A Stocktake of Environmental, Socio-economic and Governance Performance Assessment Systems in use by Australian Governments

Final report to the National Oceans Office

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Summary

Australia's Oceans Policy (Commonwealth of Australia 1998, p.13) states that for each marine region, Australia is required to:

> *'establish indicators of sustainability and requirements for monitoring, reporting and performance assessment.'*

To assist the National Oceans Office to develop an performance assessment system for our oceans, the Bureau of Rural Sciences (BRS) in collaboration with the Australian Bureau of Agricultural and Resource Economics (ABARE) was contracted by the National Oceans Office to carry out a 'stocktake of environmental, socio-economic and governance performance assessment systems in use by Australian governments.'

The National Oceans Office will use the outputs of this project to assist it in developing a pilot performance assessment system for the South-east Marine Region. It is envisaged that once approaches and assumptions have been tested and validated, the pilot performance assessment system will act as a model for subsequent regional marine plans.

Twenty seven performance assessment systems were reviewed covering a wide range of government agencies and topics. Each system was analysed for content (objectives, indicators, performance measures and linkages with decision rules), output (data collection and availability) and relevance to Regional Marine Plans and *Australia's Oceans Policy* in general.

The performance assessment systems reviewed within this report do not currently provide a comprehensive, ongoing assessment of all the types of objectives that will be required for regional marine planning purposes. However, many existing performance assessment systems, or ones currently under development, can provide useful information and examples for the National Oceans Office. Assessment of the health of ocean ecosystems could be incorporated into State of Environment Reporting. Assessment of impacts of human uses on ocean ecosystems is already monitored within some existing performance assessment systems. Assessment of the contributions of ocean systems to social and economic ESD objectives will require a process for extracting marine region specific information from existing data collection systems.

1. Introduction

Performance assessment is a tool by which the efficiency and effectiveness of management actions pursued through regional marine plans can be monitored.

Australia's Oceans Policy (Commonwealth of Australia 1998, p.12) states that for each marine region, Australia is required to continually monitor the performance of ocean planning and management processes.

The *Draft South-east Regional Marine Plan* and the *Oceans Policy: Principles and Processes* documents set out further requirements for the development of a performance assessment system for Australia's oceans. In particular, actions 2.12 and 4.6 *Assess and monitor ecosystem health and integrity in the Region* and 4.6 *Develop a performance assessment system for the South-east Marine Region* as important steps for implementing Ecosystem-Based Management and addressing issues in the Region.

To assist the National Oceans Office to develop an performance assessment system for our oceans, the Bureau of Rural Sciences (BRS) in collaboration with the Australian Bureau of Agricultural and Resource Economics (ABARE) was contracted by the National Oceans Office ('the Office') to carry out a 'stocktake of environmental, socio-economic and governance performance assessment systems in use by Australian governments.'

The stocktake includes an overview of the various performance assessment systems in use or under development to monitor environmental, economic and social outcomes, the range of operational objectives, indicators and performance measures contained within them, the monitoring systems in place to measure performance and an assessment of current data availability.

The National Oceans Office will use the outputs of this project to assist it in developing a pilot performance assessment system for the South-east Marine Region. It is envisaged that once approaches and assumptions have been tested and validated, the pilot performance assessment system will act as a model for subsequent regional marine plans.

2. Project method

The project method has involved five steps:

1. Determining the scope of the project
2. Collecting and collating information
3. Analysis
4. Recommendations
5. Reporting.

A list of possible performance assessment systems[1] was drawn up in consultation with the National Oceans Office. The list was refined during the course of the project.

A proforma (Appendix A) was developed in consultation with the Oceans Office to record key information on each performance assessment system.

In carrying out our task, we have used the most recent terminology provided by the National Oceans Office on 11 March 2004:

- **Ecologically Sustainable Development (ESD) objectives** which identify environmental, social and economic elements which are critical to the sustainability of the systems as a whole (eg maintain ecosystem structure and function/biodiversity/ecosystem services; maintain vibrant and sustainable human communities; maintain average household income/local economic growth…)
- **Use/non-human threat objectives** which identify how we want the identified human use or non-human threat to respond to management (eg decrease in rate of introduction of marine pests; maintain local employment levels; avoid declines in profit in marine-based industries)
- **Action objectives** which identify what actions we are implementing (eg implement a communication strategy; establish a marine protected area; introduce tax incentives to improve investment in marine industry).

The classification of objectives can be context specific. In order to provide a consistent basis of classification across different performance assessment systems we adopted the following rules:

- Objectives specifying the desired state or condition of components of ecological, social or economic systems were classified as ESD objectives
- Objectives specifying transfers or flows between ecological, social or economic systems were classified as use/non-human threat objectives. From the point of view of a particular system or system (eg marine ecosystem, regional community) this classification includes three sub-classes:
  - Benefits or costs flowing from the system to other systems through human use or activity within the system
  - Benefits or costs affecting the system through human activity outside the system

[1] Within this project we have interpreted 'performance assessment system' quite broadly. For the purpose of this work, performance assessment system includes any system that we feel provides useful information or direction for the development of a marine performance assessment system.

  - Benefits or costs affecting the system through non-human processes.

- Objectives specifying actions to be taken were classified as action objectives provided they were identifiable actions. For example, an objective ‘to ensure an adequate standard of living . . .’ although written as an action was classified as an ESD objective.

We have also assumed the following definitions:

- **Operational objective**: an objective that has a direct and practical interpretation and against which performance can be measured.
- **Indicator**: a quantity that can be measured directly and used to track changes over time with respect to an operational objective.
- **Performance measure**: a function that converts the value of an indicator to a quantitative measure of performance with respect to the operational objective. A performance measure may include comparison of the value of the indicator against one or more reference points.

The proformas were completed through reference to published materials and from information provided directly through contact with individuals in various departments and agencies.

3. Results of Analysis

Appendix B of this report contains completed proformas for 27 performance assessment systems. Appendix C lists a number of other performance assessment systems in use, or in development, which may provide further information. They have not been analysed within this report either because they appear less relevant to the National Oceans Office than those selected for analysis or simply because they were identified too late in the project.

3.1 Performance Assessment System Characteristics

The major characteristics of each performance assessment system analysed are summarised in Table 1. Characteristics included are: the name of the performance assessment system; the responsible agency, reason for existence of the performance assessment system (eg. legislative requirement), subject covered (eg. fisheries); scope of the performance assessment system (economic, social, governance or ecological); and the relevance of the performance assessment system to the National Oceans Office's work.

Many of the systems outlined in Table 1 can be classified as either resource-focussed or activity-focussed (Chesson 2003). Resource-focussed systems consider the combined result of human and non-human impacts on a resource of interest (eg oceans, forests, rivers). Activity-focussed systems consider the impacts of an activity (industry, government program) on some or all of our environmental, social and economic systems.

Examples of resource-focussed systems include:

- Commonwealth Marine Reserves
- State of the Environment
- National Regional Evaluation Framework
- Sustainable Rivers Audit
- Australia's State of the Forest Report.

Examples of activity-focussed systems include:

- Australian Fisheries Surveys
- Environment Plan for Offshore Petroleum Activity
- National ESD Reporting Framework for Australian Fisheries
- Indicators for Sustainable Agriculture.

Another class of performance assessment system is those systems that monitor 'events' such as accidents, breaches and marine pest incursions. Examples include:

- National System for the Prevention and Management of Marine Pest Incursions AMSA: Safety and Protection
- Port Monitoring for Marine Pests.

In addition, some systems are actually 'super systems' that provide a template or guidelines for creating a performance assessment system for individual entities such as marine reserves, fisheries or regions. Examples include:

- Commonwealth Marine Reserves
- Environment Plan for Offshore Petroleum Activity
- National ESD Reporting Framework for Australian Fisheries
- National Natural Resource Management and Monitoring Evaluation Framework.

It should be noted that the above classes are not intended to be mutually exclusive, nor are there necessarily sharp boundaries between them. We use them as a convenient summary of the detail that appears in each proforma.

Table 2 classifies each performance assessment system as described above and indicates whether the system is intended to be a performance assessment system, addresses part of a performance assessment system (eg data collection) or is something else altogether. The type of framework (eg. ESD, program evaluation, pressure-state-response) is also specified.

3.2 Performance Assessment System Content

A performance assessment system consists of:

- a set of objectives against which performance can be assessed — **operational objectives**
- the information to be used to make the assessment — **indicators**
- instructions for interpreting performance against the stated objectives — **performance measures**.

Since not all of the systems included in this stocktake were set up to be performance assessment systems, it would be unreasonable to expect them to contain all the ingredients of a performance assessment system. Nevertheless, we have assessed them against the standard ingredients so that comparisons can be made more easily.

Objectives and indicators

The objectives and indicators included in each performance assessment system are summarised by type (ESD, use/non-human threat, action) and topic (environmental, economic, social, governance) in Table 3 and Table 4 respectively. The number of stars depicts the relative emphasis on each type and topic within each system. Five stars depict 100% and zero stars depict 0%.

Objectives and indicators are included in the same table to facilitate comparisons. A difference in relative emphasis between objectives and indicators can reflect the lack of explicit objectives, particularly at the operational level. This is to be expected for systems that were not set up as performance assessment systems. However, it can also be a feature of performance assessment systems where only high-level objectives are stated and operational objectives are implied through the choice of indicator rather than an explicit statement of the objective.

Even with the rules specified in the methodology section, we sometimes found it difficult to categorise objectives and indicators as ESD, use/non-human threat or action. Subtle differences in the way an objective was expressed can move it from one category to another. Sometimes an objective may fall into one category, but the indicator selected to measure performance may be of a different type. Table 3 should therefore be regarded as a general indication rather than a definitive assessment.

Performance measures

Very few systems include explicit performance measures. This is hardly surprising for systems that were not designed for performance assessment, but explicit performance measures are rare even in purpose-built performance assessment systems. The best example is Tasmania's Tasmania Together system where targets are specified for each 5-

year period to 2020. Fishery stock assessments as reported in the Fishery Status Reports may have a limit reference point that defines a performance measure. The National ESD Reporting Framework for Australian Fisheries expects an objective, indicator and performance measure for each component. Other systems such as the Environment Plans for Offshore Petroleum Activity and Performance Assessment and Reporting Framework for Commonwealth Marine Reserves lend themselves to the inclusion of performance measures but the framework itself does not emphasise them. Their inclusion will depend on the individual plan or reserve.

Performance measures can be inferred in some cases from the objective (if stated) and the indicator. Some systems deliberately avoid introducing performance measures because they regard their role as a neutral provider of information from which the reader should make their own assessment (eg State of Environment Reporting, Sustainable Rivers Audit, Measuring Australia's Progress, State of the Forest Report).

Linkages between objectives, indicators, performance measures and decision rules

Linkages between objectives, indicators, performance measures and decision rules are strongest for the minority of systems that explicitly define these ingredients. Among the strongest systems in this regard are those that generate individual performance assessment systems for each subunit (eg, Commonwealth Marine Reserves Performance Assessment Framework, Environmental Plan for Offshore Petroleum Activity, National ESD Reporting Framework for Australian Fisheries, Strategic Assessments - Fisheries). These systems are intended to be an integral part of the day-to-day operations of the petroleum activity, marine reserve or fishery and hence interact directly with day-to-day management actions. The individuals generating the data and reporting on the indicators are the same or closely linked to those who are making management decisions. A similar level of linkage applies in event monitoring systems such as the AMSA Safety and Protection Systems.

Where the distance between reporting and management is greatest, the link between objectives, indicators and performance measures and decision rules and management action is least direct (eg State of the Environment, National Land and Water Resources Audit, Indicators for Sustainable Agriculture). This type of reporting still has an important role, but the nature of the management action is more diffuse and less likely to be tied to specific decision rules.

3.3 Indicator data availability

Information on data availability for each of the performance assessment systems is provided in Table 5. A significant number of the systems are still in the developmental stage and have not yet produced data. Others were implemented as a 'one-off' and their long-term future is uncertain. The output of many systems would need to be made marine regionally specific in order to assess performance of Regional Marine Plans. Data and indicators that might be used directly by the National Oceans Office include the Australian Fisheries Surveys, Fishery Status Reports, Marine Matters and the AFMA Annual Report.

4. Relevance to the National Oceans Office

None of the performance assessment systems reviewed within this report currently provide a comprehensive, ongoing assessment of all the types of objectives that will be required for regional marine planning purposes. This fact is acknowledged in the Draft South-east Regional Marine Plan. However, various current performance assessment systems, or ones currently in development, may offer data, approaches or objectives for the National Oceans Office's work.

4.1 Assessing the state of the ocean ecosystem

State of Environment Reporting has the potential to provide an assessment of the state of ocean ecosystems, but in its current form it relies on data collected through other processes and does not initiate primary data collection. The National Land and Water Resources Audit is an example of how data has been compiled for a one-off assessment of terrestrial systems but there has been no specific commitment to ongoing assessments. The Natural Resource Management Monitoring and Evaluation Framework sets out some principles and specifies matters for target together with some recommended indicators relevant to two major terrestrial programs (National Action Plan for Salinity and Water Quality and Natural Heritage Trust), but at present it does not provide coordinated monitoring or reporting. Some of the criteria established for creating regional plans may be useful for the Oceans Office and are provided in Appendix 4. The Sustainable Rivers Audit is a terrestrial example of a system being developed to provide a comprehensive, ongoing assessment of ecosystem health.

