

LTERM support encouraged
by prominent US ecologist

Distinguished American ecologist, former head of the Cary Institute of Ecosystem Studies and leading pioneer in the study of acid rain, Gene E Likens, has encouraged the Thomas Foundation's support for a National Centre for Long-Term Ecological Research and Management (LTERM).

"I would see this effort as the centre-piece of The Thomas Foundation's legacy," Professor Likens wrote in April 2010 in a formal review of the Foundation's strategies and objectives.

The proposed National Centre for LTERM would draw together environmental resources from six universities and produce periodic reports on the state of the nation's biodiversity to be known as the National Biodiversity Accounts. The Thomas Foundation has committed to support its establishment.

"This is one of Australia's most important environmental initiatives, and a critical one for conserving the nation's biodiversity," Professor Likens has previously said.

Borrowing from a recent editorial on science-based health care in the magazine *Science*, Professor Likens wrote in his Foundation review: "A traditional misconception is that spending on health is a social burden, instead of being a strategic investment essential for each nation's socio-economic development. This argument is equally valid for science-based conservation and the protection of the environment."

Professor Likens cited Thomas Foundation funding for the Gondwana Link, regarded by scientists as one of the world's top 40 'hot spots' and to which The Thomas Challenge has contributed some \$XX million, as "an ambitious, exciting and needed program".

But he also asked what were the Foundation's priorities for making its funding really count in such places.

"There is a need to monitor, study, experimentally evaluate and manage such protected areas, not just purchase and 'fence' them," he wrote.

"How can The Thomas Foundation insure that this happens? In no way should this imply that protecting habitats/ecosystems is unimportant. Recent research suggests that most marine protected areas do not prevent coral loss until these areas have been protected for five to 15 years.

"Thus long-term monitoring is as critically important as is the protection. Long-term conservation goals are supported by both (protection and monitoring)."

In his review of the Foundation's work, Professor Likens also wrote:

- “Your leadership with the Thomas Challenge Fund is extraordinary and badly needed. It is not just the money, but the leadership that is so important.”
- “The goals and strategies driving your strategic planning are clear, excellent and compelling.”
- “Protecting biodiversity is not high on either the environmental priority or public awareness lists in the USA. It is interesting that biodiversity is higher on the list here in Australia, and The Thomas Foundation may be a major explanation for this difference.”

Professor Likens listed the Thomas Foundation's key achievements as being:

- Helping conserve critical habitats in Australia by protesting landscape scale areas through the TNC and other not-for-profit conservation groups;
- Supporting science-based conservation;
- Providing future generations with the opportunity to experience and enjoy these unique areas and the unique species they contain. These natural areas also provide important ecosystem services, such as providing humans with clean air, clean water and outdoor recreational opportunities;
- Supporting outstanding scientists to develop new knowledge about these natural resources – what is there and what needs to be done to protect the resource – as well as providing scientific leadership on these issues for the nation; and
- Providing hope for young investigators in a difficult funding environment.

Professor Likens' advice for the Foundation's future activities included:

Ecosystems: “It is important to protect intact functioning ecosystems, not just habitats; that is, it is important to protect the vital functions of ecosystems, such as productivity of plants, cycling of water and decay of organic matter that occur in healthy ecosystems, as well as services that ecosystems provide to humans, in order to achieve full biological conservation.

“For example, terrestrial ecosystems would be a more meaningful and comprehensive target to protect than forests *per se*. What about woodlands, grasslands, etc?”

Aquatic biodiversity: “What about aquatic biodiversity? Funding for the conservation of freshwater biodiversity is totally missing in the Foundation’s current goals. Yet these systems contain about 10 per cent of all known species worldwide, including about one-third of vertebrate species, making them ‘hotspots’ for biodiversity, and they are generally far more threatened than terrestrial biota. Is this planned, or an oversight?”

Scholarships: “It appears that funding opportunities from The Thomas Foundation for bright, younger scientists occurs, but unfortunately is very limited; eg \$10k/year for the TNC Applied Conservation Award via the Ecological Society of Australia.”

Research: “The Andrew W. Mellon Foundation (in the USA) had a very enlightened approach to the support of ecological and conservation research.....It’s approach was to find persons they judged to be among the highest quality researchers (‘winners’), both young and established, and then invite these scientists ‘to propose research ideas, all with a minimum of red tape and bureaucracy’..... The focus was on results in peer-reviewed journals and books, thus making an intellectual, scientific difference.”

Gene Likens is a distinguished US scientist best known for his discovery of acid rain in North America. A global leader in his field, his research focuses on the ecology and biogeochemistry of forest and aquatic ecosystems, and has shed light on critical links between ecosystem functions and land-use practices. He has worked with the CSIRO on Australia’s water crisis. The Thomas Foundation commissioned Professor Likens’ review of its activities.