generally the most severe in terms of their effects on grass production at crucial stages of the growing season. Recent research on farmers' responses to drought suggests that many farmers tend to "farm for droughts," by ensuring that stock numbers are low throughout the summer months, which are generally expected to be dry (Keen, 1995).

Central Government Policies for Drought

For many years, the New Zealand government has played a key role in assisting farmers through adverse climatic events (including drought). The main policy agency involved is the Ministry of Agriculture and Fisheries (MAF). The types of assistance offered have changed over time, as has the philosophy behind the government's role in adverse climatic events, consistent with changes in overall national economic policy (Sandrey, 1990).

Relief measures before the mid-1980s. Before 1970, relief for drought was ad hoc, and included loans, bank overdraft guarantees, tax relief on the forced sale of livestock, subsidies for re-grassing, and transport subsidies for stock and fodder (Morriss, 1992). In 1979, a discussion paper released by MAF recommended that the balance of government assistance be shifted away from subsidies and toward loans. This took effect in February 1980, with post-drought subsidies being discontinued. Despite these changes, farmers having damage from successive drought events continued to receive greater and greater levels of central government assistance throughout the early 1980s (Morriss, 1991).

1986 review. By 1986, government assistance measures for adverse events were seen to be strongly built into farmers' expectations, influencing their perceptions of risk (Sandrey, 1990). In particular, assistance seemed to encourage farmers to produce according to optimum (economic and environmental) years, because it protected them from the costs associated with suboptimal years. Government assistance measures discouraged farmers from carrying out practices that would reduce their vulnerability to extreme climatic events, because the government was there to "bail" farmers out (Dickinson and Sandrey, 1986).

In October 1986, changes were announced that tightened the eligibility criteria for adverse events assistance and altered the forms of assistance that were available. The changes reflected the overall movement of central government economic policy toward a more market-led economic environment.

Meteorological criteria were developed to determine when adverse events occurred. For drought, an event had to be of such severity that it had a 1-in-20-year recurrence interval before assistance measures would be considered. Drought was measured by the number of soil moisture deficit days occurring in the summer, or a lack of rainfall in the winter, compared with the average situation over a 3-month period (Rural Policy Unit, 1990). Less severe events, with higher probabilities of occurrence, were regarded as the risk management responsibility of individual farmers.

Before farmers could be eligible for climatic relief loans, the areas in which their farms were situated had to be declared as "adverse events relief areas" using the meteorological criteria outlined above. Second, to be eligible for a loan, the farms in question had to have been viable and meet certain lending criteria before the drought occurred, the event had to have rendered the farms nonviable, and the advancement of the loan had to result in the farm's return to a viable state.

1988–89 east coast droughts. In the summer of 1988–89, severe droughts developed on the east coasts of both the North Island and the South Island. At that time, the financial position of farmers in the affected areas was extremely poor, with rising costs, particularly interest rates, and low product prices. Farmers were in the midst of adjusting to significant changes in the economic environment, and poor profits and falling land prices had reduced many farmers' equity to a very low level. Confidence levels among the farming community were very low, and stress suffered within farming families was high (Morriss, 1992).

In response to such factors, many farmers tried to maximize their short-term profits by increasing stock numbers to levels that were only sustainable in ideal climatic conditions. As a result, feed reserves were minimal and stock condition was poor going into the drought (Brown Copeland and Company Ltd, 1991). Thus, farmers were vulnerable to the effects of the drought in part because their capacity to absorb and recover from the effects of the extreme event was diminished.

As the regional economies of affected areas were seen to be at risk, a drought assistance package was introduced by central government (Morriss, 1991). The package included five main components. **Adverse Events Family Income Support** was available so that farm income was not run down by family living expenses (such as feeding and clothing family members). **Farm Appraisals** were offered to assist farmers in making decisions about the future viability of their farm businesses, assess their rehabilitation needs, and plan sustainable rehabilitation and ongoing farming programs. **New Start Grants** were available (up to a maximum of NZ$45,000), enabling farmers who were in an untenable financial position to vacate their property and make a new start in another industry. **Drought Rehabilitation Loans** were obtainable, dependent on the future viability of the farms in question. The loans were interest-free for the first two years, with the government providing a guarantee of 80% of their value for four years. The expenditure of loans was tied to certain activities, including capital stock replacement, pasture renewal, and fertilizer application. The **Technology Transfer Programme** was designed to develop and encourage the implementation of improved dryland farming techniques, through research, educational on-farm field days, and the production of information booklets.