A number of systems have the potential to assess the state of particular subcomponents of ocean ecosystems. Commonwealth and State and Territory systems assess the status of harvested (commercial, recreational and indigenous) marine species (Australian Fisheries Statistics, Fishery Status Reports, The National Recreational Fishing Survey). Listing of threatened or endangered species under Commonwealth and State and Territory legislation provides a coarse assessment of trends in species richness and management plans for individual species of concern may include ongoing assessment of the status of that species. The National System for the Prevention and Management of Marine Pest Incursions will incorporate risk assessment, management and monitoring and should provide performance assessment information on the status of unwanted species. The management of marine reserves can include the collection of performance information on particular sub-components of ocean health as they relate to that reserve. These might include the status of species of particular interest as well as the extent and condition of specific habitats.

4.2 Assessing impacts on the ocean ecosystem

A number of systems have the potential to assess the actual or potential impact of particular activities or uses on ocean ecosystems, ie, one of the three sub-classes of use/non-human objectives. The generic management objective is to reduce, minimise or eliminate undesirable impacts. Systems with the potential to provide this type of information include all the sector-specific environmental performance assessments (eg, Commonwealth Marine Reserves Performance Assessment framework, Offshore

Petroleum Activity Environmental Plan, National ESD Reporting Framework for Australian Fisheries) as well as systems that record 'events' such as accidents, breaches and marine pest incursions (National System for the Prevention and Management of Marine Pest Incursions, AMSA: Safety and Protection, AFMA Governance Reporting, Port Monitoring for Marine Pests).

4.3 Assessing benefits and costs associated with ocean use

Some of the benefits and costs flowing to human systems from ocean use (the second of the three sub-classes of use/non human threat objectives) are routinely assessed by existing systems. These include ABARE's fishery surveys and statistics as well as basic economic and employment statistics reported by the Australian Bureau of Statistics.

ESD objectives articulated for human systems by DOTARS (DOTARS Program Evaluation), the National Regional Evaluation Framework and others (Australia's State of the Forest Report 2003, Overcoming Indigenous Advantage, ATSIC Putting the Pieces Together, ABS Measuring Australia's Progress, Tasmania Together) are of relevance as they can help define the objectives for the flow of benefits from the SEMR to human systems. However, the indicators used to measure performance against these ESD objectives in these systems will not be sufficient to measure Oceans Policy performance. An additional step is needed to separate the contribution of oceans ecosystems from all other contributions to that particular ESD objective. The relevance of this work to performance assessment for Regional Marine Plans will also depend on how objectives for contributions to the human system are formulated for Marine Plans. If, for example, Marine Plans make no distinction between human communities in the proximity of a Marine Region and human communities in other parts of Australia then a break down of benefits by (terrestrial) region will not be required.

Important, but less tangible benefits and costs flowing to human systems from ocean use and existence include recreational, aesthetic, cultural and spiritual contributions to total quality of life. The recreational fishing survey has the potential to provide information on one of these. Other systems address safety (AMSA: Safety and Protection) and cultural heritage (State of the Environment, Australia's State of the Forest Report 2003, Overcoming Indigenous Advantage, ATSIC's Putting the pieces Together).

5. Conclusions

Regional Marine Plans and *Australia's Oceans Policy* will require a performance assessment framework that combines the features of a resource-focussed framework for oceans ecosystems with the features of an activity-focussed framework for ocean-based uses and activities.

None of the performance assessment systems reviewed within this report currently provide a comprehensive, ongoing assessment of all the types of objectives that will be required for regional marine planning purposes. This fact is acknowledged in the Draft South-east Regional Marine Plan. However, various current performance assessment systems, or ones currently in development, may offer data, approaches or objectives for the National Oceans Office's work. Assessment of the health of ocean ecosystems could be incorporated into State of Environment Reporting. Assessment of impacts of human uses on ocean ecosystems is already monitored within some existing performance assessment systems. Assessment of the contributions of ocean systems to social and economic ESD objectives will require a process for extracting marine region specific information from existing data collection systems.

6. References

(References for individual performance assessment systems are provided in Appendix B.)

Chesson, J., Whitworth, B. 2003, *Options for indicator frameworks for sustainable agriculture and rangelands*, Bureau of Rural Sciences, Canberra.

Commonwealth of Australia 1998, *Australia's Oceans Policy*. Environment Australia, Canberra, pp. 48.

Table 1. Performance assessment system characteristics

Performance Assessment System	Agency	Purpose	Reason (Legislated, formalised, informal)	Subject (who/what is being evaluated)	Scope	Scale	Relevance to National Oceans Office
1 Australian Fisheries Statistics	ABARE	To provide statistics on Australia's fisheries production and trade.	Formalised- For International, National and Industry reporting	Australian Fisheries	Economic	National/State/Industry	Economic indicators, although data not at regional level. Industry data may be aggregated for marine regions.
2 Australian Fisheries Surveys	ABARE	Provide information on the economic performance of the main Commonwealth fisheries and fishing operators	Legislated- *Fisheries Management Act 1991*	Commonwealth Fisheries	Economic	Industry (Fishery)	Economic objectives, indicators and data, includes major fisheries.
3 Performance assessment and reporting framework: Commonwealth Marine Reserves	MPA Section DEH	To fulfil reporting requirements of the Section as well as enhancing its ability to plan and manage its activities while minimising imposts on reserve managers.	Legislated- *Commonwealth Authorities and Companies Act 1997*	Management of Commonwealth Marine Reserves	Mainly Ecological and Program performance	MPA, Region	MPA are part of marine regions and their objectives and indicators are relevant to marine planning.
4 Environment Plan for Offshore Petroleum Activity	DITR	Legally binding agreement on environmental performance objectives, standards and criteria against which the operator will be assessed. Incorporates concept of reducing environmental risks and effects of petroleum activities to as low as reasonably practicable.	Legislated- *Petroleum (Submerged Lands)(Management of Environment) Regulations 1999.*	An operator of an offshore exploration or production facility or activity	Ecological, Economic, Social, Governance	Individual (body corporate)	Applies to operations that occur within marine regions. Good example of a performance assessment system. However, not publicly available.
5 Fishery Status Reports	BRS	Review the status of Commonwealth fisheries and fish stocks	Legislated- *Fisheries Management Act 1991*	Commonwealth fishery's Fish stocks	Ecological some Governance	Industry (Fishery)	This is a review of performance of Commonwealth managed fisheries and fish stocks
6 National ESD	FRDC/SCF	Develop a framework to help	Formalised	Fishery	Ecological,	Industry (Fishery)	Case studies provide

Performance Assessment System	Agency	Purpose	Reason (Legislated, formalised, informal)	Subject (who/what is being evaluated)	Scope	Scale	Relevance to National Oceans Office
Reporting Framework for Australian Fisheries	A/States-Territories	Fisheries Report on ESD performance	SCFA/FRDC/State-Territory funded State requirements Consumer demand		Economic, Social, Governance		some useful objectives, indicators, data and management responses. The framework may help aggregate industries performance for a marine region.
7 National System for the Prevention and Management of Marine Pest Incursions- Strategic plan	National Introduced Marine Pests Coordination Group (NIMPCG)	To provide a national framework to guide the establishment of appropriate structures, mechanisms and operational procedures to minimize the risk of marine pest incursions and, should they occur, to respond in emergency situations and to manage their impacts, including translocation and ongoing control of marine pests already established in Australia..	Formalised	Prevention and management of Marine pests	Ecological, Governance	National, Region, Industry	Provides the coordination of marine pest activities. Relevant actions on marine pests for marine plans.
8 The national recreational and indigenous fishing survey	State and Commonwealth agencies: Data held by BRS	To obtain fisheries statistics to support the management of non-commercial fishing in Australia	Formalised- Part of *National Policy on Recreational Fishing*. Funded by States-Territories NHT and FRDC	Recreational and indigenous fishing	Ecological, Economic, Social, Governance	Nation, Region, Industry	This provides a base of data on non commercial fishing. Data mining would be necessary to apply to Marine plans. Survey methodology and social indicators particularly useful.
9 State Of the Environment	DEH	Provide information on the condition and prospects of the Australian environment;	Legislated- *National Strategy for ESD and EPBC Act 1999*	State of the Environment	Ecological, Social	Nation, Region	Data on coasts and oceans useful for Marine Plans. Methodology for indicators useful. Marine planning should inform SOE.

Performance Assessment System	Agency	Purpose	Reason (Legislated, formalised, informal)	Subject (who/what is being evaluated)	Scope	Scale	Relevance to National Oceans Office
10 National Regional Evaluation Framework	Whole of Government, DOTARS and ABS	To develop a system for M&E of Commonwealth programs and their impact on meeting the government's regional and broader objectives.	Under development	Region	Economic, Social	Region	This will provide a framework for social and economic performance assessment for land regions, and be useful for Marine planning.
11 National Natural Resource Management Monitoring and Evaluation Framework	NRM Ministerial Council	Develop a framework to assess condition of natural resources and performance of programs to achieve this.	Formalised under NRM Ministerial Council	Condition of Natural resources and performance of programs to achieve this	Mainly Ecological and Program performance, some Social	Nation, Region	Provides objectives and indicators (Sustainability and Use) for evaluating regional plans and programs, on land, and may have some relevance to marine planning.
12 Sustainable Rivers Audit	MDBC	The Sustainable Rivers Audit (SRA) will assess river health and ecological condition at the valley scale. It will inform debates on river health management and trigger further investigations into the causes of poor river health in the Basin.	Formalised- a MDBC initiative	Rivers in MDB	Ecological	Region	The SRA is an example of a well-designed, long-term monitoring program to measure ecosystem health.
13 National Land and Water Resources Audit	NLWRA	Create a framework to collect data on Australia's natural resources, assess their status, and determine economic, social and environmental costs and benefits of changing use.	Legislated- *NHT Act 1997*, extended by the Natural Heritage Ministerial board to 2007.- Formalised	Australia's terrestrial and estuary natural resources	Ecological, Economic, and Social	Nation, Region, Industry (agriculture)	Data collection methodology Estuaries data, Social and economic indicators
14 AMSA: Safety and Protection	AMSA	Report on OH&S incidents in shipping	Legislated under *OH&S (MI) Act 1992* Formalised	Shipping OH&S incidents	Social (OH&S)	Nation, State	Occurs in marine areas on ships, but data is at national level and may not be applicable to

Performance Assessment System	Agency	Purpose	Reason (Legislated, formalised, informal)	Subject (who/what is being evaluated)	Scope	Scale	Relevance to National Oceans Office
							regions
15 Marine matters	Oceans Office, AFFA, FRDC	To deliver a comprehensive information resource on human uses of the marine environment and their relationship to coastal communities to inform the regional marine planning process.	Formalised- Funded by Oceans Office, AFFA and FRDC for input to Regional Planning	SE MR and human uses of that region	Social, Economic, Ecological, and Governance	Region, Industry	Data collected on human uses is directly useable for the SE Regional Marine Plan.
16 AFMA Governance reporting	AFMA	The framework is aimed at establishing accountability, providing a focus on fisheries management priorities, managing corporate resources and ensuring that decisions and actions occur as quickly as possible.	Formalised	The board of directors and three committees: finance and audit, research and environment.	Governance	Program	Performance indicators may be of use to Oceans Office
17 DOTARS Program Evaluation	DOTARS	To evaluate the degree to which DOTARS programs are achieving sustainability objectives	Formalised- Internal agency performance evaluation	DOTARS program performance	Mainly Social and Economic, some Ecological, Governance	Program, Region, Nation,	Perhaps useful objectives and indicators will emerge for social components
18 Port monitoring for marine pests	National Introduced Marine Pests Coordination Group (NIMPCG)	To monitor status of marine pests	Becoming formalised as part of the National System for Prevention and Management of Marine Pest Incursions	Marine Pests	Ecological	National (ports)	Relevant subject. Could be extended to include other ecological components.
19 Australia's State of the Forest Report 2003- Reporting against Montreal	NFI (BRS)	To report on the ecological sustainable development of Australia's forests.	Formalised- International requirements under Montreal Process,	Forest	Ecological, Economic, Social and Governance	(International reporting), Nation, Region,	Relevant model as both evaluate 'natural' ecosystems that are utilised by humans.

