

**WHOLE OF COMMONWEALTH GOVERNMENT
RESPONSE**

to the

**INQUIRY INTO MARINE
AND COASTAL POLLUTION**

by the

**SENATE ENVIRONMENT, RECREATION,
COMMUNICATIONS AND THE ARTS
REFERENCES COMMITTEE**

Recommendation 1

The Committee recommends that the Government consider the establishment of a central authority to coordinate coastal and marine affairs. Such an authority would consult all spheres of Government to facilitate the development of coherent policies across different jurisdictions for the management of Australia's coasts and oceans and of activities which affect Australia's EEZ including consideration of land based issues.

Response

Recommendation 2

The Committee recommends that the Commonwealth Government work with State and/or local authorities, as appropriate to make marine affairs a standing item on the agenda of COAG meetings.

Response

The Council of Australian Governments (COAG) would be unlikely to establish a specific area of policy as a standing agenda item. COAG's charter is aimed at a range of specific national reform issues requiring leadership by Heads of Government. While, for example, COAG may choose to address reform of oceans management arrangements as a specific agenda item, general oversight of marine issues would not be an appropriate role for COAG.

Recommendation 3

The Committee recommends that the Commonwealth Government work with State and/or local authorities, as appropriate to develop clear, enforceable guidelines based on appropriate research for the quality of discharges into the marine environment, through sewerage systems or direct to water, and to develop the necessary legislation to make such guidelines legally binding.

Response

The Commonwealth Government is working closely with State and Territory Governments on the development of the National Water Quality Management Strategy (NWQMS). The NWQMS is a joint initiative of the Australian and New Zealand Environment and Conservation Council (ANZECC) and the Agricultural and Resource Management Council of Australia and New Zealand (ARMCANZ). Its aim is 'to achieve sustainable use of the nation's water resources by protecting and enhancing their quality while maintaining economic and social development'. The COAG Water Reform Framework recognises the role of the NWQMS in promoting improved water quality and requires State and Territory Governments to support the development of the NWQMS through the adoption of a package of market-based and regulatory measures, including the establishment of appropriate water quality monitoring and catchment management policies and community consultation and awareness.

The NWQMS has published Guidelines for Sewerage Systems - Effluent Management, and Guidelines for Sewerage Systems - Acceptance of Trade Waste (Industrial Waste). It is also developing Guidelines for Sewerage Systems - Sludge (Biosolids) Management, and Guidelines for Sewerage Systems - Sewerage Systems Overflows. This series of Guidelines will address the quality of discharges into the marine environment through sewerage systems. These Guidelines provide a framework for a nationally consistent

approach to the management of sewerage systems, including marine discharges, but are not legally enforceable.

It is the responsibility of State and Territory Governments to implement the NWQMS Guidelines within their respective jurisdiction, for example as a basis for their own guidelines, or as a requirement of licence conditions. The Commonwealth Government encourages the use of the Guidelines and notes that the implementation of the NWQMS is one of the COAG Water Reform Framework performance milestones linked to competition policy payments to State and Territory Governments.

With respect to the development of clear, enforceable guidelines it is noted that Schedule 4 of the InterGovernmental Agreement on the Environment (IGAE) defines a guideline as providing "guidance on possible means of meeting desired environmental outcomes". Consequently, the nature of guidelines would suggest that it is inappropriate to make them legally enforceable. However a standard, defined by the IGAE as "a quantifiable characteristic of the environment against which environment quality is assessed" can be made legally enforceable.

The development of National Environment Protection Measures (NEPMs) by the National Environment Protection Council (NEPC) is a mechanism which allows the Commonwealth to participate in the development of legally enforceable standards for the protection of the environment. The Commonwealth National Environment Protection Council Act (1994), and the corresponding State and Territory Acts, enables NEPMs (which may include national environment protection standards, guidelines, goals and protocols) to be made. Measures are implemented by means of laws and other arrangements of the Commonwealth and the participating States and Territories. Thus it is through laws enacted by the participating jurisdictions, and not by means of NEPMs themselves, that national environment protection standards may be given legal force.

The Government notes that the National Environment Protection Council can make NEPMs that relate to ambient marine, estuarine and fresh water quality. A proposal for a NEPM for ambient marine and estuarine water quality is to be considered by the NEPC in the second half of 1998. This will be an opportunity to consider whether a mandatory national environment protection standard for marine and estuarine ambient water quality should be developed, the enforcement of which will mean the quality of discharges into the marine environment will need to be addressed.

Recommendation 4

The Committee recommends that the Commonwealth Government work with State and/or local authorities, as appropriate to amend the National Environment Protection Council legislation in order to give the Council wider powers to make National Environment Protection measures, and to pass the necessary legislation in each jurisdiction.

Response

The Government does not believe it would be appropriate to amend the National Environment Protection Council (NEPC) legislation at this stage, particularly given that only one National Environment Protection Measure has been finalised. Any expansion of NEPC's role would need the agreement of the State and Territory Governments.

Recommendation 5

The Committee recommends that the Commonwealth Government work with State and/or local authorities, as appropriate to develop coherent and effective policies and management practices at local level which protect the coastal and marine environments including clear guidelines and enforceable environmental standards for residential, commercial and industrial developments.

Response

It is inappropriate for the Commonwealth to consider imposing enforceable environmental standards at the local level for residential, commercial and industrial developments unless there is a specific Commonwealth interest involved. The Government is of the view that this is the legitimate role of State, Territory and Local Governments. The Commonwealth prefers to work with State and Territory Governments to develop regionally and locally agreed actions designed to ensure the best possible combination of ecologically sustainable and economically viable outcomes.

However, the Commonwealth Government, in conjunction with all State and Territory Governments, has made an unequivocal commitment to achieving ecologically sustainable management of Australia's coastal and marine environments, as is evident in several national policy documents, including the National Policy for Ecologically Sustainable Development, the National Strategy for the Conservation of Australia's Biological Diversity, and the National Water Quality Management Strategy. This is part of the government's commitment to developing coherent and effective policies and promoting the adoption of best management practices at local level which protect coastal and marine environments.

The Commonwealth Government's *Coasts and Clean Seas* initiative provides \$125 million for the conservation, sustainable use and repair of Australia's coastal and marine

environments. This package, principally funded through the Natural Heritage Trust, provides the Commonwealth Government with an unprecedented opportunity to protect, conserve and manage Australia's coastal and marine environments. *Coasts and Clean Seas* represents the largest financial contribution ever made by the Commonwealth Government towards protecting our coasts and oceans. The focus of *Coasts and Clean Seas* is on protecting the marine environment from the negative impacts of human activities. It is tackling pollution problems, addressing threats to marine biodiversity and habitat degradation, and promoting the sustainable use of Australia's coastal and marine areas. *Coasts and Clean Seas* is based on partnerships between the Commonwealth, the community, state and local governments and industry. *Coasts and Clean Seas* involves a number of programs, including Coastcare, the Coastal and Marine Planning Program, the Fisheries Action Program, the Capacity Building Program, the Australian Coastal Atlas, the Coastal Monitoring Program, the Marine Species Protection Program, the Introduced Marine Pests Program and the Marine Protected Areas Program.

