

Communities under heat: new research on social factors affecting wildfire risk and community recovery

E.R. (Lisa) Langer*

Social research is new to rural fire research in New Zealand. The Ensis Rural Fire programme has evolved into a sustainably focused research programme concentrating on the four 'R's of risk management – Reduction, Readiness, Response and Recovery. Ensis is a 50:50 joint venture between Scion (formerly Forest Research) and CSIRO in Australia. This team combines leading fire research capabilities in both countries.

New Zealand fire research has traditionally concentrated on describing the fire environment (fuels, weather and topography) and fire behaviour, as the basis for improving the New Zealand Fire Danger Rating System as a decision support tool for fire managers. The addition of the new social objective brings a new research dimension which focuses on community recovery mechanisms and resilience to wildfire events in an effort to develop methods to reduce social impacts from future events in New Zealand. The aim of this research is to develop best practice guidelines that will lessen the social impact on communities and improve the recovery process following significant wildfires.

Additional aspects of social research within other areas of the programme include an evaluation of the effectiveness of existing fire danger warnings in communicating wildfire risk, and identification of human/social factors (particularly relating to ignition, i.e. cause, location etc.) which have contributed to wildfire risk. The social research will feed back into the rest of the programme to improve fire prevention, readiness and response activities.

A small team of researchers, led by Lisa Langer, Ensis, Christchurch, and including Tim Barnard and Richard Parker, Ensis, Rotorua have the task of initiating this new research.

The first step in the community resilience and recovery research has been to examine the world scene to learn what studies have been undertaken and what lessons we can learn for New Zealand. An international literature review has revealed the following points of relevance in the local context:

- Impacts that wildfires have on communities are widespread and injurious to personal and social health.
- Cognitive approaches of affected parties must be taken into account to fully understand the complex ways in which societies interact with fire, and therefore how fire events affect their recovery.
- Effects on communities are mediated by various social forces, such as personal perceptions and vulnerability to disaster.

* Ensis, Christchurch

Wildfire threatened houses on the outskirts of Nelson illustrating the potential threat of wildfires to rural communities and those in the rural/urban interface.



- Community members personally involved in their own mitigation and recovery efforts lead to maximum effectiveness.
- Residents not relying on authorities for assistance lessen issues of conflict and blame, and how these negative effects can impact on recovery.
- Agencies and communities need to cooperate at all stages of a wildfire disaster to achieve successful recovery.
- The recovery process extends beyond the immediate reinstatement of damages and livelihood, and can continue for many years after the event.

Gerard Fitzgerald, Applied Sociology, was commissioned to examine the definition of community resilience and look at steps forward for our social research.

A study tour of relevant research groups is planned in Australia, North America and hopefully parts of France, Portugal and Spain, areas all affected by major wildfires in recent years. This will allow us to gain direct experience from an in-depth evaluation of research methods and results to understand alternative social recovery practices. The team also plans to examine the human dimension of recent significant New Zealand wildfires (such the West Melton and Mt. Somers fires which occurred in Canterbury during December 2003 and January 2004) to consider resilience and recovery mechanisms for the community and the surrounding environment.

Meetings with local focus groups, including iwi and landcare groups in the selected communities are planned to identify the full extent of the social, psychological and economic impacts of the fire they experienced. The case studies will be documented and will contribute to reduced likelihood and impact of future fires of a similar nature.

Communication has been established with social researchers in the United States and in the Australian Bushfire Cooperative Research Centre (CRC). While in the States the team leader took the opportunity to meet with social research scientists, USDA Forest Service, North Central Research Station from Minnesota and Illinois to discuss common research interests. Along with another

social researcher at Washington State University, they are interested in exploring the possibility of collaborative research. In addition, we are exploring the possibility of two University of Canterbury students undertaking Master degrees on aspects of the social research within the rural fire programme.

The research is funded by the Foundation of Research, Science and Technology in conjunction with a rural fire industry collaborative that includes the Forest Owners Association (through a levy), Fire Service Commission, Department of Conservation, NZ Defence force and individual district councils.

new information

Forester of the Year gains Royal Society recognition

The New Zealand Institute of Forestry Inc ("NZIF") 2005 Forester of the Year, Dr Andrew McEwen, had his award recognised at the Royal Society 2005 Science Honours Dinner in Wellington last night.