Performance Assessment System	Agency	Purpose	Reason (Legislated, formalised, informal)	Subject (who/what is being evaluated)	Scope	Scale	Relevance to National Oceans Office
process criteria and indicators			and 5 yearly reporting requirements under *National Forest Policy Statement, 1992*				Components and Performance indicators could be adapted to marine regions.
20 Standing Committee on Agriculture and Resource Management: Indicators for Sustainable Agriculture	SCARM	To assess whether agriculture is sustainable.	Formalised- Requested by Standing Committee on Agriculture and SC on Agriculture and Resource Management.	Agriculture	Ecological, Economic, Social and Governance	Nation, Region.	Potential indicators for governance, social and economic.
21 Overcoming Indigenous Disadvantage	Productivity commission	To inform Australian governments about whether policy programs and interventions are achieving positive outcomes for Indigenous people	Formalised-	Policy programs and their impact on indigenous people	Social, Economic	Program, Nation	Provides potential indicators for measurement of improvement in disadvantage on indigenous people
22 ATSIC Putting the pieces together: Regional Plans, data and outcomes	ATSIC	To assess data requirements and availability for Regional Plans (Regional Council)	Formalised- *ATSIC Act 1989*	Data collected relevant to indigenous people and its usefulness for regional planning	Mainly Social, Economic, some Ecological, Governance	Region (Regional Council), Nation	Potential source of indicators and datasets for measuring indigenous wellbeing and governance at Regional level.
23 Strategic Assessments- Fishery	DEH	To determine whether fisheries are achieving sustainable use.	Legislated- *EPBC Act 1999*	Fishery	Mainly Ecological, some Social and Governance	Industry (Fishery)	Potential operational objectives for fisheries, some indicators. Data not often in the form for re-use (qualitative)
24 Strategic Assessments- Petroleum	DEH	To establish a relationship between the Petroleum (Submerged Lands) (Management of	Legislated- *EPBC Act 1999 and Petroleum (Submerged Lands)*	Petroleum operators impact on marine	Ecological, Governance	Industry (Petroleum)	A Strategic Assessment, if performed, could provide relevant

Performance Assessment System	Agency	Purpose	Reason (Legislated, formalised, informal)	Subject (who/what is being evaluated)	Scope	Scale	Relevance to National Oceans Office
		Environment) Regulations 1999 and the Environment Protection and Biodiversity Conservation Bill 1999.	*(Management of Environment) Regulations 1999*	environment.			information to the Oceans Office on the environmental performance of offshore petroleum activities. Alternatively, depending on its nature it may provide objectives and ongoing performance information on governance arrangements.
25 Measuring Australia's Progress- ABS Headline indicators	ABS	To measure whether life in Australia has improved, (in the past decade)?	Formalised- *National Strategy for ESD 1992*, international directions.	Australia	Ecological, Social, Economic	Nation, some indicators divided to State level	Most useful for indicators and data on social and economic themes. This report shows what data is available immediately. ABS could be paid to provide data on these indicators at relevant Statistical Local Area (SLA) for National Oceans Office requirements.
26 Tasmania Together	Tasmania Together Progress Board (Statutory Authority)	Framework for tackling the problems of Tasmania and setting a long-term vision	Legislated – *Tasmania Together Progress Board Act 2001*	Tasmania	Ecological, Social, Economic, Governance	State of Tasmania	Example of PAS design. Geographically relevant to SEMR.
27 ATSIC Outcome data measurement: Unfinished Business	ATSIC	To assess data requirements and availability for Indigenous programs	Formalised- *ATSIC Act 1989*	Data collected relevant to indigenous people and its	Mainly Social, Economic, some	Programs	Potential source of indicators and datasets for measuring indigenous wellbeing

Performance Assessment System	Agency	Purpose	Reason (Legislated, formalised, informal)	Subject (who/what is being evaluated)	Scope	Scale	Relevance to National Oceans Office
				usefulness for indigenous programs	Ecological, Governance		and governance at Program level.

Table 2. Performance assessment system description

Performance Assessment System	**Description**		
	Is the system a true performance assessment system, an evaluation, just data collection, or some other system? Or does the system provide a template rather than collect data?	**Is the system activity-focussed or resource-focussed, or both?**	**What Framework is used? [2] (eg ESD, P-S-R, Risk Assessment, Program evaluation, other, mix)**
1 Australian Fisheries Statistics	Primarily data collection	Activity-focussed.	ESD framework (the economic component)
2 Australian Fishery Surveys	Performance assessment system	Activity-focussed.	ESD framework (the economic component)
3 Performance assessment and reporting framework: Commonwealth Marine Reserves	A performance assessment system 'template' that is made specific to each marine reserve	Resource-focussed	Inputs – outputs – outcomes reporting framework
4 Environment Plan for Offshore Petroleum Activity	A Plan specific to each petroleum activity/installation	Activity-focussed	P-S-R. Also ESD (only ecological components).
5 Fishery Status Reports	Performance evaluation	Mixed, some parts resource, some activity	ESD (ecological components).
6 National ESD Reporting Framework for Australian Fisheries	A performance assessment system template	Activity-focussed	ESD (social, economic, ecological and governance).
7 National System for the Prevention and Management of Marine Pest Incursions- Strategic plan	Overarching framework and strategy- could lead to a PAS if Tasks are reviewed and updated.	NA	Various-Program assessment, risk assessment/emergency response framework. Pest control generally follows a P-S-R framework, while the National System as a whole is heading towards ESD.
8 The national recreational and indigenous fishing survey	Primarily data collection	Activity-focussed	ESD (social, economic and ecological).

[2] -P-S-R Means pressure-state-response, where a state (or condition) such as a marine ecosystem is affected by a pressure (threat) usually negative, and humans respond to this.
-ESD usually refers to positive and negative impacts on social, economic and environmental over the short and long-term.
-Risk assessment is made up of analysing potential risks and managing those risks.
-Program evaluation is a framework that evaluates program, its objectives, monitoring, evaluation and management response.

Performance Assessment System	Description		
9 State Of the Environment	'Value free' PAS	Resource-focussed	ESD at 'theme' or high level components. Generally P-S-R for lower level components.
10 National Regional Evaluation Framework	Performance assessment system.	Mixed, some parts resource, some activity	ESD (social components) and Program assessment
11 National Natural Resource Management Monitoring and Evaluation Framework	Performance assessment system.	Mixed, mainly resource-focussed objectives and indicators at this point	ESD (social, economic, ecological and governance) and Program assessments
12 Sustainable Rivers Audit	'Value free' PAS	Resource-focussed	ESD (ecological).
13 National Land and Water Resources Audit	Primarily data collection and evaluation. Originally intended to suggest management responses	Mixed	Generally P-S-R (pressure-state-response) although some reports do tends towards ESD (social, economic, ecological costs and benefits)
14 AMSA: Safety and Protection	Performance assessment system.	Activity-focussed	Risk assessment/emergency response framework.
15 Marine matters	Data collation	Activity-focussed	ESD (social, economic, ecological, governance)
16 AFMA Governance reporting	Program evaluation	Activity-focussed	Program evaluation
17 DOTARS Program Evaluation	Program evaluation	Activity-focussed	Program Evaluation. ESD (social and economic components mainly).
18 Port monitoring for marine pests	Data collection	Resource-focussed	Risk assessment, emergency response
19 Australia's State of the Forest Report 2003- Reporting against Montreal process criteria and indicators	Performance assessment system	Resource-focussed	ESD (social, economic, ecological, governance).. Program assessment for governance.
20 Standing Committee on Agriculture and Resource Management: Indicators for Sustainable Agriculture	Performance assessment system	Activity-focussed	Sustaining agriculture. (social, economic, ecological, governance).
21 Overcoming Indigenous Disadvantage	Primarily data review/collection	Resource-focussed	P-S-R, and ESD (mainly social, economic)
22 ATSIC Putting the pieces together: Regional Plans, data and outcomes	Primarily data review/collection	Resource-focussed	ESD (mainly social, economic)

Performance Assessment System	**Description**		
23 Strategic Assessments- Fisheries	Performance assessment system	Activity-focussed	ESD (mainly ecological), P-S-R
24 Strategic Assessments- Petroleum	Performance assessment system	Activity-focussed	ESD (mainly ecological), P-S-R
25 Measuring Australia's Progress- ABS Headline indicators	Performance assessment system	Resource-focussed	ESD (social, economic, ecological).
26 Tasmania Together	Performance assessment system	Resource-focussed	ESD (social, economic, ecological, governance)
27 ATSIC Outcome data measurement: Unfinished Business	Primarily data review/collection	Activity-focussed	ESD (Social, economic, governance mainly)

Table 3. Objectives and indicators by type. Five stars are allocated within a PAS to show the relative importance of each type of objective and indicator

Performance Assessment System	Objectives by type			Indicators by type		
	Ecologically Sustainable Development	Use/Non-human threats	Actions	Ecologically Sustainable Development	Use/Non-human threats	Actions
1 Australian Fisheries Statistics	****	*		****	*	
2 Australian Fishery Surveys	*****			*****		
3 Performance assessment and reporting framework: Commonwealth Marine Reserves	*	**	**	*	**	**
4 Environment Plan for Offshore Petroleum Activity		***	**		***	**
5 Fishery Status Reports	****	*		*****		
6 National ESD Reporting Framework for Australian Fisheries	*	****		*	****	
7 National System for the Prevention and Management of Marine Pest Incursions- Strategic plan			*****			
8 The national recreational and indigenous fishing survey	*	*	***	**	**	*
9 State Of the Environment	***	**		*	***	*
10 National Regional Evaluation Framework	**	**	* (*)			
11 National Natural Resource Management Monitoring and Evaluation Framework	**	**	*	***	*	*
12 Sustainable Rivers Audit	*****			*****		
13 National Land and Water Resources Audit	**	**	*	**	***	

Performance Assessment System	**Objectives by type**			**Indicators by type**		
	Ecologically Sustainable Development	Use/Non-human threats	Actions	Ecologically Sustainable Development	Use/Non-human threats	Actions
14 AMSA: Safety and Protection		*****			****	*
15 Marine matters	****	*		***	**	
16 AFMA Governance reporting	*	*	***	**	*	**
17 DOTARS Program Evaluation						
18 Port monitoring for marine pests	*	***	*	*	***	*
19 Australia's State of the Forest Report 2003- Reporting against Montreal process criteria and indicators	**(*)	**(*)	*	**(*)	**(*)	*
20 Standing Committee on Agriculture and Resource Management: Indicators for Sustainable Agriculture	***	**	(*)	*(*)	***	*
21 Overcoming Indigenous Disadvantage	**	***		**	***	
22 ATSIC Putting the pieces together: Regional Plans, data and outcomes	***	*	*	***	*	*
23 Strategic Assessments- Fisheries	**(*)	**	*	***	**	
24 Strategic Assessments- Petroleum	*	***	*	*	***	*
25 Measuring Australia's Progress- ABS Headline indicators	*	*	***	*	*	***
26 Tasmania Together	***		**	*	*	***
27 ATSIC Outcome data measurement: Unfinished Business	***	*	*	***	**	

Table 4. Objectives and indicators by topic. Five stars are allocated to show the relative importance of each topic.

Performance Assessment System	Objectives by topic				Indicators by topic			
	Ecological	Economic	Social	Governance	Ecological	Economic	Social	Governance
1 Australian Fisheries Statistics		*****				*****		
2 Australian Fishery Surveys		*****				*****		
3 Performance assessment and reporting framework: Commonwealth Marine Reserves	***		*	*	***		*	*
4 Environment Plan for Offshore Petroleum Activity	***	*	*		***	*	*	
5 Fishery Status Reports	****			*	****		(*)	*
6 National ESD Reporting Framework for Australian Fisheries	**	*	*	*	**	*	*	*
7 National System for the Prevention and Management of Marine Pest Incursions- Strategic plan	***	(*)	*	*				
8 The national recreational and indigenous fishing survey	**	*	*	*	**	*	**	(*)
9 State Of the Environment	****		*	(*)	***		*	*
10 National Regional Evaluation Framework	(*)	*	***	*				
11 National Natural Resource Management Monitoring and Evaluation Framework	***		(*)	**	****		(*)	*
12 Sustainable Rivers Audit	*****				*****			
13 National Land and Water Resources Audit	**	*	*	*	***	*	*	(*)
14 AMSA: Safety and Protection			*****				****	*
15 Marine matters	***		**		***		**	
16 AFMA Governance reporting			*****				*****	

Performance Assessment System	Objectives by topic				Indicators by topic			
	Ecological	Economic	Social	Governance	Ecological	Economic	Social	Governance
17 DOTARS Program Evaluation	(*)	**	***	(*)	(*)	**	***	(*)
18 Port monitoring for marine pests	***	*	(*)	*	***	(*)	*	*
19 Australia's State of the Forest Report 2003- Reporting against Montreal process criteria and indicators	**	*	*	*	**	*	*	*
20 Standing Committee on Agriculture and Resource Management: Indicators for Sustainable Agriculture	**	*	*	*	**	*	*	*
21 Overcoming Indigenous Disadvantage		**	***	(*)		**	***	(*)
22 ATSIC Putting the pieces together: Regional Plans, data and outcomes		**	**	*		**	**	*
23 Strategic Assessments- Fisheries	****		(*)	(*)	****			*
24 Strategic Assessments- Petroleum								
25 Measuring Australia's Progress- ABS Headline indicators	(*)	*	*	**	(*)	*	*	**
26 Tasmania Together	*	*	**	*	*	*	**	*
27 ATSIC Outcome data measurement: Unfinished Business	*	**	**	*		**	**	*(*)