The Coastal and Marine Planning Program aims to put quality planning in place along the entire Australian coastline. It will stimulate coastal and marine planning that combines social, economic and environmental factors. Multiple use management plans, arising out of the program, will be based on partnerships between communities, government, and the private sector. They will take into account and link with existing regional management strategies, including catchment management plans. This Commonwealth Government initiative will fund the development of coherent and effective policies by regional and local authorities, whose statutory planning should include clear guidelines and enforceable environmental standards for residential, commercial and industrial development. The key objectives of this program are to minimise the impacts of uncoordinated development in the coastal zone and minimise the impacts of land-based marine pollutants, particularly those arising from ad hoc development, stormwater, and sewage discharges on coastal and marine environments. The Coastal and Marine Planning Program will also contribute to Australia's international coastal and marine environmental obligations, including the implementation of the United Nations Environment Program's Global Program of Action for the Protection of the Marine Environment from Land-Based Activities.

Coastcare is a community-based program that is a cornerstone of the Commonwealth's commitment to working with the coastal community. Coastcare encourages communities to become stewards of their local coastal areas as they are frequently the first to identify problems and often the best placed to identify solutions. The program promotes community and local government partnerships to undertake works principally on public land. The emphasis is on on-ground works, including revegetation of dunes and wetlands, control of weeds and feral animals, protection and rehabilitation of coastal habitats and access control.

The Clean Seas Program assists better water management in coastal areas by supporting projects which have a direct effect on reducing pollution and degradation of the marine environment, particularly projects tackling discharges directly into estuaries or the sea.

The program targets on-ground action and reform through promoting innovative management of wastewater and stormwater, including increased reuse and recycling, the development of new Australian technologies, the rehabilitation of polluted areas, the reduction of erosion and sediment discharge in runoff, as well as coastal urban design and development incorporating sustainable water management. Examples of projects that will be supported include innovative side entry pit collectors, stormwater pipe interceptors, constructed wetlands and package stormwater treatment devices for removing pollutants from stormwater, techniques for reducing sewage overflow contamination of stormwater systems or coastal waters from septic tanks and other on-site systems, and projects improving the removal of nutrients from sewage effluent, as well as strategies to increase water reuse and recharge of aquifers.

The Fisheries Action Program acts to protect fish habitats and ensure that commercial and recreational fishing practices are sustainable. It provides an opportunity for community groups, government and industry to make Australia's fisheries more productive while protecting the surrounding aquatic environment. Community and industry groups will be able to replace depleted fish stocks, compile inventories of fish fauna and habitats, develop local education centres and programs and provide information on endangered species and ecologically sustainable fishing practices.

The well-being of the coast ultimately lies in the quality of the decisions made by a wide range of coastal managers in government, industry and the community. The Capacity Building Program provides opportunities for coastal and marine education, information exchange through the internet, the development of industry codes of practices and professional development and training. The Australian Coastal Atlas is being developed to provide up-to-date and interactive electronic information on the coastal and marine environments. This information is essential to allow coastal managers to make effective decisions and increase their own environmental awareness by providing information that can be manipulated for their own particular management needs.

The Coastal Monitoring Program aims to assist coastal managers and the wider community in identifying significant threats to key coastal environments and habitats and, over time, in assessing the effectiveness of policies designed to protect them. A regional monitoring network is being developed with pilot sites established in the Alligator Rivers region and at Jervis Bay. Further sites may be added as suitable locations are identified. A directory of Coastal and Marine Monitoring is being developed on the internet to provide coastal managers with information on what and who is doing monitoring in Australia. The major focus in 1998-99 will be to expand the range of information available in the directory and make it accessible to all internet users. The Coastal Monitoring Program will also fund a range of other projects through both a publicly advertised and Commonwealth component grant process. Indicative priorities for 1998-99 for the publicly advertised grants include seagrass loss, water quality in estuaries and coastal lakes, mangrove and saltmarsh loss in developed areas, eutrophication and coastal reefs.

The Marine Species Protection Program aids on-ground activities which identify and reduce threats to vulnerable marine mammals, seabirds, turtles and fish species (including sharks). It funds activities which address the adverse environmental impacts of commercial and recreational fishing, control the impact from other commercial and recreational activities, reduce the impact caused by habitat degradation, and address the effects of environmental changes on marine species and habitats from a whole-of-ecosystem perspective. The aim of the program is to ensure that community and industry groups, fisheries managers, marine management and research agencies, and governments work together for the conservation and sustainable use of living marine resources.

The Introduced Marine Pests Program supports measures that either reduce the likelihood of exotic marine pests being introduced into or spread through Australian waters, or measures that reduce, manage and/or locally eradicate exotic marine pests that have already been introduced. The focus of the program is on evaluating and reducing the impacts on the marine environment of exotic pest species that have breached existing quarantine barriers. The program funds projects on activities such as the systematic detection of, and rapid response to, new exotic pest incursions, impact assessment programs of existing introduced marine pests, removal and eradication techniques for threatening exotic marine species and raising public and industry awareness to help prevent the introduction and spread of harmful exotic marine species.

The Marine Protected Areas Program supports the development of a National Representative System of Marine Protected Areas (NRSMPA) and sustainable multiple use of the marine environment in addition to declaration work to develop marine protected areas within Commonwealth Waters established under Commonwealth legislation. This program will support relevant State and Territory projects, including scientific research, to determine the basis for protected areas, public awareness and community consultation programs, as well as the development and implementation of strategic projects to help expand the existing system of marine parks and reserves. A bioregional planning framework has been established to help guide the identification of areas for inclusion in the NRSMPA and ensure that it is representative of the full range of Australia's marine environments.

The Commonwealth, States and the Northern Territory have been working together to develop automated databases - electronic coastal resource atlases - to identify what is most at risk from oil spills and maritime accidents. These atlases provide information on such things as biological resources, environmentally significant and sensitive areas, and ownership of potentially affected sites and infrastructure. The atlases will greatly assist in planning for contaminant spills, installing the most effective protection for our foreshores and deploying the most appropriate control and clean-up equipment for specific marine environments.

Recommendation 6

The Committee recommends that the Commonwealth Government work with State and/or local authorities, as appropriate to oversee catchment management policies from the perspective of their eventual impact on the marine environment, and to develop strategies to ensure that catchment management committees are genuinely representative of catchment communities.

Response

The Government recognises and supports the adoption of an integrated approach to the conservation and ecologically sustainable management of Australia's land, water and biodiversity. The adoption of an integrated catchment management approach to water resource management is a key guiding principle of both the 1994 COAG Water Reform Framework and the National Landcare Plan. In addition, a key finding of the 1996 State of the Environment Report was the urgent need for integrated management approach for marine environments and catchment areas. The Government, in partnership with State and Territory Governments, is developing integrated catchment management policies through participation in such bodies as the Murray-Darling Basin Commission and the Lake Eyre Basin Catchment Management Committee. The Great Barrier Reef Marine Park Authority is engaged in providing integrated management for the particularly sensitive marine environment of the Reef.

However, the primary responsibility for land and water management lies with the State and Territory Governments. In its report to COAG of February 1994, the Working Group on Water Resource Policy noted that in some jurisdictions, integrated catchment management has not been introduced to the extent that it has elsewhere, and that there is a requirement for those jurisdictions where institutional arrangements of this nature have not yet been fully implemented, to consider doing so. (It should be noted that COAG does not include the Norfolk Island Government.) Nevertheless, the Commonwealth recognises that it has a role in encouraging State, Territory and Local Governments to develop catchment management policies which address potential impacts on the marine environment, (through the Coastal and Marine Planning Program, for instance) and to ensure that their catchment management committees genuinely represent the catchment community, including marine industries likely to be affected by decisions taken by the committee.

