MANAGEMENT IN UNCERTAINTY; USING THE OPPORTUNITY TO ADOPT AN EXPERIMENTAL APPROACH TO MANAGEMENT

G. PEET
Workshop Leader
Department of Conservation and Land Management,
Northern Forest Regional Headquarters, 3044 Albany Highway, Kelmscott, W.A. 6111.

TERMINOLOGY

Uncertainty arises from lack of scientific information, e.g. uncertain consequences arising from apparently certain action due to the complexity of ecosystems or uncertainties arising from unforeseen public and political reactions.

APPROACH

Management in uncertainty may be conservative or adventurous. Before an approach can be decided the relevant issues and strategies must be developed. These issues include the amount of latitude the manager has to decide a course of action e.g. there may be a high level of freedom to decide a fire regime but very little on mining and other exploitation. The coercion factor imposed by other organisations or individuals must be recognised.

Managing in uncertainty requires a high level of staff support. Within a large organisation there is a considerable inertia which resists change and this may be an important factor which can affect a manager's ability to react.

ISSUES

Three areas can be identified as affecting implementation of new initiatives; the Government level, Departmental policy level, and branch or land manager level.

Government level. Uncertain consequences create a cautious approach. The spectrum of political influence will affect Government reaction while other organisations/individuals will influence Government reaction.

Departmental (policy) Level. Political influence will affect Departmental response. Senior support will depend on the breadth of support within the Department. It will also depend on entrepreneurial and other benefits for the Department, the likely backlash from public/others as well as available finance and current priorities.

Land Manager Level. The management problem must be defined and of sufficient importance to warrant action. The action must take into account the level of scientific uncertainty and likelihood the consequences are unpredictable and serious. It is also important to establish the position of the project in relation to current priorities.

These issues defined a number of management objectives for which the discussion group were able to define strategies. Time did not permit treating all the issues.

STRATEGIES

Government Level. Coercion by other organisations/individuals must be managed. The possibility of winning community support for the project should be assessed. The uncertainties need to be explained and then minimised. The positive benefits from the project must be established and pointed out to all concerned.

Departmental Level. Broad support from staff and the community should be sought. A Departmental policy should be written and the constraint of inertia minimized by sowing the seed of the idea and developing a statement of benefits flowing from the project. Staff and the public should be involved in designing the process/project so that they develop a sense of ownership. Once the Department has set a course of action it must be firm and not changed as a result of pressure.

Support from senior staff is essential for the success of any project. Any proposal for change must identify and assess the likely backlash both externally and internally and advise senior staff. Finally the proposal must be widely circulated so that all who have an interest in it are informed and feel that they have a stake in the project and its outcome.

Land Manager Level. The level of scientific uncertainty must be assessed. It is necessary to define the management problem, ensure a clear objective and state the hypothesis regarding the end point of the management program. Management procedures should be written and involve all relevant staff expertise. The management procedures should be reviewed and the results assessed with a view to refining the objective or the management procedures as necessary. It is important to set aside control areas.

The level of historical uncertainty should be assessed by examining the evidence of historical fire regimes, etc. and seeing if they are relevant to current plant/animal communities.

EXPERIMENTAL APPROACH

An experimental approach should be based on a systematic method for establishing the proposals for management. It is necessary to identify the risks and the constraints. A clear objective which relates to landuse objectives must be provided. The full range of knowledge on the subject both internal and external should be collated and finally a proposal developed. This should specify hypotheses, procedures, consequences, recording methods, monitoring methods and the review process. The review process is extremely important as the success of this stage will allow for the interpretation of the results of management practices and the refinement or change to these practices, where necessary.