Table 5: Monitoring systems and data availability

Performance Assessment System	**Monitoring system/data collection**			**Data availability**	**Usefulness to National Oceans Office**
	In progress,	**Frequency**	**Coverage/ spatial**	**Public/non public/confidential**	**Directly useable (D), Need to make marine region specific (N) A useful Model (M)**
1 Australian Fisheries Statistics	Y	Annually	State, Nation	Public	N
2 Australian Fishery Surveys	Y	Biannually	Industry (Fishery)	Public	D, N-depends some data confidential
3 Performance assessment and reporting framework: Commonwealth Marine Reserves	Y		MPA	non public	N
4 Environment Plan for Offshore Petroleum Activity	Y	Agreed interval- No less than annual	Impacted area	Confidential	Unsure, variable and dependent on issues at the site.
5 Fishery Status Reports	Y	Annually	Industry (Fishery)	Public/confidential	D, N-depends some data confidential
6 National ESD Reporting Framework for Australian Fisheries	N	Sporadic	Industry (Fishery)	Fishery managers	N- Some fisheries in SEMR have completed reports and could be aggregated together.
7 National System for the Prevention and Management of Marine Pest Incursions- Strategic plan	N- soon		National/Regional	Unavailable	D/N- Information that will come out of the national system will be relevant for data and actions in marine planning.
8 The national recreational and indigenous fishing survey	Y	Once, possibly repeated in 5 years	National/Regional/Industry (sector)	Public	N-Regional data is a smaller scale than Ocean Office regions and data analysis would have to be carried out.
9 State Of the Environment	Y	Every 5 years	National/Regional	Public	N
10 National Regional Evaluation Framework	N		Program/Regional		N- Framework currently being developed
11 National Natural Resource Management Monitoring and Evaluation Framework	N		Regional/National		M. In the future data will be collected, this may be at the regional level or national level, or both.
12 Sustainable Rivers Audit	Y	~6 Yearly	Sub-Regional/Region	Public	M. A pilot program has just been completed.
13 National Land and Water Resources Audit	Y	Once, but continuing for another 5 years	National/Regional/Industry	Public	D- estuary condition and description directly useable by Oceans Office. N- Estuary value based on case studies. Estuary

Performance Assessment System	**Monitoring system/data collection**			**Data availability**	**Usefulness to National Oceans Office**
	In progress,	**Frequency**	**Coverage/ spatial**	**Public/non public/confidential**	**Directly useable (D), Need to make marine region specific (N) A useful Model (M)**
					M- Indicators for social and economic could provide a model for marine planning. The Audit as a whole is a good example of setting up and maintaining a monitoring system that could be used in marine planning.
14 AMSA: Safety and Protection	Y	By incident, summarise 5 yearly	Industry	Public	N- Data appears to be only available at the national level, which is not useful for marine plans. Oceans Office could check with AMSA.
15 Marine matters	Y	Once, but continuing through National Marine Matters	Regional, Industry	Public	D
16 AFMA Governance reporting	Y	Annually	National/Industry	Public	D, N
17 DOTARS Program Evaluation	Y	Variable	Program/Region	Non Public	N, M If data becomes available in the future.
18 Port monitoring for marine pests	Y		Port		N, M
19 Australia's State of the Forest Report 2003- Reporting against Montreal process criteria and indicators	Y	Every 5 years	National/State/Region	Public	N (indicators may be interpreted in marine context), M (the Performance Assessment System could be applied to marine ecosystems)
20 Standing Committee on Agriculture and Resource Management: Indicators for Sustainable Agriculture	N	Once off. May be repeated in the future.	National/Regional	Public	M
21 Overcoming Indigenous Disadvantage	Y	Variable	Program	Public	N
22 ATSIC Putting the pieces together: Regional Plans, data and outcomes	N	Once off. Although statistics group in ATSIS taking on data collection	National/Regional	Public	N, M. This report gives a good overview of useful datasets and their indicators/data related to indigenous regional planning.
23 Strategic Assessments- Fisheries	Y	Initial collection,	Industry (Fishery)	Public	N. Most data is presented qualitatively rather than quantitatively.

Performance Assessment System	**Monitoring system/data collection**			**Data availability**	**Usefulness to National Oceans Office**
	In progress,	**Frequency**	**Coverage/ spatial**	**Public/non public/confidential**	**Directly useable (D), Need to make marine region specific (N) A useful Model (M)**
		update after 3-5years			
24 Strategic Assessments-Petroleum	NA	NA	Area impacted by petroleum	Potentially public	Unclear at this stage
25 Measuring Australia's Progress-ABS Headline indicators	Y	2 years	National/ Some indicators are broken down into States and demographics	Public	N, M. This report shows what data is available. ABS could be paid to provide data at relevant Statistical Local Area (SLA) for National Oceans Office requirements.
26 Tasmania Together	Y	Annually for first three years then biennially	State	Public	N, M Could inform development of SERMP objectives
27 ATSIC Outcome data measurement: Unfinished Business	N	Once off	Program	Public	N, M This report identifies datasets and indicators that may be used for reporting on indigenous programs and therefore are of relevance as a model and for data for the Regional Marine Plans, such as SERMP Indigenous participation and/or impacts.

Appendix A: Standard Proforma

PERFORMANCE ASSESSMENT SYSTEM: Information collection sheet			
PAS ID:			
PAS NAME:			
CONTACT'S NAME:			
PHONE NO.		**EMAIL:**	
CONTACT'S NAME:			
PHONE NO.		**EMAIL:**	
DATE:			
REFERENCES/WEB:			

Performance Assessment System name:

Description of the Performance Assessment System

The subject of the Performance Assessment System:

Scale:	**Scope**:
Individual	Ecological
Region	Economic
Industry	Social
National	Governance
International	Other

Purpose: *[What is the goal of the PAS?]*

Reason: [*Are there any legislative requirement, or is it up to agency discretion- for reporting, evaluation, or audit?*]

Relevance to National Oceans Office: [*For example: relevant subject (eg fisheries), geographic area (eg SE, other), relevant methodology that may be used by Oceans Office for Performance Assessment]*

The Framework, Components and Prioritisation

Framework: [*For example P-S-R, ESD, Input-Output, Program assessment*]

Components: *[What components have been included?]*

Prioritisation: *[How are components selected?]*

Objectives and indicators (and performance measures)

Objectives: *[Does the PAS have objectives, what sort, and are they formalised or implicit?]*

Indicators: *[Does the PAS have indicators for each objective, how were the indicators derived?]*

Performance measures: *[How is the indicator interpreted? eg through trends, reference points or limits]*

Table: Objectives and Indicators (and performance measures)

Component	Objective	Formalised/ Implicit	Indicator	Performance measure	Type of objective/ indicator (1,2)

1. The Oceans Office classifies three forms of Objectives, those for ESD elements (social, economic, environmental), those for Use/non-human threat objectives, and those for Actions (on-ground). Each of these three types of objectives have respective indicators, being ESD indicators, Use/non-human threat indicators, and Action indicators.
2. Objectives and Indicators may be either measurable/operational or not measurable.

Data gathering

Data collection: *[Is data collected or is the PAS a model only? Is data collection regular, a one off, or unpredictable? Who collects the data?]*

Ongoing research to improve data quality:

Management response

[What management responses are taken after evaluating each indicator/objective? What management responses are made at the level of the PAS as a whole?]

Key points

Appendix B: Completed proformas

PERFORMANCE ASSESSMENT SYSTEM: **Information collection sheet**			
PAS ID:	PAS 1		
PAS NAME:	**Australian Fisheries Statistics**		
CONTACT'S NAME:	Graham Love		
PHONE NO.	02 6272 2055	**EMAIL:**	glove@abare.gov.au
DATE:	12.1.04		
REFERENCES/WEB:	ABARE 2003, *Australian Fisheries Statistics 2002*, Canberra, March.		

Performance Assessment System name:

Australian Fisheries Statistics

Description of the Performance Assessment System

Australian Fisheries Statistics documents the volume and value of production from state and Commonwealth fisheries, and the volume and value of Australian fisheries trade, by destination, source, and product.

The subject of the Performance Assessment System: Fish producers, exporters and importers.

	Scale:		**Scope:**
	Individual		Ecological
X	Region (State)	X	Economic
X	Industry		Social
X	National		Governance
	International		Other

Purpose: Australian Fisheries Statistics is designed to meet the needs of the fishing industry and fisheries managers, policy makers and researchers for current and comprehensive national level statistics on Australia's fisheries production and trade.

Reason: Three reasons:
1. The Australian Government Department of Agriculture, Fisheries and Forestry is required to calculate levels of fisheries levies and fisheries funding based on formulas that use the gross value of fisheries production as an input. Accurate estimates of fisheries GVP are required for this purpose.
2. The Australian Government Department of Agriculture, Fisheries and Forestry is required to provide statistics relating to Australia's fisheries production, value of production, and trade, to international agencies such as the FAO and the OECD. Accurate fisheries statistics are required for this purpose.
3. In recognition of the need of the fishing industry and fisheries managers, policy makers and researchers for current and comprehensive national level statistics on Australia's fisheries production and trade, the FRDC has engaged ABARE to compile and disseminate such statistics on an annual basis for information.

Relevance to National Oceans Office:
1. Information on the production and value of production for Commonwealth fisheries is provided on a fishery by fishery basis (except for some small value or limited number of operator fisheries, for which this data is aggregated into an 'other' category). Production and GVP for the south eastern fisheries and for the major species caught in those fisheries can be identified.
2. Information on the production and value of production for state fisheries is provided on a species by species basis. Victoria and Tasmania in the SEMR can be separately identified, but the NSW and SA component in the SEMR cannot.

The Framework, Components and Prioritisation

Framework: Sub-component of the ABS National Accounts Framework.
Australian Fisheries Statistics forms the economic component of a broader ESD framework (economic, ecological, social).

Components: The economic contributions of fisheries are sub-divided into the following components:

- Contribution of Commonwealth fisheries to national fisheries production and GVP
- Contribution of state fisheries to national fisheries production and GVP
- Volume and value of national fisheries products exports
- Volume and value of national fisheries products imports

Prioritisation:
Production statistics are prioritised by major species, by fishery (Commonwealth) or state (state fisheries).
Trade statistics are prioritised by major product, by country of origin or destination.

Objectives and indicators (and performance measures)

Objectives: This is not a performance assessment system it is a data collection activity. The data is expected to be used to measure performance of other entities such as fisheries management agencies, fishing industry, etc. The choice of indicators however suggests implied performance objectives for these other entities.

Indicator: The indicators reported on by Australian Fisheries Statistics include

- Volume of production – tonnes
- Value of production – dollars
- Volume of exports – tonnes
- Value of exports – dollars
- Volume of imports – tonnes
- Volume of imports – dollars

(see Table)

Performance measures: These performance measures are interpreted as year on year changes, or longer term trends (Table). Industry and government tend to prefer to see the real value of production and exports rising, and the real value of imports falling, both year on year, and in the long term.

Table: Objectives and Indicators (and performance measures)

Component	Objective	Formalised/ implicit	Indicator	Performance measure	Type of objective/ indicator (1, 2)
Fisheries production	To maintain/increase fisheries production and value for Commonwealth and state fisheries	Implicit	Volume (tonnes)	Rising	Use/non-human threat, Measurable
As above	As above	Implicit	Real value (dollars)	Rising	Use/non-human threat, Measurable
Fisheries trade	To maintain/increase fisheries trade volume and value	Implicit	Volume (tonnes)	Exports – rising Imports - falling	Use/non-human threat, Measurable
As above	As above	Implicit	Real value (dollars)	Exports – rising Imports - falling	Use/non-human threat, Measurable

1. The Oceans Office classifies three forms of Objectives, those for ESD elements (social, economic, environmental), those for Use/non-human threat objectives, and those for Actions (on-ground). Each of these three types of objectives have respective indicators, being ESD indicators, Use/non-human threat indicators, and Action indicators.
2. Objectives and Indicators may be either measurable/operational or not measurable.

Data gathering

Data collection: The data is collected and published annually by ABARE in its Australian Fisheries Statistics report.

Ongoing research to improve data quality: Efforts continue to provide better information on the production and value of those 'minor' species whose production is continuing to grow e.g. farmed abalone and marine finfish.

Management response

ABARE provides an review of data, for use by the fishing industry and fisheries managers, policy makers and researchers, but they are not directly involved in management responses as a result of the review.

Key points

1. The process undertaken by ABARE is the only source of national level statistics on fisheries production and value. ABS does not undertake this collection and for the purpose of the national accounts, ABS uses the ABARE figures.
2. While ABS collects the raw trade statistics, ABS publishes only highly aggregated numbers. To provide detailed statistics on product and country using ABS data, ABARE has an extraction program which assembles this data into the tables published in the report.

PERFORMANCE ASSESSMENT SYSTEM: **Information collection sheet**			
PAS ID:	PAS 2		
PAS NAME:	**Australian Fisheries Surveys**		
CONTACT'S NAME:	Graham Love		
PHONE NO.	02 6272 2055	**EMAIL:**	glove@abare.gov.au
DATE:	13.1.04		
REFERENCES/WEB:	Galeano, D., Gooday, P., Shafron, W. and Levantis, C. 2002, *Australian Fisheries Surveys Report 2002: Economic Performance of Selected Fisheries in 1999-2000 and 2000-01*, ABARE, Canberra, May (and preceding issues).		