Recommendation 7

The Committee recommends that the Commonwealth Government work with State and/or local authorities, as appropriate to address the issues of acid sulphate soils and their impact on the marine environment including the development of legislation and management strategies to control activities on areas affected and to rehabilitate those areas already disturbed.

Response

The National Working Party on Acid Sulfate Soils has been established by the Standing Committee on Agriculture and Resource Management (SCARM) to develop a national strategy for the management of acid sulfate soils. Representation on the Working Party has been drawn from SCARM, the Australian and New Zealand Environment Conservation Council, the Ministerial Council on Forestry, Fisheries and Aquaculture, the National Farmers' Federation, the Australian Seafood Industry Council, the Cane Growers Association, CSIRO and DPIE. The Working Party has finalised a draft strategy, which is expected to be released for public comment in the near future.

In addition, the Coastcare Program aims to raise the awareness of land managers of the potential threats to the marine environment of various land management practices and the National Landcare Program has been funding projects aimed at improving knowledge about the occurrence of acid sulfate soils and their management.

Recommendation 8

The Committee recommends that the Commonwealth Government work with State and/or local authorities, as appropriate to set uniform target dates for the elimination of discharges of untreated sewage to the sea, and to explore land based treatment strategies wherever environmentally possible.

Response

The Government supports the elimination of discharges of untreated sewage to the sea. As part of the National Water Quality Management Strategy (NWQMS), Draft *Guidelines for Urban Stormwater Management*, and Draft *Guidelines for Sewerage Systems - Use of Reclaimed Water* have been developed. These draft Guidelines have been released for public comment and are currently being finalised. These Guidelines aim to highlight the limitations of many existing stormwater management practices and promote organisational structures, procedures and best management practices which address currently fragmented jurisdictional and functional arrangements. The NWQMS's *Guidelines for Sewerage Systems: Effluent Management* establish national guidelines for effluent discharges to land, inland waters, and ocean and marine waters. The Guidelines also promote effluent reuse where appropriate. While implementation of these

Guidelines is a matter for individual jurisdictions, the Commonwealth Government encourages their use and notes that the implementation of the NWQMS is one of the COAG Water Reform Framework performance milestones linked to competition policy payments to State and Territory Governments.

A number of existing initiatives for reclaimed water use involving vegetation and forests are being developed through catalytic funding from the Natural Heritage Trust through the National Landcare Program. In addition, *Coasts and Clean Seas* aims to assist State and Local Governments to improve the performance of ocean outfalls in environmentally sensitive areas, and to develop water-use efficiency and effluent reuse projects.

The Government notes, however, that any land based treatment strategies need to be environmentally sound to avoid possible land degradation and contamination of ground and surface water resources through infiltration or surface runoff.

Recommendation 9

The Committee recommends that the Commonwealth Government work with State and/or local authorities, as appropriate to develop integrated strategies for dealing with stormwater, including sewerage overflows into stormwater systems, and to develop clear enforceable guidelines assigning responsibility for the management of stormwater and the maintenance of the relevant infrastructure.

Response

The Commonwealth does not have the power to enforce guidelines in jurisdictions other than its own. As part of the Council of Australian Governments' (COAG) Water Reform Framework a report on Wastewater Reuse and Stormwater Management, and a consequent Policy Position Paper entitled *Wastewater and Stormwater Management - A National Framework for Improved Wastewater Reuse and Stormwater Management in Australia*, have been prepared that support integrated strategies for stormwater management. On the basis of these reports, the Government supports the evaluation of the economics of the urban water life cycle so as to identify opportunities for improving the ecologically sustainable management of water resources and the health of inland and coastal waters in cost effective ways.

As part of the National Water Quality Management Strategy (NWQMS), Draft *Guidelines for Urban Stormwater Management*, and Draft *Guidelines for Sewerage Systems - Use of Reclaimed Water* have been developed. These draft guidelines have been released for public comment and are currently being finalised. These Guidelines aim to highlight the limitations of many existing stormwater management practices and promote organisational structures and procedures which address currently fragmented jurisdictional and functional arrangements.

Recommendation 10

The Committee recommends that the Commonwealth Government work with State and/or local authorities, as appropriate to encourage the development of effective on-site wastewater technologies, and the necessary standards, and the treatment and reuse of urban stormwater and household effluent in new housing developments; and the modification of existing systems to the maximum extent possible.

Response

The Commonwealth's role is limited by the fact that the legislative basis for planning and land management of the terrestrial area of the coastal zone is primarily provided by the States, with Local Government generally responsible for day-to-day decision making. The principal responsibility for the management of land based sources of marine pollution also rests with State and Local Governments. However, several Commonwealth initiatives are underway to address the issues raised in this recommendation.

The Commonwealth is currently working with State and Local Governments through the Council of Australian Governments (COAG) Water Reform Framework Agreement to improve the management of stormwater and wastewater. COAG has requested that the Agricultural and Resource Management Council of Australia and New Zealand (ARMCANZ), the Australian and New Zealand Environment Conservation Council (ANZECC) and the Ministerial Council for Planning, Housing and Local Government examine the management and ramifications of making greater use of wastewater in urban areas and develop strategies for handling stormwater, including its use. A policy position paper on wastewater and stormwater management was prepared and has since been adopted by COAG.

The National Water Quality Management Strategy (NWQMS) also promotes better and innovative management of stormwater and wastewater. The COAG Water Reform Framework recognises the role of the NWQMS and requires the State and Territory Governments to support the development of the NWQMS through the adoption of a package of market-based and regulatory measures, including the establishment of appropriate water quality monitoring and catchment management policies and community consultation and awareness. This is particularly applicable to the increasing adoption of wastewater reuse and stormwater management.

As part of the National Water Quality Management Strategy (NWQMS), Draft *Guidelines for Urban Stormwater Management*, and Draft *Guidelines for Sewerage Systems - Use of Reclaimed Water* have been developed. These draft guidelines have been released for public comment and are currently being finalised.

The Commonwealth Government, through the Natural Heritage Trust's National Landcare, Rivercare and *Coasts and Clean Seas* programs has been contributing to the

improvement of water management for marine and coastal areas by part-funding project activities that find ecologically sustainable and economically viable re-use options for treated effluent and the demonstration of new, low cost or innovative approaches to water management and delivery of water services.

Recommendation 11

The Committee recommends that the Commonwealth Government work with State and/or local authorities, as appropriate to explore the desirability of large-scale reuse of treated effluent and stormwater for industrial and agricultural purposes.

Response

On the fundamental premise that improved management of stormwater and wastewater is integral to the Council of Australian Governments (COAG) Water Reform Framework Agreement, COAG requested that the Agricultural and Resource Management Council of Australia and New Zealand (ARMCANZ), the Australian and New Zealand Environment Conservation Council (ANZECC) and the Ministerial Council for Planning, Housing and Local Government examine the management and ramifications of making greater use of wastewater in urban areas and strategies for handling stormwater, including its use. A policy position paper on wastewater and stormwater management was prepared and has since been adopted by COAG.

The paper makes it clear that improving the overall efficiency of the use of water resources while maintaining appropriate environmental values, the fundamental guiding objective in resource management, should serve to minimise the impact of the effects of stormwater runoff and the return of treated effluent to urban waterways, estuaries and coastal waters. An important tool in the efficient use of water is to price water at its true environmental cost, which is as important as reusing water after it has been used inefficiently. The paper also contains recommendations aimed at minimising the impediments to wastewater reuse and stormwater management, and encouraging and publicising the use of wastewater and improved management of stormwater as a resource rather than as waste stream.