1989 review. Government expenditure on adverse climatic events assistance increased significantly throughout the late 1980s and led, in December 1989, to a further review of policy. The review aimed to develop a system that was equitable and consistent between events, reflecting both the scale and impact of those events (Morriss, 1991). Risk management was to be encouraged, rather than emergency response. The responsibility for managing "inherent but predictable risks" was shifted to individuals, industry organizations, and local government agencies, with central government involvement only as a last resort (Rural Policy Unit, 1990). The reviewed policies came into force from 1 July 1990.

1991—Resource Management Act. In 1988–89, a major review of the legislation relating to the management of New Zealand's natural environment occurred, resulting in the *Resource Management Act 1991*. This Act gave local government agencies (regional and district councils) responsibility for the management of natural hazards, including drought. The legislation was drafted in a somewhat flexible manner, allowing each local government agency to decide which natural hazards are significant enough to be managed in each local area.

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Issues Yet to Be Resolved

A number of issues from the 1989 review and the introduction of the *Resource Management Act 1991* have yet to be fully resolved.

Determining the occurrence of severe droughts. It is still unclear what the "trigger points" should be that would indicate a need for government assistance (Morriss, 1991). Current central government policies for drought limit assistance to cases of extremely severe events that are beyond the coping capacity of local communities. Certain meteorological criteria must be met, and a region's economy must be seen to be at risk. However, in practice, recent extreme events have shown that it is difficult to determine the degree and type of regional economic impacts that should be used as a threshold (Morriss, 1991). The degree to which central government assistance is provided tends to depend, to an extent, on the effectiveness of local farming lobby groups in persuading central government of the need for assistance.

Long-term adjustment programs. Consideration of New Zealand drought policies suggests that government assistance has tended to promote short-term recovery rather than long-term adjustment to drought. Although successive governments have stated the intention to make individuals responsible for the management of risk associated with drought, insufficient effort has gone into the encouragement of prudent risk management practices. Morriss (1991) suggests that there has actually been no reduction in government's exposure to future claims for relief.

Central government does not currently have an ongoing role in the facilitation of practices that are likely to make farms less susceptible to the effects of droughts in the future. Although the Technology Transfer Programme (part of the 1988–89 drought package) did provide farmers with information on risk management techniques, programmed government funding into such programs has now ceased. Researchers must now bid competitively for funding, and there are no programs to ensure that the results of research are effectively disseminated to farmers.

Severe drought events. Even if a program encouraging long-term drought adjustment in the future were developed, it should still be recognized that, occasionally, extremely severe drought events will occur. Sometimes the effects of drought events will be compounded by antecedent environmental and economic conditions, the impacts of which will be affected only to a limited degree by wise drought management practices.

No severe droughts have occurred in New Zealand since the most recent review (1989) of central government policies for adverse climatic events assistance. It is difficult to determine whether the central government's resolve to restrict drought relief to extremely severe events will hold in the future. In the past, in New Zealand and overseas, central government policy goals for drought have sometimes been undermined as a result of various contextual factors and political processes.

Implementation of policies at the local level. Successive reviews of policies for adverse climatic event assistance have devolved responsibility for the management of drought to local government, communities, and individuals. Limited research has been carried out to determine how effectively these policies are implemented by agencies at the local level. Research to date suggests that the implementation is variable (Keen, 1995).

Drought has not been included in the local government plans required by the *Resource Management Act 1991* to any significant degree, even in areas where recurring droughts have been experienced (Keen, 1995). This may relate to the fact that before the reform of environmental legislation, local government agencies had only been charged with managing the hazards associated with flooding, erosion, and land instability. Staff and politicians in local government agencies are not accustomed to managing drought.

No severe droughts have occurred since the introduction of the *Resource Management Act 1991*. Many local government agency staff interviewed in Hawke's Bay, a drought-prone area of the North Island east coast, in 1994 were unaware that central government had withdrawn its provisions for assistance except in the most severe cases (Keen, 1995). The importance of local planning for drought may not be recognized until a major drought occurs, where central government does not respond with financial assistance. Central government may need to direct resources toward educating people in such agencies about their responsibilities according to current policies. It seems that it is not enough merely for policies to exist—they must be actively enforced and their implementation must be monitored (Burby and Dalton, 1994).

Where Do We Go from Here?

Although successive policy reviews have devolved the first line of responsibility for drought response away from central government and to individuals and local agencies, it is by no means clear that this will result in satisfactory long-term adjustment to drought. Until another major drought occurs, the ability of individuals and local agencies to cope will not be tested. And until such a drought occurs, the strength of central government's resolve not to provide assistance except in the most extreme circumstances will not be tested either.

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