Performance Assessment System name:

Australian Fisheries Surveys

Description of the Performance Assessment System

Australian Fisheries Surveys provide estimates of the financial performance of boats in Commonwealth fisheries, and the economic performance of the main Commonwealth fisheries.

The subject of the Performance Assessment System: Fishing operators in Commonwealth fisheries. Commonwealth fisheries

	Scale:		**Scope:**
	Individual		Ecological
	Region	X	Economic
X	Industry		Social
	National		Governance
	International		Other

Purpose: Australian Fisheries Surveys is designed to inform the fishing industry and fisheries managers, policy makers and researchers on the economic performance of fishing operators in Commonwealth fisheries, and the economic performance of the main Commonwealth fisheries.

Reason: The Australian government has a number of legislated objectives for fisheries management that are stated in the *Fisheries Management Act 1991* or in more recent legislation. Two of these objectives are to implement efficient and cost-effective management of Commonwealth fisheries, and to maximise economic efficiency in the use of the fishery resources. ABARE's surveys of the Commonwealth fisheries aim to develop a consistent time series of economic information for each surveyed fishery that can be used, in conjunction with scientific assessments of each fishery, to assess the economic performance of the fishery.

Relevance to National Oceans Office: Commonwealth fisheries occur within marine regions and an assessment of their economic performance is useful for the National Oceans Office. Australia's major Commonwealth fishery for the supply of local fish to the main south east markets of Sydney, Melbourne and Hobart, the south east fishery, is one of the fisheries regularly surveyed.

The Framework, Components and Prioritisation

Framework: The *Fisheries Management Act 1991* takes an ESD perspective, focusing on economic, ecological and governance components. The ABARE Fisheries Surveys evaluate and report on the economic component.

Components: ABARE Fisheries Surveys report on the economic component (economic performance of a fishery). This is separated into sub-components of the performance of operators and the fishery itself.

Prioritisation: ABARE surveys are designed and samples selected on the basis of information supplied by the Australian Fisheries Management Authority (AFMA) on operator size of catch, fishing effort, and boat characteristics. A sample of boats is selected based on their representativeness of a component of the industry (small, medium or large producers) and the fishing method used (longline, purse seine, trawlers etc). Information on a number of physical and financial components is collected, however, the two final 'bottom line' indicators ABARE aims to derive are:

1 Fishing operators' profit

2 Net returns to a fishery

Objectives and indicators (and performance measures)

Objectives: An explicit objective of the fisheries survey process is to quantify the financial profile of the commercial fishers operating in the Commonwealth fisheries, and to quantify the economic rents being obtained from the Commonwealth fisheries. This objective is to satisfy the legislated objectives of the *Fisheries Management Act 1991*.

Indicators: The indicators that are used to measure whether the objectives are being achieved are:

- Fishers' profit
- Net returns to the fishery

These indicators are calculated using the following sub-indices.

1 Boat operator fishing and other receipts
2 Boat operator fishing and other costs
3 Boat operator fishing and other capital
(The three sub-indices above, while useful in their own right, are all required to calculate a 'bottom line' summary indicator for operators in that fishery, 'profit').
4 Commonwealth fishery management costs
(This information is combined with the first three components to calculate a 'bottom line' summary indicator for the fishery itself, 'net returns to the fishery').

It is important to note that many boats are licensed to operate in a number of fisheries and therefore an operator's fishing receipts, costs, and capital may be derived from, or used in, a number of different fisheries. When calculating the net returns to the fishery, therefore, only the share of returns, costs and capital used by operators in the fishery in question are included in the calculation.

Performance measures: Industry, managers, and government prefer to see both these indicators rising.

Table: Objectives and Indicators (and performance measures)

Component	Objective	Formalised/ Implicit	Indicator	Performance measure	Type of objective/ indicator (1,2)
Fishing operators	To quantify the financial profile of the commercial fishers operating in the Commonwealth fisheries	Formalised	Profit	Rising	ESD, Measurable
Fisheries	To quantify the economic rents being obtained from the Commonwealth fisheries	Formalised	Net returns to fishery	Rising	ESD, Measurable

1. The Oceans Office classifies three forms of Objectives, those for ESD elements (social, economic, environmental), those for Use/non-human threat objectives, and those for Actions (on-ground). Each of these three types of objectives have respective indicators, being ESD indicators, Use/non-human threat indicators, and Action indicators.
2. Objectives and Indicators may be either measurable/operational or not measurable

Data gathering

Data collection: The current fisheries survey program involves surveying major Commonwealth fisheries every few years, or more frequently where the fishery is undergoing major changes and monitoring is particularly important. Information is collected for the current and previous year(s) so that an annual time series of information can be built up.

Ongoing research to improve data quality: Research to better identify the precise value of operator, family, and crew labour in situations where these workers are paid under some profit sharing arrangement.
Increase sample size in some cells where there are currently insufficient sample points to derive statistically valid estimates of key financial variables.

Management response

ABAREs independent evaluations of economic performance of operators and fisheries is provided to policy clients within the Department of Agriculture, Fisheries and Forestry (DAFF) and the Commonwealth minister responsible for fisheries, to help advise on policy decisions. The evaluations are also provided to the Australian Fisheries Management Authority who incorporate the evaluations in their deliberations about management settings.

Key points

ABARE's economic surveys of the Commonwealth fisheries are the only source of information on the financial performance of operators in Commonwealth fisheries and the only estimates provided of net returns to individual fisheries.

PERFORMANCE ASSESSMENT SYSTEM: **Information collection sheet**			
PAS ID:	PAS 3		
PAS NAME:	**Performance assessment and reporting framework: Commonwealth Marine Reserves**		
CONTACT'S NAME:	Matt Whitting		
PHONE NO.	02 6274 1869	**EMAIL:**	matthew.whitting@ea.gov.au
DATE:	12/1/2004		
REFERENCES/WEB:	Unpublished document provided by Matt Whitting		

Performance Assessment System name

Performance Assessment and Reporting Framework: Commonwealth Marine Reserves

Description of the Performance Assessment System

The subject of the Performance Assessment System: Management of marine reserves (Marine Protected Area Section of Department of Environment and Heritage)

	Scale:		**Scope:**
	Individual	X	Ecological
X	Region		Economic
	Industry	X	Social
	National	X	Governance
	International		Other

Purpose: To fulfil the Section's reporting requirements as well as enhancing its ability to plan and manage its activities while minimising imposts on reserve managers.

Reason: *Commonwealth Authorities and Companies Act 1997* requires the Director of National Parks to provide specific information related to both financial and non-financial performance.

Relevance to National Oceans Office: Marine reserves are components of Marine Regions. Objectives of marine reserve management are expected to be relevant to Oceans Policy and to particular regional marine plans. The framework, independent of the subject matter, provides an example of how a performance assessment system can be designed and implemented.

The Framework, Components and Prioritisation

Framework: Inputs – outputs – outcomes reporting framework as promoted by Department of Finance and Administration (insert ref). Framework consists of three inter-connected parts: risk assessments, implementation plans and performance reports. Implementation plan includes performance monitoring which can cause confusion, ie performance reporting on performance reporting.

Components: 'Planned outcomes' derived from 'strategic objectives' of Management Plan. Likely to be mainly environmental/ecological but could include governance, social and economic depending on what is in Management Plan.
'Inputs' – resources (people, expertise, materials, energy, facilities and funds) used to achieve outputs
'Outputs' – all the management activities that are carried out to achieve the planned outcomes.

Prioritisation: Formal risk assessments completed to assess the risk of undesirable outcome under current management measures. Identifies where additional management measures are required. This appears to mainly influence implementation plan rather than select components for performance assessment.

Objectives and indicators (and performance measures)

Objectives: Explicit objectives specific to each reserve. Planned outcomes follow from Management Plan and are equivalent to 'ESD objectives' in Ocean Office terminology. Implementation plans include 'management objectives' and 'action objectives'.
A semi-hypothetical example (ie one that is not current) for the Coral Seas Reserves is provided as an illustration. In the example the planned outcomes are implicitly disaggregated into sub-components through the specification of more than one indicator. For example the planned outcome "protection from human induced damages" is implicitly subdivided into sub-components (and hence implicit objectives): marine debris, introduced pests, marine pollution, human presence and harvesting of commercial species through the specification of indicators for each of these sub-components.

Indicators and Performance measures: Specific to each reserve. Performance assessment documents are not publicly available. Coral Seas Reserves provided as an illustration.

Data gathering

Data collection: Ongoing. Included in implementation plan. Collected by or for Marine Protected Area Section.

Ongoing research to improve data quality: Could be included in implementation plan.

Management response

Management responses are specified but are specific to each marine reserve.

Key points

The framework sets out an overall structure, but objectives, indicators etc are specific to each marine reserve. The framework is relatively new and is in the process of being implemented. Overall objectives for a reserve are set by Management Plan that is a public document. Framework is designed as an active component of day-to-day management and is not publicly available. The Annual Report for the Director of National Parks is collated from each reserve's Implementation and Performance report.

PERFORMANCE ASSESSMENT SYSTEM: **Information collection sheet**			
PAS ID:	PAS 4		
PAS NAME:	**Environment Plan for Offshore Petroleum Activity**		
CONTACT'S NAME:	Sue Kruse Department of Industry, Tourism and Resources Level 4, 51 Allara Street, Canberra City ACT 2600 GPO Box 9839, Canberra ACT 2601 Ph: 02 6213 7973 Fax: 02 6213 7818 Internet: http://www.industry.gov.au		
PHONE NO.	02 6213 7973	**EMAIL:**	sue.kruse@industry.gov.au
DATE:	12/1/2004		
REFERENCES/WEB:	Document provided by Sue Kruse (Department of Industry 2003)		

Performance Assessment System name:

Environment Plan for Offshore Petroleum Activity

Description of the Performance Assessment System

The subject of the Performance Assessment System: An operator of an offshore exploration or production facility or activity

	Scale:		**Scope:**
X	Individual (body corporate)	X	Ecological
	Region	X	Economic
	Industry	X	Social
	National	X	Governance
	International		Other

Purpose: Legally binding agreement between government regulators and the operator setting out environmental performance objectives, standards and criteria against which the operator will be assessed. Incorporates concept of reducing environmental risks and effects of petroleum activities to as low as reasonably practicable.

Reason: Required under the *Petroleum (Submerged Lands)(Management of Environment) Regulations 1999.*

Relevance to National Oceans Office: Applies to operations that occur within marine regions. Good example of a performance assessment system. The plans themselves and the assessment of performance against the objectives of the plan are not publicly available and this reduces their current usefulness to the Oceans Office.

The Framework, Components and Prioritisation

Framework: Impacts on the 'environment'. ESD approach but only 'environment.'

Components: "Environment' is defined to include the natural environment (including water, air and land), the cultural environment (including indigenous and heritage issues) and the socioeconomic environment (including fishing, shipping and tourism). It appears that the social and economic costs and benefits associated with the petroleum activity itself are not within the scope of the Plan.

Prioritisation: The Environment Plan must include a detailed risk assessment. AS/NZS 4360:1995 is cited as a standard. Risk is defined as the chance of something happening that will have an impact upon objectives. The Environment Plan must contain environmental performance objectives, standards and measurement criteria and these must be consistent with reducing risks and effects to as low as reasonably practicable. It seems reasonable to infer that the risk assessment helps specify the performance objectives etc.

Objectives and indicators (and performance measures)

Objectives: The High-level objective is to reduce environmental risks and effects of petroleum activities to as low as reasonably practicable. Explicit performance objectives required but are specific to each plan. Could be presumably of any and all types (ESD, Use/non-human threat and Action) but regulations emphasise outcome-based assessment. Operators are free to choose the actions that they believe are likely to achieve the agreed outcomes.

Indicators: Plan must specify agreed measurement criteria which appear to encompass indicators and performance measures.

Performance measures: See 'indicators' above
Objectives, indicators and performance measures are all specific to the particular Plan. Plans are not publicly available.

Data gathering

Data collection: Data are collected by the operator according to the Implementation Plan that is part of the Environment Plan. Reporting is at an agreed interval but no less than annually.

Ongoing research to improve data quality: Not specifically addressed in guidelines, but an Implementation Plan could include research to improve data quality. Environment Plans must be revised and resubmitted at least every 5 years.

Management response

The Implementation Plan is part of the Environment Plan and it is reported on at an agreed interval but no less than annually. The Environment Plans must be revised and resubmitted at least every 5 years.

Key points

The Environment Plan is a legally binding agreement between the Government (represented by a Designated Authority) and the operator. An operation cannot be carried out without an agreed Environment Plan and evidence of performance against the objectives of the plan is required in order to continue operating. The guidelines for what a plan should look like are rigorous yet flexible. The performance of the Designated Authority is audited annually by the Commonwealth to ensure standards and consistency are being maintained. The Plan and assessment against the objectives of the Plan are not public documents and this limits their value to other parties. This situation is currently under review.