The COAG water reform framework recognises the role of the National Water Quality Management Strategy (NWQMS) in promoting improved water quality and requires the State and Territory Governments to support the development of the NWQMS through the adoption of a package of market-based and regulatory measures, including the establishment of appropriate water quality monitoring and catchment management policies and community consultation and awareness. This is particularly applicable to the increasing adoption of wastewater reuse and stormwater management. As part of the NWQMS, Draft *Guidelines for Urban Stormwater Management*, and Draft *Guidelines for Sewerage Systems - Use of Reclaimed Water* have been developed. These draft guidelines have been released for public comment and are currently being finalised.

The Commonwealth Government, through the Natural Heritage Trust's National Landcare Program has been contributing to the improvement of water management for rural areas and small country towns by part-funding project activities such as ecologically sustainable and economically viable re-use options for treated effluents and the demonstration of new, low cost or innovative approaches to water management and delivery of water services. Both of these are to be undertaken in a catchment management context.

However, it needs to be recognised that the reuse of treated effluent and stormwater will not be a universal panacea as both sources represent quite considerable amounts of water. Physical factors which have limited the use of wastewater and stormwater have included the temporal variability of flow (for example, this could mean that large quantities of urban stormwater are generated at times when demands for second class water are minimal), limitation on available storage, and water quality. Moreover, the collection of sewage into a few centralised locations for treatment creates large localised volumes of effluent which often exceed any local demands for second class water.

Recommendation 12

The Committee recommends that the Commonwealth Government work with State and/or local authorities, as appropriate to extend the protection of mangrove and wetland areas, especially in areas under threat from coastal development and harmful discharges, and to rehabilitate degraded areas wherever possible.

Response

The Commonwealth has indicated that it aims to provide leadership in the conservation and wise use of wetlands through the Wetlands Policy of the Commonwealth Government of Australia. Funding of activities through the National Wetlands Program of the Natural Heritage Trust has provided an opportunity to take a national approach to wetland conservation activities.

It is a guiding principle of the Wetlands Policy of the Commonwealth Government of Australia that the repair of degraded wetlands should be undertaken where ecologically beneficial, feasible and cost effective. The Commonwealth released its Wetlands Policy in February 1997, and is currently developing an implementation plan for the Policy. The Commonwealth will promote this by funding appropriate projects from the Natural Heritage Trust and *Coast and Clean Seas*. Wetland protection and rehabilitation are also identified as priorities in the National Strategy for the Conservation of Australia's Biological Diversity. Further, the Coastal and Marine Planning Program seeks to manage pressures on key habitats, including wetlands and mangroves through improved regional strategic planning.

In addition, nomination of sites as Ramsar wetlands or as East Asian-Australasian Shorebird Reserves, and development of management plans for those sites are being encouraged through the Commonwealth - State/Territory partnership agreements. The partnership agreements also reflect commitment on the part of State and Territory Governments to develop a strategic approach to conservation and management of wetlands and coastal habitats through the development of wetland management policy statements.

Recommendation 13

The Committee recommends that the Commonwealth Government work with State and/or local authorities, as appropriate to develop strategies to prevent further damage to seagrass beds from the effects of coastal development, sewerage and stormwater outfalls and diffuse run-off from agricultural activities.

Response

Australia has the world's largest number of seagrass species (over 30 species) and some of the largest and most diverse seagrass beds. Seagrass provides essential or important habitat for significant marine species such as western rock lobsters, tiger and endeavour prawns, green turtle, leafy sea dragons and dugongs. Australian seagrasses are highly endemic, particularly those found in the temperate regions below about 25-30 degrees south. Losses of temperate seagrasses through human-induced changes has been particularly severe due partly to the intense development pressures existing in the southern regions.

The Council of Australian Governments (COAG) has initiated a variety of strategies and policies which will have the effect of reducing threats of damage to seagrass beds. The Water Reform Framework Agreement aims to improve the management of stormwater and wastewater. A policy paper on wastewater and stormwater management, prepared by the Agricultural and Resource Management Council of Australia and New Zealand (ARMCANZ), the Australian and New Zealand Environment Conservation Council (ANZECC) and the Ministerial Council for Planning, Housing and Local Government, has been adopted by COAG.

The National Water Quality Management Strategy is recognised under the COAG Water Reform Framework Agreement and its development supported by COAG. The NWQMS has developed a variety of packages of market-based and regulatory measures that establish appropriate water quality monitoring and catchment management policies, community consultation and increase community awareness. The issue of diffuse run-off from agricultural activity is being addressed through the development of principles and high level national Guidelines through the NWQMS. These Guidelines include the draft *Guidelines for Urban Stormwater Management*, (released for public comment and currently being finalised); the draft *Guidelines for Sewerage Systems - Use of Reclaimed*

Water (released for public comment and currently being finalised); *Rural Landuses and Water Quality - A Community Resource Document*; *Effluent Management Guidelines for Dairy Sheds*; *Effluent Management Guidelines for Dairy Processing Plants*; *Effluent Management Guidelines for Intensive Piggeries*; *Effluent Management Guidelines for Aqueous Wool Scouring and Carbonising*; and *Effluent Management Guidelines for Tanning and Related Industries*.

The issue of diffuse run-off from agricultural activity is also being addressed through program activities of the National Landcare Program and the National Rivercare Initiative funded by the Natural Heritage Trust (NATURAL HERITAGE TRUST) which focus on the causes of the problem through improving the management of natural resources, rather than addressing the symptoms. The NATURAL HERITAGE TRUST is aimed at stimulating significant improvement and greater integration of biodiversity conservation, land, water and vegetation management on public and private land.

The Commonwealth's approach to natural resource management through the NATURAL HERITAGE TRUST is to continuously improve the decision making practices of land and water managers. This has involved a number of elements including improving the awareness of managers of problems about the complex relationships involved and the management practices these require, assisting them to access information on the causes of problems, and encouraging them to acquire, as an ongoing process, the skills required to implement ecologically sustainable management practices.

The NATURAL HERITAGE TRUST's Landcare, Rivercare and *Coasts and Clean Seas* Programs have been contributing to the improvement of water management for marine and coastal areas by part-funding project activities such as ecologically sustainable and economically viable re-use options for treated effluent and the demonstration of new, low cost or innovative approaches to water management and delivery of water services, as well as strategic and regional management, planning and monitoring.

Through the Great Barrier Marine Park Authority, the Commonwealth has supported a range of initiatives in partnership with State and Local Governments to monitor and reduce the input of land based pollutants which are destroying seagrass beds. These include a flood monitoring program which investigates the impact of catchment management practices on the spatial and temporal dynamics of flood plumes and their entrained contaminant loads to reef waters; an agricultural research and extension program which will document and demonstrate the impact of variable stocking rates of beef cattle in dryland savannah country on reducing soil and nutrient loss from grazing lands; and a long term water quality monitoring program which monitors chlorophyll concentrations at key sites along the length of the Great Barrier Reef to assess long term changes in the nutrient status of reef waters.

In addition, there is a research program which is developing nutrient and sediment budgets for reef waters from the major catchments draining into Great Barrier Reef waters; a monitoring program which investigates the concentrations of heavy metals and

organochlorine compounds in nearshore sediments and seagrasses and in marine mammal populations; and a research program which investigates the impact of increased nutrient on coral reproduction.