Dr McEwen, who is also Vice President of NZIF, received the award for to his commitment and contribution to the profession of forestry over the last 43 years. He played a significant role in the privatisation of the State-owned plantations in the late 1980s and early 90's, and has also been involved in Treaty of Waitangi settlements involving forestry land.

In announcing the award, NZIF President Jaquetta (Ket) Bradshaw congratulated Andrew and thanked him for his contribution to forestry in New Zealand over a long and distinguished career. Ms Bradshaw also highlighted his contribution to the NZIF.

"His voluntary effort in producing a comprehensive weekly electronic newsletter benefits both the forestry sector and the professional standing of foresters and the Institute. In addition, he has been highly effective in creating opportunities for networking and in giving a sense of community for the forestry profession."

On receiving his award, Dr McEwen thanked the Royal Society, observing:

"This award recognises professionalism within the forestry sector and acknowledges that our forests, both indigenous and exotic, are vitally important to the economic and environmental well-being of New Zealand".

NZIF, with a membership of 780, is the organisation for the professionals in New Zealand forestry. Its main objective is to be an independent advocate for forestry, and

to provide services and support to members, the profession, and the general public. Its members are concerned with the professional management of all forests, plantation and indigenous, protection and commercial. The members can be found in forestry companies, consulting businesses, research institutes, educational facilities, government departments and providers of specialist services. The NZIF also operates a scheme that controls the registration and conduct of forestry consultants who provide forestry advice to the public. There are around 90 registered NZIF members.

The full list of award recipients is given below.

Rutherford Medal for exceptional contribution to New Zealand society in science and technology: awarded by the Royal Society of New Zealand on behalf of the New Zealand Government to Professor Paul Callaghan FRSNZ, Victoria University of Wellington

Pickering Medal to recognise excellence and innovation in the practical application of technology: awarded by the Royal Society of New Zealand to Professor John Boys FRSNZ, The University of Auckland

Liley Medal to recognise research that has made an outstanding contribution to health and medical sciences: awarded by the Health Research Council of New Zealand to Professor Richard Faull FRSNZ, The University of Auckland

Marsden Medal for a lifetime of outstanding service to science: awarded by New Zealand Association of Scientists to Dr Kevin Tate FRSNZ, Landcare Research

Te Rangi Hiroa Medal to recognise excellence in social sciences: awarded by the Academy Council of the Royal Society of New Zealand to Professor Cluny Macpherson, Massey University

Edward Kidson Medal: awarded by the Meteorological Society of New Zealand to Dr Jim Renwick, NIWA

Research Medal for outstanding research by a young scientist: awarded by New Zealand Association of Scientists to Dr Fiona MacDonald, University of Otago

NZIF Forester of the Year Award to recognise leadership and excellence: awarded by New Zealand Institute of Forestry to Dr Andrew McEwen, Wellington

Shorland Medal to recognise contribution to research: awarded by New Zealand Association of Scientists to Dr Adya Singh, SCION

NZMS Research Award: awarded by the New Zealand Mathematical Society to Professor Robert McLachlan FRSNZ, Massey University and Professor James Sneyd FRSNZ, The University of Auckland

McKenzie Award for educational research: awarded by the New Zealand Association for Research in Education to Professor Clive McGee, University of Waikato

Outstanding Physiologist to recognise outstanding work by a young scientist: awarded by the New Zealand Society of Plant Physiologists to Dr Julian Eaton-Rye, University of Otago

Applied Biosystems Award: awarded by New Zealand Society for Biochemistry and Molecular Biology to Professor Barry Scott, Massey University

New Zealand HortResearch Prize: awarded by New Zealand Institute of Chemistry to Professor Margaret Brimble FRSNZ, The University of Auckland

Erratum

In the August 2005 edition, the final sentence of the article entitled "Juken's world – facing the challenge" was cut short. The full sentence should have read as follows: And yes, the economics turn out all right too – for company and contractor.