PERFORMANCE ASSESSMENT SYSTEM: **Information collection sheet**			
PAS ID:	PAS 5		
PAS NAME:	**Fishery Status Reports**		
CONTACT'S NAME:	Albert Caton Fishery Status Reports Editor Bureau of Rural Sciences GPO Box 858 Canberra ACT 2601 Australia		
PHONE NO.	(02) 6272 5287	**EMAIL:**	Albert.Caton@brs.gov.au
DATE:	16/12/2003		
REFERENCES/WEB:	Caton, A. (ed) (2002) *Fishery Status Reports 2000-2001: Resource assessments of Australian Commonwealth fisheries*. A, Caton. (ed). Bureau of Rural Sciences, Canberra.		

Performance Assessment System name:

Fishery Status Reports 2000-2001.

Description of the Performance Assessment System

The subject of the Performance Assessment System: Fishery (where a fishery is usually a group of people catching a type of fish, in an area of water, by a method of fishing, and purpose) and fish stocks.

	Scale:		**Scope**:
	Individual	X	Ecological
	Region		Economic
X	Industry		Social
	National	X	Governance
.....	International		

Scale Other: The BRS Fishery Status Reports as well as assessing Commonwealth fisheries (fisheries within Australia's marine Exclusive Economic Zone but outside the State 3nm limit), they assess the performance of fish stocks.

Purpose : To independently review the status of fish stocks in Commonwealth fisheries. These reviews form one component of the assessment of the performance of Commonwealth fisheries management.

Reason: The *Fisheries Management Act 1991* has a legislative objective that the exploitation of fisheries resources is consistent with the principles of ecologically sustainable development and the exercise of the precautionary principle, in particular the need to have regard to the impact of fishing activities on non-target species and the long term ESD of the marine environment. The Fishery Status Reports assess performance against this objective.

Relevance to National Oceans Office: The BRS Fishery Status Reports review performance of Commonwealth fisheries management, with respects to the status of fish stocks and the marine environment. Commonwealth Fisheries operate within Commonwealth waters and Oceans Policy marine regions, including some in the SE Marine Region.

The Framework, Components and Prioritisation

Framework: The framework followed by the BRS Fishery Status reports is an ESD Framework. However, the BRS Fishery Status Reports assess the ecological part of ESD, plus some governance issues related to management performance of ecological issues. ABARE report on economic performance and Governance is mainly reported on in Australian Fishery Management Authority annual reports.

Components: For the BRS Fishery Status Reports the components are generally divided into the status of the primary target species stocks and into environmental effects (that includes bycatch species). The level of further sub-division is dependent on the fishery.

Prioritisation: The Australian Fishery Management Authority identified the primary species for Commonwealth waters. Other environmental effects were prioritised depending on fishing method, species impacted, politics, etc. The development of Bycatch Action Plans often led to qualitative ranking of bycatch issues. A more recent project funded by AFMA on environmental risk assessment is prioritising environmental issues in a rigorous way to allow for more strategic management.

Objectives and indicators (and performance measures)

Objectives: Fisheries are assessed against the legislated ESD objective in the *Fisheries Management Act 1991*. Fishery Management Plans explicitly state objectives although these plans have only been completed for some fisheries and the objectives are often very broad rather than measurable/operational. Measurable objectives are usually implicit or informal, although objectives (for ESD, Use/Non human threat and Actions) have often been stated explicitly for non target species in Bycatch Action Plans. Explicit objectives for each fishery are reported in the BRS Fishery Status Reports, where available, and performance against those objectives is assessed. In addition, fisheries that have completed the Strategic Assessment process have to satisfy *EPBC Act 1999 Commonwealth Guidelines for the Ecologically Sustainable Management of Fisheries* which include specific and measurable ESD and Use/Non human threat objectives for environmental components. Action and Use/Non human threat objectives are assessed as a part of management performance focussing on their impacts upon ESD elements.

Indicators and Performance measures: The variable nature of fisheries means that indicators are usually specific to each fishery. Nevertheless the status of fish stocks (Table) is evaluated across all fisheries for the primary target species and stocks. Catch Per Unit Effort (CPUE) trends may also be used as a contextual indicator across fisheries (Table). Indicators and performance measures (reference points and trends) specific to each Commonwealth fishery and primary target fish stock are stated in the BRS Fishery Status Reports.

Table: Objectives and Indicators (and performance measures)

Component	Objective	Formalised/ Implicit	Indicator	Performance measure	Type of objective/ indicator (1,2)
Primary target species		Implicit	Stock status	Reference point	ESD, Measurable
Primary target species		Implicit	CPUE	Trend	ESD, Measurable

1. The Oceans Office classifies three forms of Objectives, those for ESD elements (social, economic, environmental), those for Use/non-human threat objectives, and those for Actions (on-ground). Each of these three types of objectives have respective indicators, being ESD indicators, Use/non-human threat indicators, and Action indicators.
2. Objectives and Indicators may be either measurable/operational or not measurable.

Data gathering

Data collection: Data is collected regularly and analysed each year as part of the BRS Fishery Status Reports series. Data collection and analysis for non target species and the marine environment is often more sporadic and strategic, sometimes using independent observer studies. The data custodian is BRS.

Ongoing research to improve data quality: Bycatch Action Plans, Strategic Assessments and the Environmental Risk Assessment process are the main mechanisms being used to improve environmental information.

Management response

BRS independent evaluations of the performance of fish stocks and fisheries is provided to policy clients within the Department of Agriculture, Fisheries and Forestry (DAFF) and the Commonwealth minister responsible for fisheries, to help advise on policy decisions. The evaluations are also provided to the Australian Fisheries Management Authority who carry out management responses as a result of the evaluations. BRS is not directly involved in management responses as these are the responsibility of these other agencies.

Key points

The BRS Fishery Status Reports assess performance of Commonwealth fisheries with respects to the ecological objectives of the *Fisheries Management Act 1991*. Data is collected regularly for assessment of primary target species stock status, while use/non human threat and action objectives are specific to each fishery. Impacts on non target species status and the marine environment are assessed less frequently.

PERFORMANCE ASSESSMENT SYSTEM: **Information collection sheet**			
PAS ID:	PAS 6		
PAS NAME:	**National ESD Reporting Framework for Australian Fisheries**		
CONTACT'S NAME:	Rick Fletcher		
PHONE NO.	08 92468 465	**EMAIL:**	Rick Fletcher [rfletcher@fish.wa.gov.au]
DATE:	15/12/2003		
REFERENCES/WEB:	Fletcher, W.J., Chesson, J., Fisher, M., Sainsbury, K.J., Hundloe, T., Smith, A.D.M and Whitworth, B., (2002) *National ESD Reporting Framework for Australian Fisheries: The 'How to' guide for wild capture fisheries*. FRDC Project 2000/145, Canberra, Australia. Whitworth, B., Chesson, J., Fletcher, W.J., Sainsbury, K.J., Fisher, M., Hundloe, T., and Smith, A.D.M (2002) *National ESD Reporting Framework for Australian Fisheries: Technical support document- Ecological components of the 2000-01 Case studies*. FRDC Project 2000/145, Canberra, Australia.		

Performance Assessment System name:

National ESD Reporting Framework for Australian Fisheries

Description of the Performance Assessment System

The subject of the Performance Assessment System: Fishery

	Scale:		**Scope**:
	Individual	X	Ecological
	Region	X	Economic
X	Industry	X	Social
	National	X	Governance
	International		Other

Purpose: To report on a fishery's performance with respects to ESD.

Reason: The National ESD Reporting Framework for Australian Fisheries contains a set of National (high-level) Criteria and Indicators, plus a 'How to Guide'. The Framework should help assist fishery managers to satisfy ESD reporting requirements under the *National Strategy for Ecologically Sustainable Development* and other State, Territory, Industry and NGO requirements.

Relevance to National Oceans Office: The National ESD Reporting Framework for Australian fisheries was tested in 9 case study fisheries, from across Australia, with three fisheries in the South-East Marine region. Other fisheries in the SEMR are developing reports. The 4 ESD components (environmental, economic, social and governance) have been reported on for these fisheries although the latter 3 are usually 'under-development'. At present, national collection of data across fisheries is not envisaged through this process, as ESD reports are for use and maintenance by fishery managers. The National ESD Reporting Framework for Australian Fisheries provides a useful methodology for combining (integrating) ESD issues within a PAS. More recently the Framework project team (through a FRDC funded project) have examined methods for combining and reporting results across fisheries, which may also have relevance to marine regions.

The Framework, Components and Prioritisation

Framework: This approach uses an ecologically sustainable development framework looking at positive and negative social, economic, environmental, and governance contributions to ESD over the short and long term, based upon the National Strategy for ESD. The objective for ESD is divided into its main components (see components section below), and performance is reported for each component. As a result this framework combines an outcomes framework with a process framework.

The performance report categories are as follows:

1. Operational Objective (plus justification)
2. Indicator

3. Performance Measure/Limit (plus justification)
4. Data Requirements
5. Data Availability
6. Evaluation
7. Robustness
8. Fisheries Management Response
    - -Current
    - -Future
    - - Actions if Performance Limit exceeded
9. Comments and Action
10. External Drivers

Components: ESD was divided into eight main components (see below), and further divided into sub-components.

Contributions of the fishery to ecological wellbeing

1. Retained species
2. Non-retained species
3. General ecosystem

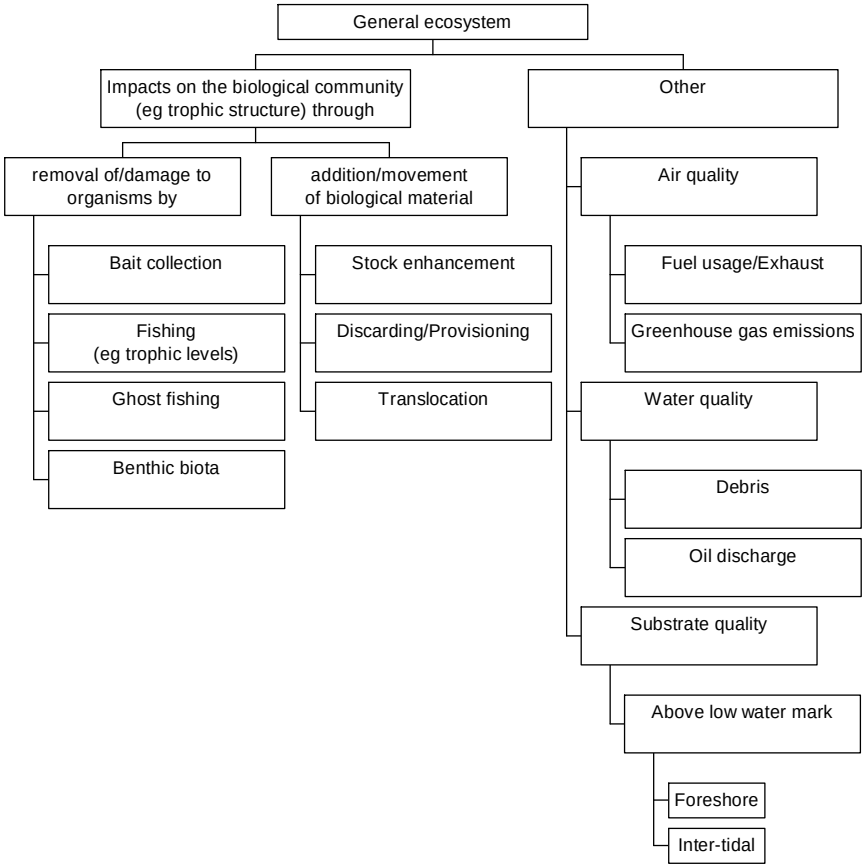
Contributions of the fishery to human wellbeing

4. Indigenous wellbeing
5. Community and regional wellbeing
6. National social and economic wellbeing

Ability of the fishery to contribute

7. Impact of the environment on the fishery
8. Governance

Each of these components was further sub divided into component 'trees'. For example the general ecosystem component tree was separated as follows:



Prioritisation: Components were rated for their importance using a qualitative risk analysis (based upon the Standard AS/NZS 4360:1999).

Objectives and indicators (and performance measures)

Objectives: The Framework specifies 8 major components for ESD each with an aspirational or high-level objective, as stated in the Table. These components are sub-divided to suit the needs of each particular fishery. For each of the lowest level components measurable operational objectives are stated and are therefore specific to each fishery. The Framework was tested in 9 case study fisheries and their measurable operational objectives for ecological components are reviewed and presented in Whitworth, et al. (2002). The objectives were to numerous to report in this overview.

Indicators and Performance measures: Due to the flexible nature of this framework indicators and performance measures were not specified at a national level but are specific to each fishery. Operational objectives, indicators, performance measures, actions and data for the ecological components of the 9 Case study fisheries have been reviewed in Whitworth et al. (2002).