Other initiatives include policy documents written in consultation with the Queensland Department of Environment to provide minimum standards for effluent and wastewaters discharged into World Heritage Area waters. In addition, broadscale and finescale surveys of the distribution of Great Barrier Reef seagrass beds (including recently discovered deep water meadows) have been funded for key areas of the Great Barrier Reef. Future surveys will target dugong protection areas (DPAs) will be conducted in conjunction with the Queensland Department of Primary Industry.

The *Coasts and Clean Seas* Monitoring Program is tackling this issue via a series of state workshops, culminating in a national workshop held in late 1997. Follow-up of the outcomes of this national workshop is underway.

The Commonwealth has also provided funding to address more general issues. For example, the National Landcare Program has provided funding assistance since 1997 to the Australian Fertiliser Services Industry Association to develop a set of Guidelines and Code of Practice for the fertiliser services industry. The principal aim is to ensure that the practices of the fertiliser industry are ecologically sustainable and economically viable by the year 2000. The project aims to minimise the impact of the industry's activities on Australia's land, water and air resources while guaranteeing a sustainable future for the agricultural industry.

Recommendation 14

The Committee recommends that the Commonwealth Government work with State and/or local authorities, as appropriate to develop and review standards and procedures relating to the prevention and control of oil spills in Australian waters, in consultation with the Australian Maritime Safety Authority and other relevant bodies, including the development of management plans for fishing vessels and small pleasure craft in the nearshore zone.

Response

The majority of fishing vessels and small pleasure craft are subject to State and Territory jurisdiction in respect of legislative requirements and management plans. That said, standards and procedures relating to the control of oil spills are contained in the National Plan to Combat Oil Pollution of the Sea by Oil (NatPlan). NatPlan, administered by the Australian Maritime Safety Authority (AMSA), brings together the resources of the States, Northern Territory, the Commonwealth and industry to respond to oil pollution incidents in the marine environment including incidents caused by fishing vessels and small pleasure craft. Improvements to NatPlan over the last few years have enhanced Australia's preparation for a major spill by addressing review and reassessment of contingency plans, including coastal resource atlases, preparedness of equipment, the identification and appropriate training of personnel and the sourcing of additional personnel, equipment and resources.

The NatPlan has been regularly reviewed through both internal and external processes, including the High Level National Plan Review (1993), the Australian National Audit Office Performance Audit (1994); the 1995 Report of the House of Representatives Standing Committee on Transport, Communications and Infrastructure; the Iron Baron Review (1995); the recommendations arising from the major exercise George Bass in Victoria (1996); and the Strategic Directions meeting of the National Plan Advisory Committee (1997).

A review of NatPlan training conducted by both Government and industry is currently under way. The effectiveness of the plan is also reviewed automatically following exercises every two years and every major incident. Australia, through the International Maritime Organization, is coordinating many initiatives aimed at the prevention of oil spills. For example, Australia took an active part in the IMO developing draft regulations to improve the safety of new and existing bulk carriers.

Australia is also a leading proponent of the International Safety Management (ISM) Code which is intended to provide an international standard for the safe management and operation of ships and for pollution prevention by providing for safe practices in ship operation and a safe working environment; establishing safeguards against all identified risks; and continuously improving the safety management skills of personnel ashore and

on-board ships, including preparing for emergencies relating both to safety and environmental protection.

Australia also seeks to prevent oil spills by promoting greater understanding and awareness of maritime issues within the general community and industry, particularly for small vessels, as they relate to the marine environment. This area is a major focus in the National Marine Education Program and *Coasts and Clean Seas*. In 1997, the National Plan Advisory Committee completed a two year education program. The primary focus of this program was the development of an education resource kit and its circulation to several thousand schools, universities and libraries around Australia. Following a decision by the National Plan Advisory Committee in November 1997, a new three year program has commenced.

As previously mentioned, under *Coasts and Clean Seas*, the Commonwealth, States and the Northern Territory have been working together to develop automated databases - electronic coastal resource atlases - to identify what is most at risk from oil spills and maritime accidents. These atlases provide information on such things as biological resources, environmentally significant and sensitive areas, and ownership of potentially affected sites and infrastructure. The atlases will greatly assist in planning for contaminant spills, installing the most effective protection for our foreshores and deploying the most appropriate control and clean-up equipment for specific marine environments.

Recommendation 15

The Committee recommends that the Commonwealth Government work with State and/or local authorities, as appropriate to develop uniform national standards and fee structures for the disposal of ships' waste and to incorporate waste reception fees into general port duties in order to discourage dumping of waste at sea to avoid waste reception fees.

Response

Standards for the disposal of ships' wastes in Australia are based upon standards developed by the International Maritime Organization (IMO). These standards must be consistent with Australian quarantine measures and the requirements of our trading partners, as the majority of vessels using Australian ports operate in the international arena. IMO standards are effected through national, State and Territory legislation. This legislation provides for penalties to be levied if dumping of ships' wastes occurs.

The Australian and New Zealand Environment and Conservation Council's (ANZECC) National Strategy on Maritime Accidents and Pollution (the Seagull Report) is currently being implemented. ANZECC has developed a report providing information on mandatory and recommended approaches to improving waste reception facilities at ports, marinas and boat harbours, contained in the recently completed *Best Practice Guidelines*

for the Provision of Waste Reception Facilities at Ports, Marinas and Boat Harbours in Australia and New Zealand. The Guidelines aim to achieve best practice with regard to management of wastes in ports, marinas and boat harbours in Australia and New Zealand and to reduce marine pollution from shipping of all sizes. The Guidelines will be implemented by State and Local Governments through licensing and approval processes for ports, boat harbours and marinas, and other measures for ensuring effective environmental management of these facilities. The Commonwealth Government is also developing an auditing strategy for waste reception facilities. Under the MARPOL (International Convention for the Prevention of Pollution from Ships) 73/78 Convention, regulations, all vessels of over 400 grt must keep a garbage record book to record all waste disposal from 1 July 1998. These regulations will be implemented by State and Territory Governments. The management of marine debris will be improved through a waste recording and audit system for small commercial coastal vessels not covered by current MARPOL regulations. A national monitoring program for marine debris and a community and industry awareness and needs survey is being developed to assist with the education of the community and industry about maritime and shipping issues, including the dumping of waste.

State and Territory Governments are responsible for ports and have been moving to privatise or commercialise their ports and fully recover costs. Incorporating waste disposal costs into general port dues would not be consistent with port users' expectations that charges made by ports be transparent and reflect the nature of the business. Port authorities have responsibility for ensuring adequate waste reception facilities are available, but the provision of such services is usually provided by the waste disposal industry on a competitive commercial basis. Costs of waste disposal vary significantly from port to port depending on the waste disposal facilities available, on the vessel and cargo types handled and many other factors. A uniform national fee structure for ships' waste disposal would lead to cross subsidisation in some ports and would be inconsistent with competitive commercial practices.

Currently, quarantine requirements for disposal of galley refuse from vessels is by means of incineration, deep burial at marked sites or by heat treatment. In most ports this is undertaken by contractors who are monitored and audited by AQIS. The recent Nairn Report on quarantine, *Australian Quarantine - A Shared Responsibility*, recommended that auditing of this disposal be intensified. As these quality assurance arrangements for vessel waste are cost-recovered by AQIS, any review of waste reception fees and fee structures should take the AQIS requirements into account.

