

Paper 10: QUEENSLAND REPORT - SCIENTIFIC SUPPORT CO-ORDINATORS ROLE

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The appointment of a SSC to the Queensland State Committee was made in October, 1987. However, the Committee was fortunate in that scientific representation was high, with professional staff from the Department of Fisheries, QNPWS, and GBRMPA, all providing input. Consequently, scientific advice was available prior to the appointment of a SSC. The nominated SSC for the Queensland State Committee is the Division of Environment.

One of the major objectives of the National Plan is to minimise the environmental impact associated with an oil spill. In order to achieve this objective methods for the containment, control, dispersion and clean-up of oil need to be applied which are appropriate to the circumstances of the spill. Where control and clean-up action is required, the decisions relating to the selection of methods and strategies to be used must be made with knowledge as to the social, economic and environmental consequences of the action. The role of the SSC is to provide informed advice to the OSC relating to environmental aspects of oil spill management. The SSC is responsible for co-ordinating scientific resources for emergency response to oil spills.

1. Response Planning

An effective and rapid response to a spill requires the immediate availability of information relevant to the decision-making process. A major responsibility of the SSC is to collate biological resource information and ensure that it is in a usable, interpretable and accessible form.

Specifically, responsibilities of the SSC in response planning include:

1.1 Pre-incident

- Assist in the production of documents and guidelines relating to environmental aspects of oil spills and oil spill control and clean-up.
- Provide advice to the **State** Committee on matters of a scientific nature.

- Assist in the development of those parts of **contingency plans** requiring **specialised** scientific **knowledge**.
- Acquire familiarity with the materials and methods used **in** oil spill clean-up and control, and the potential of respective methods **to adversely affect biological resources**.
- Acquire a knowledge and understanding of:
 - the physical and chemical properties of dispersants,
 - the fate of dispersants in the environment,
 - the toxicity of dispersants to marine organisms,
 - the role of dispersants in the degradation of oil.

The SSC should be sufficiently briefed to the extent that he has a balanced and objective view as to the value of using dispersants in different oil spill situations.

- Assist in the collation of coastal biological resource information. Such information may take the form of a resource atlas in which habitat types and biological resources ~~are identified, and for each, the location, extent, depth, seasonal occurrence (breeding areas), and significance are detailed.~~
- Collate information relating to the sensitivity of different **habitat types to** contamination by oil, and their sensitivity to different **methods of** clean-up (dispersant toxicity, etc.). Preferred methods of clean-up should be identified for **each** habitat type.
- Establish links with expert bodies and personnel who **may be called upon during an oil spill**.
- Identify research **needs** and establish research priorities

1.2 On-Scene Role

In the event of an oil spill:

Advise relevant **personnel** from other interested agencies (Queensland National Parks and Wildlife Service, Fisheries, Great Barrier Reef Marine Park Authority).

- Provide rapid assessment of, and advice on, the nature, **behaviour** and fate of the oil, e.g. toxic properties, alteration in physical and chemical characteristics which **can be** expected, and the prospects of water column mixing, sinking; etc.
- Co-ordinate, collate and evaluate all available information relating to biological resources within the region of potential impact.
- Identify 'sensitive' habitats and those of special significance.
- Determine environmental priorities based on the significance, sensitivity and recovery potential of identified biological resources.
- Provide balanced, sensible and realistic advice to the OSC relating to environmental priorities.
- Nominate preferred control/clean-up methods.
- Pacify **and control** single interest groups.

1.3 Post-Incident

Following an oil spill:

- Provide advice to the OSC on when it is appropriate to **terminate** a mode of action in the clean-up operation.
- Identify priority research projects that may take advantage of a spill incident.
- Provide advice as to the need for, and the requirements of, any follow-up monitoring.
- Participate in post-spill monitoring studies for purposes of assessing the magnitude of alteration or destruction of naturally occurring populations, communities or habitats in both the short term and long term.
- Participate in debriefing session.
- Publish and distribute post-spill monitoring results.

2. Costs and Resources

Initial planning for a resource inventory is underway. The compilation of such an inventory will require considerable resource allocation in the near future. It is envisaged that the collation of data and the design of the presentation format will be done by the SSC and other members of the State Committee, but that the development of the resource inventory will be contracted to a computer consultancy firm. A computer stored resources atlas is currently under consideration by the Great Barrier Reef Marine Park Authority for resources within the Marine Park. It is probable that the same format and company will be used for the development of a similar atlas for the remainder of the Queensland Coast. An approximate cost estimate is within the region of \$20 - \$30,000.

More time will also be allocated by the SSC in the near future for the compilation of a regional personnel directory. Liaison with regional support personnel and the compilation of material relevant to the region has a high priority.

In both 1987 and 1988 the SSC was requested to provide input into regional training exercises which involved expenditure by the Division of Environment, for airfares and accommodation.

3. Experiences-in-Implementing-Defined-Roles---

- Experience on-scene is nil.
 - Involvement in all aspects of pre-incident response planning. Specifically:
 - resources inventories have been reviewed and a format proposal prepared for a Queensland inventory;
 - an extensive library of research papers relating to oil pollution and its effects on marine coastal habitats • seagrass, mangroves, coral reefs • has been compiled,
 - talks have been given at two operators workshops relating to environmental considerations of oil spills.
 - A simulated oil spill is planned for January 1989, in which the SSC will participate.
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