Table: 'High level' Objectives for the National ESD Reporting Framework for Australian Fisheries

Component	Objective	Formalised/ Implicit	Type of objective/ indicator (1,2)
Retained Species	To manage the take of retained species within ecologically viable stock levels by avoiding overfishing and maintaining and optimizing long-term yields.	Explicit	ESD, Measurable
Non Retained Species	To manage the fishery in a manner that does not threaten biodiversity and habitat via the removal of non-retained species (including protected species and ecological communities) and manage the take of non-retained species at ecologically viable stock levels.	Explicit	ESD, Measurable
General Ecosystem	To manage the impacts *of* fisheries such that only acceptable impacts occur to functional ecological relationships, habitat and processes.	Explicit	Use/non human threat, Non measurable
Indigenous Community Wellbeing	To satisfy traditional (customary) fishing needs, cultural /economic development and ESD of indigenous communities.	Explicit	Use/non human threat, Non measurable
Community	To contribute to community, regional and national well-being, lifestyle and	Explicit	Use/non human

and National Wellbeing	cultural needs.		threat, Non measurable
Governance	To ensure that ESD principles are underpinned by legal, institutional, economic and policy frameworks capable of responding and taking appropriate pre-emptive and remedial actions.	Explicit	Use/non human threat, Non measurable
	To allocate the resource to maximise/optimise community benefits.	Explicit	Action, Measurable
Impacts of the Environment	To recognise the impacts of the environment on fisheries from both natural and non-fishery human induced sources and incorporate these within management responses.	Explicit	Use/non human threat, Non measurable

1. The Oceans Office classifies three forms of Objectives, those for ESD elements (social, economic, environmental), those for Use/non-human threat objectives, and those for Actions (on-ground). Each of these three types of objectives have respective indicators, being ESD indicators, Use/non-human threat indicators, and Action indicators.
2. Objectives and Indicators may be either measurable/operational or not measurable.

Data gathering

Data collection: The National ESD Reporting Framework did not collect data, it provided a Framework, however a FRDC (Fisheries Research and Development Corporation) project tested the Framework in 9 case study fisheries and this did identify data for indicators suggested for each fishery (Whitworth et al. 2002). Although the FRDC case study project was a once-off process, it used information that was being collected for fisheries (as well as identifying potential data for collection) and much of this data continues to be collected as a normal part of fishery management. This data is summarised in Whitworth, et al. (2002). In addition a number of the case study fishery managers continue to use the Framework to assist with reporting on ESD and have updated their reports and each fishery manager would have to be contacted to obtain these updated reports.

Ongoing research to improve data quality: Research on how to integrate data/information across fisheries using this Framework is ongoing as part of a more recent FRDC project. Other ongoing research to improve data quality is identified in the case study reports and specific to each fishery.

Management response

The management response is identified as a part of each performance report for each issue/component. There are headings for current and future management responses as well as the performance limit that, if exceeded, triggers a management response.

Key points

The National ESD Reporting Framework for Australian fisheries provides a flexible framework for reporting on ESD for fishery managers. This Framework can be used by fishery managers as a performance assessment system. The Framework was tested in 9 case study fisheries, from across Australia, with three fisheries in the SE Marine Region. Other fisheries in the SEMR are developing reports. The 4 ESD components (environmental, economic, social and governance) have been reported on although the latter 3 have not usually been finalised in these case study reports. These reports provide a comprehensive review of ESD for each fishery that may be of use to the Oceans Office. At present, national collection of data across fisheries is not envisaged through this process, as ESD reports are for use and maintenance by fishery managers. The National ESD Reporting Framework for Australian Fisheries provides a useful method for combining (integrating) issues within a PAS. A new FRDC project is looking at methods for combining results across fisheries.

PERFORMANCE ASSESSMENT SYSTEM: **Information collection sheet**			
PAS ID:	PAS 7		
PAS NAME:	**National System for the Prevention and Management of Marine Pest Incursions.**		
CONTACT'S NAME:	National Introduced Marine Pests Coordination Group Contact Karina McLachlan Invasive Marine Species Program Department of Agriculture Fisheries and Forestry GPO Box 858 Canberra ACT 2601 Australia		
PHONE NO.	(02) 62723289	**EMAIL:**	Karina. McLachlan@affa.gov.au
CONTACT'S NAME:	Michael Wilson		
PHONE NO.	02 6272 4300	**EMAIL:**	michael.wilson@affa.gov.au
CONTACT'S NAME:	The National Introduced Marine Pest Information System (NIMPIS)		
PHONE NO.		**EMAIL:**	nimpis@csiro.au
DATE:	13/1/2004		
REFERENCES/WEB:	National Introduced Marine Pests Coordination Group (NIMPCG) (2002) *National System for the Prevention and Management of Marine Pest Incursions: Australian Strategic Plan 2002-2006.* 12 July 2002. National Introduced Marine Pests Coordination Group (NIMPCG), Canberra. Hewitt C.L., Martin R.B., Sliwa C., McEnnulty, F.R., Murphy, N.E., Jones T. & Cooper, S. (2002). Editors. *National Introduced Marine Pest Information System*. Web publication		

	<http://crimp.marine.csiro.au/nimpis>, Date of access: 13-Jan-2004

Performance Assessment System name:

National System for the Prevention and Management of Marine Pest Incursions. Strategic plan

Description of the Performance Assessment System

This is not a performance assessment system, it is a framework and strategy for marine pests. Nevertheless it has most of the ingredients of a performance assessment system and may be useful in informing marine planning performance assessment.

The subject of the Performance Assessment System: Marine pests.

	Scale:		**Scope:**
	Individual	X	Ecological
X	Region		Economic
X	Industry		Social
X	National	X	Governance
	International	X	Other: Program performance

Purpose: The objective for the national system is to provide a national framework to guide the establishment of appropriate structures, mechanisms and operational procedures to minimize the risk of marine pest incursions and, should they occur, to respond in emergency situations and to manage their impacts, including translocation and ongoing control of marine pests already established in Australia..

There is also a vision of a shared National System that provides for a bio-secure marine ecosystem, particularly in coastal waters and ports, relatively free from the risk of introduced marine pests and pathogens, supporting competitive and efficient marine based industries and providing social and recreational amenity for all Australians.

Reason: Under the National System for the Prevention and Management of Marine Pest Incursions the National Introduced Marine Pests Coordination Group (NIMPCG) has developed the Australian Strategic Plan 2002-06. Considerable activity is occurring with substantial changes occurring to legislation and regulations, governance, community involvement and research, as a part of the new system and plan. For example, possible changes to the EPBC Act is being investigated to incorporate control of pests. Lists for marine pests are being reviewed and updated and these will be added to the EPBC Act regulations Section 301A. Control plans for marine pests have been initiated with one plan completed for Northern Pacific Seastar. Research is being carried out, for example, to improve coordination of ballast water controls between jurisdictions and on hull/bio fouling that will inform policy makers. The National Introduced Marine Pest Coordinating Group reports to Commonwealth Ministerial Councils and, through its members, to relevant State and Territory governments.

Relevance to National Oceans Office: The National System for the Prevention and Management of Marine Pest Incursions is directly relevant for marine planning as marine pests are an important subject in oceans, marine pests occur in marine regions, although

quite a lot of research and effort is in State waters which are currently outside the scope of the SERMP. The components of the strategic framework will help inform marine planning components with respects to marine pests. The objectives and the tasks under each program (component) of the Strategy should inform objectives in marine planning. The results of programs on research, funding, governance and the outcome related programs should inform performance evaluation of marine plans (with respects to marine pests) in the future, as well as informing objectives for marine plans, because a number of tasks in the Strategy will set directions for risk assessment, management of marine pests in the future.

The Framework, Components and Prioritisation

Framework: The National System for the Prevention and Management of Introduced Marine Pests combines numerous frameworks, with pest incursions mainly following a risk assessment/emergency response framework (ie risk analysis, risk management (including emergency response)), with marine pest control mainly being a pressure-state-response framework, but the system as a whole is gradually being extended into an ESD (social, economic, environmental, and governance) framework. The strategy itself is in the form of a program assessment system.

Components: The 'National System' draws together marine pest activities under one system and its programs form the components of the framework, consistent with components for a national system identified in *National Taskforce on the Prevention and Management of Marine Pest Incursions (December 1999).* The programs are:

1. International linkages
2. Prevention
3. Emergency response mechanisms and procedures
4. Management of established introduced pests
5. Governance
6. Research and development
7. Resources and funding

Programs 1, 5, 6, & 7 are action components whereas Programs 2, 3, 4, 4 more directly relate to use/non human threat under the national oceans office classifications.

Objectives and indicators (and performance measures)

Objectives: The National System for the Prevention and Management of Introduced Marine Pests Strategic Plan 2002-06 identifies high-level principles and objectives (predominantly use/non human threat and action objectives), program objectives (use/non human threat and action objectives) and measurable tasks (action objectives) and monitor the status of tasks, and is a broad performance assessment system. The Strategic plan is an overarching strategy developed for guidance of its stakeholders and therefore is unlikely to provide detailed assessment of performance. The strategic plan is in the process of being updated as most of the tasks are nearing completion and therefore it was

not felt useful to list the measurable tasks and monitoring (indicators and performance measures) for the National Oceans Office.

Indicators*:* The 'status/completion' is the indicator for all tasks. This is because almost all tasks are action objectives using the National Oceans Office terminology.

Performance measures: The performance measure for a task is whether that task has been completed or not.

Data gathering

Data collection: Not applicable

Ongoing research to improve data quality: The National System for the Prevention and Management of Introduced Marine Pests is currently coordinating research into data issues, identifying gaps and developing tasks to fill gaps.

Management response

The Strategic plan may be thought of as the management response to previous recommendations and identified gaps.

Key points

The National System for the Prevention and Management of Introduced Marine Pests Strategic plan has developed 6 components (programs) with high level objectives and corresponding tasks underneath to. The National System is not a performance assessment system, nevertheless it has many components, objectives and action that may inform regional plans on marine pests. Considerable changes and development has occurred with respects to marine pest research and management in recent years and it is best to refer to the NIMPCG to gain specific answers to questions.

PERFORMANCE ASSESSMENT SYSTEM: **Information collection sheet**			
PAS ID:	PAS 8		
PAS NAME:	**The national recreational and indigenous fishing survey**		
CONTACT'S NAME:	Phil Sahlqvist Data custodian, Bureau of Rural Sciences GPO Box 858, Canberra ACT 2601, Australia		
PHONE NO.	02 62725243	**EMAIL:**	Phil.Sahlqvist@brs.gov.au
CONTACT'S NAME:	Anne Coleman Indigenous Fishing Survey contact		
PHONE NO.	08 8999 2173	**EMAIL:**	
DATE:	14/1/2004		
REFERENCES/WEB:	G.W. Henry and J. M. Lyle (2003). *National recreational and indigenous fishing survey*, G.W. Henry and J. M. Lyle (eds). Department of Agriculture Fisheries and Forestry, Australia, Canberra. Website- www.affa.gov.au/recfishsurvey. Updated 28/10/2003, Accessed 14/1/2004		

Performance Assessment System name:

The national recreational and indigenous fishing survey.

Description of the Performance Assessment System

The subject of the Performance Assessment System: Recreational and indigenous fishing.

	Scale:		**Scope**:
	Individual	X	Ecological
X	Region	X	Economic
X	Industry	X	Social
X	National	X	Governance
	International		Other

Purpose: To obtain fisheries statistics to support the management of non-commercial fishing in Australia. The aims of the survey were:

- to obtain reliable, consistent and comparable data Australia-wide on angler participation and demographics, catch and effort, attitudes and awareness, and economic activity;
- to obtain information on indigenous fishing in Australia to help achieve a wider understanding of a range of issues including the important role it plays in many indigenous communities; and
- to obtain information on international tourist fishing activities.

To satisfy each of these aims 3 surveys were developed, being the National Recreational Fishing Survey (NRFS), the Indigenous Fishing Survey of Northern Australia (IFSNA), and the Overseas Visitor Fishing Survey (OVFS). The first two surveys also had sub-surveys.

Reason: The national recreational and indigenous fishing survey was supported at the highest level of government in Australia. The Standing Committee on Fisheries and Aquaculture, the Ministerial Council on Forestry, Fisheries and Aquaculture and State fishery agencies adopted the recommendations of the National Policy on Recreational Fishing and supported the development and implementation of the survey. Ministerial fishing advisory councils, fishing associations, fishing clubs, environmental and indigenous groups and many other community groups expressed their support for the collection of fishery statistics through a range of media. State fishery agencies contributed financial and human resources. Financial grants from the Australian Natural Heritage Trust (NHT), Fisheries Research and Development Corporation (FRDC) and State fisheries agencies supported the survey. The Fisheries Action Program (FAP) of the Department of Agriculture, Fisheries and Forestry – Australia (AFFA), administered the project.

Relevance to National Oceans Office: The recreational fishing component of the survey is relevant to marine plans and the South-East Marine Region. Although data is assessed at the State and National levels in the report, it is potentially possible to use the same data for reporting at a regional level, whether State + Commonwealth (possibly for the

Northern Planning Area) or only Commonwealth waters (SEMR). This would require creating a formal agreement with the project proponents and gaining funding for a data mining project. Information from the Indigenous component of the survey could potentially be used for the Northern Planning Area. If the survey is repeated in the future (which is expected) then information will become available to assess performance of recreational fishing. Survey methodology developed for recreational and indigenous fishing in this project could be used by the National Oceans Office. In addition, social components and indicators appear particularly useful for marine planning.