It should be noted that some jurisdictions have recently reclassified quarantine waste to the level of hazardous waste. As a result of this reclassification, there has been a steep rise in the costs of quarantine waste disposal. This issue should also be considered in the fee structure for waste disposal.

Recommendation 16

Commonwealth Government Response to the Senate Environment, Recreation, Communications and the Arts References Committee's *Inquiry into Marine and Coastal Pollution*

The Committee recommends that the Commonwealth Government work with State and/or local authorities, as appropriate to negotiate an agreement on the domestic movement of ballast water and to explore with industry and other stakeholders the potential for legislation to implement the Australian Ballast Water Management Guidelines.

Response

The issues of agreement on domestic movement of ballast water and mandatory observation of the Australian Ballast Water Management Guidelines are addressed by the current priorities within the Australian Ballast Water Management Strategy. The Strategy encompasses a range of management and research measures to be undertaken cooperatively by all relevant levels of government, industries and other non-government interests aimed at improving environmental protection.

In relation to coastal ballast water translocations, initiatives have already been taken towards an inter-governmental agreement on the domestic movement of ballast water. The Australian Ballast Water Management Advisory Council (ABWMAC), which includes representatives from each State, the Northern Territory and Commonwealth government agencies, finalised Guidelines for managing the domestic movement of ballast water in November 1996. The Council is administered by the Australian Quarantine and Inspection Service (AQIS) and advises the Minister for Primary Industries and Energy on ballast water issues. At its last meeting on 18 November 1997 the Council agreed to trial the Guidelines between three ports (Melbourne, Adelaide, Devonport) to develop nationally consistent procedures for the application of the Guidelines around Australia. The trial is being funded under *Coasts and Clean Seas*. The Minister for Primary Industries and Energy wrote to State and Northern Territory Ministers responsible for ballast water issues on 2 December 1997 seeking their agreement to the introduction of Coastal Guidelines and in reply the States and Northern Territory have agreed. Resourcing the management of Coastal Guidelines is an issue still under consideration.

In relation to legislation for implementation of the *Australian Ballast Water Management Guidelines* for international shipping visiting an Australian first port of call, initiatives are already underway to secure mandatory regulatory arrangements through the International Maritime Organization (IMO). *The Australian Ballast Water Management Guidelines* for international shipping were introduced in 1990 and are currently implemented on a voluntary basis, in line with a Resolution of the IMO. Legislation for ballast water management is likely following the adoption by the IMO of a mandatory ballast water Annex to MARPOL (the International Convention for Prevention of Pollution from Ships), which is expected in the year 2000. Unilateral action to introduce legislation before this would be inconsistent with Australia's current approach to IMO conventions, and with Australia's stated position in the IMO. In addition, it is unlikely that it would be an effective or practical approach as mandatory management procedures and ballast exchange validation methodologies are still being developed.

Recommendation 17

The Committee recommends continuing Commonwealth support for strategic ballast water research and for specific programs such as research conducted by the National Seastar Task Force.

Response

The Commonwealth is providing continuing support for the Strategic Ballast Water Research and Development Program, developed by the Australian Ballast Water Management Advisory Council (ABWMAC). It is administered by AQIS, and commenced implementation in 1996/97 when it was funded by the shipping industry and the Australian Maritime Safety Authority (AMSA). Funding for 1997/98 will be provided under *Coasts and Clean Seas* and for 1998/99 to 1999/2000, funding will be derived from a levy on both international and coastal shipping.

The National Seastar Task Force has not met for almost two years. The coordinating role undertaken in the past by the National Seastar Task Force in relation to the marine pest, the Northern Pacific Seastar (*Asterias amurensis*), has to a large degree been subsumed by the CSIRO Centre for Research on Introduced Marine Pests (CRIMP). Continuation of funding for research on introduced marine pests should therefore relate to other research organisations, including CRIMP. The Introduced Marine Pests Program under *Coasts and Clean Seas* will be an important source of support over 4 years from 1997-98 for targeted research and management programs to both assess and reduce the impact of harmful exotic species introduced to the Australian marine environment.

The establishment of an incursion response capability for new outbreaks of introduced marine pests is a priority under the Introduced Marine Pests Program. The Australia and New Zealand Environment and Conservation Council (ANZECC), through its Standing Committee on Conservation, is currently working with the Ministerial Council on Forests, Fisheries and Agriculture's (MCFFA) Standing Committee on Fisheries and Aquaculture (SCFA) to establish joint Commonwealth and State arrangements to support a ready response capability for incursions of exotic marine pests.

Recommendation 18

The Committee recommends the replacement of discharge standards based on concentration of pollutants by stronger standards based on scientific understanding of particular marine ecosystems, and the negotiation of uniform standards, where appropriate to avoid competitive undermining of standards in different jurisdictions.

Response

The Commonwealth, on behalf of the Australian and New Zealand Environment Conservation Council (ANZECC) and the Agricultural and Resource Management Council of Australia and New Zealand (ARMCANZ), is coordinating the revision of the ANZECC Water Quality Guidelines for Fresh and Marine Waters, as part of the National Water Quality Management Strategy (NWQMS).

The Guidelines address ambient (environmental) water quality rather than discharge water quality, and through the revision process are moving away from single number guidelines to a risk based approach that takes into account site specific factors that modify the effects of a pollutant. Hence, it comprises a standard national approach that takes into account an ecosystem's unique characteristics to derive meaningful ecosystem specific guidelines (for example ambient nutrient concentrations in estuaries). This approach has been able to be progressed furthest for the natural physical and chemical stressors (such as pH, salinity, turbidity and nutrients) and toxicants listed in the chapter on aquatic ecosystem protection.

The approach requires a greater understanding of the ecosystems being managed than the previous Guidelines and emphasises the need for efficient and effective monitoring programs that will enable environmental/ecosystem modelling approaches to be developed (including load based models). The Guidelines will therefore focus on managing issues and problems rather than individual water quality parameters, and promote a cooperative management approach involving all stakeholders. As part of this new approach, there is a greater emphasis on the use of biological indicators for the assessment of water quality within the wider context of ecosystem integrity, and environmental quality objectives that must be maintained or attained if the values of the water resource are to be protected. More attention has been given to nutrients and algal blooms in the revised guidelines and sediment quality guidelines have been included for the first time.

While implementation of these Guidelines is a matter for individual jurisdictions, the Commonwealth Government encourages their use and notes that the implementation of the NWQMS is one of the COAG Water Reform Framework performance milestones linked to competition policy payments to State and Territory Governments.

The development of national environment protection measures (NEPM) by the National Environment Protection Council (NEPC) is a mechanism for achieving mandatory natural

ambient marine and estuarine water quality standards. It is noted that a proposal for a NEPM for ambient marine and estuarine water quality is likely to be considered by the NEPC in the second half of 1998.

Recommendation 19

The Committee recommends the provision in the National Marine Science and Technology Plan of secure, long-term funding to support taxonomic research and museum collections.

Recommendation 20

The Committee recommends the establishment of a system of Commonwealth funded scholarships and research fellowships attached to particular museums, and to ensure the supply of appropriately trained marine scientists .

Recommendation 21

The Committee recommends a Commonwealth funded group of scientists attached to an existing museum or university to undertake study of Australia's southern waters.

Response to Recommendations 19, 20 & 21

Several submissions made in response to the Scoping Paper for the Marine Science and Technology Plan highlighted the need to build our taxonomic skills base, to introduce a marine science scholarships program, and to improve our understanding of marine species, introduced marine pests, and ecosystems in southern temperate waters. These issues will be addressed in the drafting of the Marine Science and Technology Plan. The Plan will recognise the importance of increasing our understanding of our marine environment and its resources, and will consider means of achieving these objectives.

The Australian Biological Resources Study (ABRS) is a Federal Government project structured to facilitate Recommendations 19 and 20, and thus, indirectly, Recommendation 21. The ABRS is well placed to implement, and is already involved in, many components of these recommendations. It has a long-established grants program for taxonomists, catering for those attached to particular institutions or unattached personnel, and has a PhD scholarship award scheme.

The Government recognises that Australia's southern temperate waters have not been the arch in the way that large areas of our tropical northern waters have. Given the level of endemism in our southern waters, this disparity needs to be corrected over time.

Recommendation 22

The Committee recommends the coordination and standardisation of the collection and management of information relating to the marine environment, and ease of access to that information.

Response

The Commonwealth Government, through the Environmental Resources Information Network (ERIN), a technical group within Environment Australia, is leading the coordination and standardisation of the collection, management and dissemination of information relating to Australia's marine and coastal environment. It has specialised in providing Internet-based access tools and World Wide Web sites that allow easy access to the derived information. Coordination across all spheres of government, industry, academia and the general user community is progressing through the adoption of distributed Internet technologies as one of the major delivery mechanisms. The Commonwealth has a national leadership role to play in the long term dynamic assessment of the marine and coastal environment through the collection of the primary data, its analysis, the production of useable interpreted products, the provision of advice and the establishment of technical monitoring networks which specifically focus on biological indicators as well as water and sediment quality as indicators of environmental health. The national State of Environment (SoE) Reporting Program is also run by Environment Australia.

Recent efforts in the Commonwealth sphere have been directed to Global Ocean Observing System (GOOS), the Marine Science & Technology Plan, Oceans Policy, UNCLOS Law of the Sea boundary definitions, the Australian Spatial Data Infrastructure (ASDI) and the scoping of the creation of a National Marine Data Group (NMDG).

There are a number of Commonwealth Government initiatives designed to further organise the collection, collation and distribution of coastal and marine information. The Heads of Marine Agencies (HOMA) and the Commonwealth Spatial Data Committee (CSDC) provide information on a voluntary basis about the status of marine & coastal data/ information management and dissemination. This includes custodial arrangements for the long term storage and maintenance of nationally significant core datasets within Australia across all marine disciplines.

The Australian Coastal Atlas (ACA) Project is a major national initiative currently underway which allows users to customise a map with several spatial information layers using a distributed World Wide Web architecture. This project involves collaboration with State and the Northern Territory Governments to establish a series of State Nodes to the Australian Coastal Atlas. The basic premise of such distributed systems is that the organisations or people who are best able to update and maintain the information are encouraged to do so in their role as primary custodians. The ACA specifically focuses on

the coastal realm (200m isobath - 100 km inland). It is envisaged that coastal monitoring programs will feed directly into the ACA.

The National Marine Information System (NatMIS) has helped establish a national network of marine and coastal agencies making their information available via a series of agency marine and coastal World Wide Web sites in a mutually supportive way via the Internet. CoastNet is a forum on the Internet for communicating about coastal management issues that allows ideas, initiatives and solutions to marine and coastal problems to be openly discussed. It has a series of topical discussion groups (List Servers), information on conferences and workshops, on-line manuals and reports and details on community monitoring programs. The Marine and Coastal Data Directory of Australia (Blue Pages) Project is a distributed directory of ANZLIC-compliant marine and coastal dataset descriptions (metadata) held in Australia that allows users to enter and edit their dataset or monitoring information directly using the Internet from anywhere in Australia. There are currently 3,500 entries on the Blue Pages from 35 Agencies, 10 of which host the information on their own site. Commonwealth datasets for the Interim Marine and Coastal Regionalisation for Australia (IMCRA) Project have been provided to ERIN for loading into the NatMIS. In addition, several national workshops addressing the coordination and standardisation of marine and coastal data have been organised by the ERIN Marine and Coasts Team in the last four years and have resulted in several products being distributed and on-line manuals being released.

Recommendation 23

The Committee recommends that the Commonwealth Government work with State and/or local authorities, as appropriate to develop uniform legislation requiring local councils to provide information relating to the health of the marine environment and impact of proposed developments, waste disposal practices and licence conditions, on request.

Response

The Government supports this recommendation in principle, but notes that local councils only hold a portion of the information about the health of the marine environment and impacts of proposed developments, waste disposal practices and licence conditions. Substantial information is held by State and Territory Governments, Commonwealth bodies such as the Great Barrier Reef Marine Park Authority (GBRMPA) and CSIRO, research bodies and industry. The community sector also has some information. An exclusive focus on local councils to the exclusion of other bodies will not fully address the perceived problem.

Recommendation 24

The Committee recommends the development of models for community participation in local authority processes, and uniform legislation requiring local councils to provide opportunities for the community to be involved in the decision making process relating to proposed developments and their impact on the marine environment.

Response

This recommendation needs to be considered by individual States and Territories in recognition of their legislative responsibilities with regard to local councils. The Commonwealth has no jurisdiction relevant to this recommendation. That said, *Coasts and Clean Seas* will be delivered through the tripartite Coastal Memoranda of Understanding (MOU) between State/Territory governments, State/Territory Local Government Associations and the Commonwealth. These MOUs will maximise the potential for cooperative Commonwealth, State/Territory and Local Government program delivery and policy development, recognising the extensive interests of all three spheres of government in coastal management and encouraging active ownership by all parties of the issues associated with coastal and marine environmental protection and remediation. This recommendation could be addressed through the consultative mechanisms set up under the *Coasts and Clean Seas* MOUs.

Recommendation 25

The Committee recommends that the Commonwealth Government work with State and/or local authorities, as appropriate to the provision of opportunities, such as those offered by Coastcare, for members of the community to participate in monitoring and management of the marine environment and in the formulation of policies and programs relating to such activities.

Response

Coasts and Clean Seas is a major component of the Natural Heritage Trust (NATURAL HERITAGE TRUST) designed to help tackle coastal and marine pollution problems, threats to marine biodiversity and habitat degradation, and to promote ecologically sustainable use of Australia's coastal and marine areas, including estuarine areas.

The *Coast and Clean Seas* Coastcare program, through State Assessment Panels, provides funding for community groups to participate in monitoring and management of the marine environment. For example, the North-East Albert Landcare Group have been funded to monitor the impacts of acid sulfate soils in the Hotham Creek and Pimpama River, two important designated fish habitats of Moreton Bay that are periodically affected by acid discharges. The data generated will provide a platform for the local management of acid sulfate soils and their impacts.

The *Coast and Clean Seas* Coastal Monitoring Program aims to assist coastal and marine managers and the wider community in identifying significant threats to the coastal and marine environments and, over time, in assessing the effectiveness of policies designed to protect the environment. For example, the Commonwealth is funding the Jervis Bay Marine Ecological Study, where community groups are taking an active role in monitoring aspects of the environment which are relevant to the management of Jervis Bay.

The Commonwealth, in conjunction with the CSIRO Centre for Introduced Marine Pests, is funding a \$100,000 twelve month pilot project in 1997-98, to facilitate awareness and support community monitoring of introduced marine pests. The community monitoring pilot will provide an important detection and identification mechanism to pursue incursion management activities under the Introduced Marine Pests Program of *Coasts and Clean Seas*.

Recommendation 26

The Committee recommends the development of strategies to assist indigenous communities in the management of their parts of the coastal zone.

Response

Australia's Oceans Policy is being developed in cooperation with the States and Northern Territory Government. The policy recognises that Aboriginal and Torres Strait Islander peoples occupy significant coastal areas of Australia, that there is continued strong cultural association with the coastal area and that indigenous communities have an important role to play in the development of integrated approaches to management of coastal resources. There are a number of processes in train to identify and agree upon indigenous interests in the ocean, including those relating to Aboriginal and Torres Strait Islander marine management and conservation aspirations and responsibilities, indigenous fishing and the maintenance of continued access to traditional marine resources. Consideration will be given to indigenous participation and co-management at all levels of planning and management.

The Commonwealth, in partnership with the States and Territories, is developing an Aboriginal and Torres Strait Islander Fisheries Strategy (ATSIFS), which aims to address concerns and issues raised by indigenous groups about the management of fisheries. ATSIFS objectives include the establishment of structures and processes within each jurisdiction for effective consultation with, and involvement of, Aboriginal and Torres Strait Islander peoples on the shared use of coastal aquatic resources; the development of principles and mechanisms for identifying understanding and recognising Aboriginal and Torres Strait Islander peoples; cultural associations with, and traditional use of, coastal aquatic resources to assist in management processes and the development of

arrangements for promoting greater involvement of Aboriginal and Torres Strait Islander people in sustainable fishing and fishing related activities.

The Aboriginal and Torres Strait Islander Coastal Reference Group was established to provide advice to the Commonwealth on the development and implementation of initiatives to involve Indigenous peoples in coastal resource management in the various program elements of *Coasts and Clean Seas*. An Indigenous Communities Component of Coastcare has been established to provide support for the participation of Aboriginal and Torres Strait Islander communities and organisations in coastal management providing funds specifically designated for projects undertaken by indigenous communities and organisations.

Commonwealth initiatives underway in the Torres Strait will assist ongoing fulfilment of environmental obligations by parties to the Torres Strait Treaty while helping the Torres Strait Islanders to sustainably manage their marine and coastal environment. The Commonwealth is working on these initiatives in cooperation with the Queensland Government, the Torres Strait Regional Authority and the Torres Strait Island Coordinating Council.

A Strategy for the Planning of Resource Integration in the Torres Strait (SPRITS) is being developed to ensure that decisions on activities in and around the Torres Strait Protected Zone, designated under the Torres Strait Treaty, support the sustainable use of the region's natural resources. SPRITS is taking an integrated approach to the management of a broad range of activities in the Torres Strait such as conservation, shipping, fisheries and cultural resource management. SPRITS will draw together other complementary activities in the Torres Strait.

One such activity is the Marine Study for Torres Strait Environment Resources Strategy (MaSTERS) which provides a mechanism for Torres Strait Islanders to participate in developing and delivering environmental management initiatives at a local level. Among other things, MaSTERS has collected cultural and environmental information through fieldwork and collaborative work with other agencies.

The Commonwealth and Queensland Governments are also working together to develop a Multiple Use Strategic Plan (MUSP) for the Southern Gulf of Carpentaria. The MUSP will guide stakeholders on the future sustainable use of the waters and adjoining coastal areas of the region while helping to secure social and economic benefits for the Gulf community.

Recommendation 27

The Committee recommends that the Commonwealth Government work with State and/or local authorities, as appropriate to the consideration of establishing marine science courses, with equal status to other tertiary entrance subjects, in all States, and to provide funding for marine resource centres at strategically located schools.

Response

Coastcare has helped establish the Star of the Sea Marine Discovery Centre, which will include an aquaria, a touch tank, internet access, a video microscope and displays. This school will also act as a research centre for other schools. Funding will also be provided for a Curriculum Development Officer. Another Coastcare project assists a consultant making school visits around Tasmania to increase awareness of Tasmania's marine and coastal environment. Further, the Commonwealth has supported TAFE, University and Professional Associations to deliver coast and marine educational courses in regional locations around Australia. A Coastal and Marine Short Course program is underway within each State for middle managers and operational staff in a wide range of coastal management disciplines.

The Commonwealth Government works with State and Territory Governments on issues relating to schools through the Ministerial Council for Education, Employment, Training and Youth Affairs (MCEETYA). However, the establishment of marine science courses or marine resource centres in strategically located schools, is primarily the responsibility of individual State and Territory Governments.

Recommendation 28

The Committee recommends the provision of funds to relevant peak industry bodies, including the tourism sector, to develop educational materials for use within particular industries, in schools and in the general community.

Response

The Commonwealth has supported the development of a number of Codes of Practice and Guidelines with peak industry and professional associations under the *Coasts and Clean Seas Capacity Building Program*. Improved coastal management is being pursued through joint ventures with professional associations and peak industry groups to develop codes of practice that promote enhanced coastal management through the identification and dissemination of best practice. Codes of practice or guidelines are currently being, or have been developed for the aquaculture industry, the recreational fishing industry, Surf Lifesaving Association, the coastal planning sector, the commercial fishing sector, the engineering sector and the tourism industry.

The Commonwealth has encouraged the further uptake of coastal and marine studies by schools, field studies centres and preservice universities through the Coast and Marine School Project. The first stages of the project focused on a needs analysis to determine the status of marine education in educational facilities in each state, the extent to which coast and marine subjects are taught in the curriculum and what resources are available to support this. The second and third stages have developed a training manual which is currently being utilised with a select number of educators in a 'train the trainer model'. It is hoped that by utilising this model a wide variety and number of educators (university lecturers, teachers, field studies and interpretive staff) will be provided with professional development in coast and marine studies.

In addition, Coastcare has provided funding for Tasmanian teachers to gain a better understanding of coastal and marine issues and the roles of community groups in maintaining ecosystems as a means of enhancing the teaching of marine and coastal issues within appropriate learning areas. The Commonwealth Government works with State and Territory Governments on issues relating to schools through the Ministerial Council for Education, Employment, Training and Youth Affairs (MCEETYA). However, the adoption or use of education materials in schools is primarily the responsibility of individual State and Territory Governments.

Recommendation 29

The Committee recommends the development of a general media campaign, such as the Do the Right Thing campaign to raise community awareness of marine pollution issues and the effect of everyday activities, including those in the home, on the marine environment.

Response

Media activities are being undertaken to promote special events during the year. For example, Seaweek is an Australia-wide, public education campaign conducted each year to provide information, focus community awareness and encourage the appreciation of the sea and marine habitats. Other media campaigns that raise community awareness of marine issues and the effect of human activities are included in programs such as Coastcare, International Year of the Ocean and Ocean Care Day.

Ocean Care Day is an annual event that promotes the achievements of community and user groups and individuals actively pursuing conservation of Australia's marine and coastal ecosystems at a national, regional and local level. The underlying philosophy of Ocean Care Day (held on the first Sunday in December) is that every Australian has a responsibility to care for Australia's marine and coastal zone. Facilitated by the National Marine and Coastal Community Network (MCCN), Ocean Care Day aims to catalyse and coordinate a broad variety of locally based activities, linking them under a common theme. To this extent, activities are organised by community groups themselves, with the

MCCN acting to encourage involvement, with a subsequent role to promote events and community participation in coastal and marine management. In addition, it is anticipated that the launch of the Oceans Policy and Marine Science and Technology Plan in mid-1998 will provide a further opportunity to raise the profile of marine issues.