The Framework, Components and Prioritisation

Framework: This is an ESD-style Framework examining social, economic and environmental components.

Components: Data and information was reported for the surveys under the following components (In most cases components were also subdivided further):

National Recreational Fishing Survey (NRFS)
- Participation in Recreational Fishing
- Recreational Fishing Effort
- Recreational Fish Catch
- Expenditure by Recreational Fishers
- Motivation for recreational fishing

Indigenous Fishing Survey of Northern Australia (IFSNA)
- Participation in fishing by indigenous people
- Indigenous fishing effort
- Indigenous fish catch

Overseas Visitor Fishing Survey (OVFS)
- 'Activity in fishing'

Objectives and indicators (and performance measures)

The national recreational and indigenous fishing survey was not set-up as a performance assessment system, it was initiated to collect statistics and information. Consequently operational objectives are not stated in the report (high-level action objectives are stated for the project). The components and sub components (discussed in the section above) have numerous indicators relating to fishing, to many to mention in this overview. To obtain this information it is most useful to examine the report.

Data gathering

Data collection: Data was collected through three surveys and their sub surveys. This data collection was a once off, and sets the benchmark for Australia. It is intended to repeat the survey in the future and jurisdictions are encouraged to utilise the methodology developed during this project for their own needs. The survey design was based upon reviews of the national and international literature and upon field testing to ensure the survey could be repeated with minimal changes in the future. A variety of agencies

collected the data for the three main surveys (see report). Data for the survey is held by BRS (Phil Sahlqvist is the contact- see the front page).

Ongoing research to improve data quality: The recreational and indigenous fishing survey was based upon substantial literature reviews and field testing before carrying out the survey, and data was also tested after collection. The authors were confident that few changes to collection methods and data analysis will be needed if the survey is repeated in the future.

Management response

This is a data collection project and management responses are the responsibility of fishery management agencies, other agencies, industry and the community.

Key points

The National Recreational and Indigenous Fishing Survey was carried-out once, to provide a baseline of data on these fishing sectors. It is expected that the survey will be repeated and this will provide important information to allow for performance assessment. The survey provides an important source of data for a sector that was previously poorly understood. This survey now enables all users of fish stocks (ie commercial, recreational and indigenous) to be evaluated and allows for more accurate assessments of fish stocks. Data was reported at the National and State scales, but it appears possible to use the same data to report at a regional scale such as for the SEMR, although this would require funding for a data mining project. Survey methodology was also reviewed and tested as a part of the process and this knowledge may be useful for marine planning surveys, particularly for social components.

PERFORMANCE ASSESSMENT SYSTEM: **Information collection sheet**			
PAS ID:	PAS 9		
PAS NAME:	**State Of the Environment**		
CONTACT'S NAME:	Director, State of the Environment Reporting Section Department of the Environment and Heritage GPO Box 787, Canberra, ACT, 2601		
PHONE NO.	Tel: (02) 6274 2037	**EMAIL:**	
DATE:	14/1/2004		
REFERENCES/WEB:	ANZECC State of the Environment Reporting Taskforce. (1998) *Core Environmental Indicators for reporting on the State of the Environment: Discussion paper for public comment*, pp 63, Australian and New Zealand Environment and Conservation Council, Canberra. ANZECC State of the Environment Reporting Taskforce. (2000) *Core Environmental Indicators for reporting on the State of the Environment*, pp 92, Australian and New Zealand Environment and Conservation Council, Canberra. ASEC (Australian State of the Environment Committee) (2001a) *Australia State of the Environment 2001, Independent Report to the Commonwealth Minister for the Environment and Heritage*, CSIRO Publishing on behalf of the Department of the Environment and Heritage, Canberra. ASEC (Australian State of the Environment Committee) (2001b) *Australia State of the Environment 2001, Independent Report to the Commonwealth Minister for the Environment and Heritage: Coasts and Oceans Theme Report*, CSIRO Publishing on behalf of the Department of the Environment and Heritage, Canberra. Website http://www.deh.gov.au/soe/2001/coasts/index.html, Updated 3/9/2003, Accessed 14/1/2004. COAG, (1992) *National Strategy for Ecologically Sustainable*		

	Development. Council of Australian Governments. Australian Government Publishing Service, Canberra. DEH (2003) *State of the Environment Australia-Publications- State of the Environment reporting Environmental Indicator Reports – Background*. Department of Environment and Heritage, Canberra. Website http://www.ea.gov.au/soe/publications/background-ind.html, Updated 3/9/2003, Accessed 15/1/2004. SEAC (State of the Environment Advisory Council) (1996) *Australia State of the Environment 1996, An Independent Report Presented to the Commonwealth Minister for the Environment by the State of the Environment Advisory Council*. Department of the Environment, Sport and Territories, Canberra. Ward T., E. Butler & B. Hill (1998) *Environmental indicators for national state of the environment reporting – Estuaries and the Sea, Australia: State of the Environment (Environmental Indicator Reports)*, Department of the Environment, Canberra.

Performance Assessment System name:

State Of the Environment. (SOE)

Description of the Performance Assessment System

The subject of the Performance Assessment System: The state of the environment: including the condition of the environment, the pressures on that condition and the human responses to the pressures.

	Scale:		**Scope**:
	Individual	X	Ecological
X	Region		Economic
	Industry	X	Social
X	National		Governance
	International		Other

Purpose: The purpose and objectives of SOE Reporting are to:

- Provide accurate, timely and accessible information on the condition and prospects of the Australian environment;
- Increase public understanding of these issues;
- Continue the development of national environmental indicators, and report on these indicators;
- provide an early warning of potential problems; and
- Report on the effectiveness of policies and programs designed to respond to environmental change, including progress toward achieving environmental standards and targets.

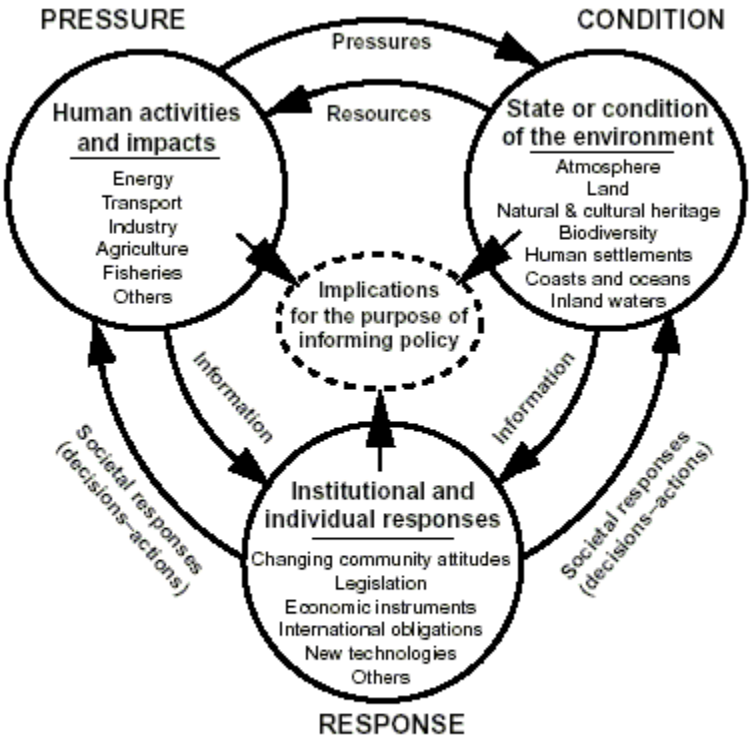
Reason: The Australian Government Department of Environment and Heritage (DEH) reports upon matters of national environmental significance every five years as required by the *Environment Protection and Biodiversity Conservation Act 1999*. This framework is anticipated to "foster a more integrated and longer term perspective to environmental management" (ASEC, 2001a) by enhancing the quality, accessibility, and relevance of data (SEAC, 1996). State of the Environment Reporting is required by law in NSW, Queensland, ACT, Tasmania, and South Australia. Victoria is considering re-establishing its state of environment reporting process. At the national level State of the Environment Reporting in its current form is solely an information tool rather than a framework for management. Some State and Territory governments are required to consider SOE recommendations in their decision-making processes. At a national level, there is no statutory requirement for the Australian Government to adopt any of the management recommendations in the State of the Environment Report. The organisation responsible for State of the Environment reporting often has little control over the responses (if any) that are taken to the pressures and conditions upon which it reports. This could be viewed as a significant shortcoming of the Pressure – Condition – Response framework for State of the Environment Reporting.

Relevance to National Oceans Office*:* The National State Of the Environment Reporting system uses available data rather than carrying out on-ground data collection.

Therefore information that is developed during oceans planning is likely to be collated for future SOE reports rather than the other way around. Nevertheless the SOE Coasts and Oceans Report (ASEC 2001b) provides information on components of the marine environment that could be useful for SEMR and other marine regions. Indicator development is documented in detail in the Indicator reports (DEH, 2003, Ward et al. 1998) and SOE report (ASEC 2001a) and this methodology will be useful for the National Oceans Office. The P-S-R approach is a simple performance assessment system and therefore the indicators reported on under SOE, in addition to the SOE recommendations, should provide assistance when developing Marine Plan performance assessment systems.

The Framework, Components and Prioritisation

Framework: Australian jurisdictions use a modification of the original OECD Pressure-State-Response model known as the Pressure-Condition-Response model (Figure 1).



SoE reporting model.

Source: ASEC 1999.

The Australian model aims to clarify the role of human decisions in environmental outcomes. In particular, it explicitly recognizes that:

- pressures are human-induced
- states are the result of pressures and the effectiveness of responses

The Commonwealth, State and Territory State of Environment frameworks are resource-focussed frameworks.

Components: The first Commonwealth SOE report (SEAC, 1996) identified key environmental issues at the national level, as a first step towards identifying a set of indicators relevant to Australian conditions. The second SOE report (ASEC, 2001a) adopted a set of 75 core indicators across six themes, including local and community uses. A seventh theme was reported separately. The themes include:

- Atmosphere
- Coasts and oceans
- Land
- Inland waters
- Biodiversity
- Natural and cultural heritage
- Human settlements

Each theme report is divided into sections. The major issues for each theme are reported by sections. As an example, the Coasts and oceans theme has the following sections:

- Introduction
- Habitats and Species
- Coastal settlement and Development
- Water quality
- Introduced marine species and marine pests
- Fisheries and Aquaculture
- Activities and uses of the marine environment
- Marine and coastal management

Most sections are further subdivided. Each section has one or more indicators.

Prioritisation: The criteria for selecting core indicators are provided in ANZECC (2000).

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Objectives and indicators (and performance measures)

Objectives: The SOE has high-level objectives but does not have operational objectives. Rationales are provided for each indicator and these incorporate information equating to objectives (see Ward et al. 1998), but these are difficult to display in a Table. In State Of the Environment 2001 often objectives are implied in the explanations for each indicator.

Indicators: The Australian and New Zealand Environment and Conservation Council (ANZECC) SOE taskforce identified 454 environmental indicators for SOE reporting. The coastal and oceans indicators are described and reviewed in Ward et al. (1998). Of these a set of core indicators were developed that could be reported across jurisdictions. The Taskforce produced a draft set of Core Indicators in 1998 (ANZECC 1998) and after public consultation and agreement by ANZECC in December 1999 they produced the report Core Environmental Indicators for reporting on the state of the environment (ANZECC 2000), (ASEC 2001a). This set of core indicators has been separated into six themes, and 75 core indicators, along with a set for local and community uses. These indicators formed the base of the State of Environment Report 2001. The indicators for the natural and cultural heritage theme were developed separately, with 43 key indicators and 8 of these were selected as general indicators. The data used for indicators are derived primarily from work by State and Commonwealth government agencies with additional information provided by research organisations. The core indicators reported in the SOE report are listed below (Table).

All the Coastal and Oceans indicators are discussed and reviewed in developed in Ward et al (1998) and this information should inform the National Oceans Office on the indicators, why they were selected, their rationale and analysis, ie:

- Description
- Rationale
- Analysis and interpretation
- Monitoring design and strategies
- Reporting scale
- Outputs
- Data sources and
- Linkages to other indicators

The core indicators selected for reporting were reported in SOE 2001. Generally Ward et al (1998) and The State Of the Environment report (ASEC 2001b) correspond although there are a few differences between components in the reports and also the State Of the

Environment report includes additional data (they are not called indicators) that presumably were not available in 1998. Also State Of the Environment provides more explanations than Ward et al (1998).

In ward et al (1998) a list of indicators and whether they are ESD (condition), use/non human threat (pressure) or action (response) is listed. These classifications have been used in the Table below. However, in the State Of the Environment (2001b) these clear classifications are sometimes blurred. For example for sea temperature this is explained as both a condition of the environment as well as a pressure on animal populations (ie it is stated that penguins and seals may be moving to subantarctic islands as Antarctica melts). For some indicators in the State Of the Environment report data on pressures, condition and response are provided, for example on threatened species. Even though the indicator is classified as a response indicator in Ward et al (1998).

Performance measures: In Ward et al (1998) in the analysis section for each indicator the performance measure is explained. However as the data presented in State Of the Environment 2001 for each indicator is not always the same as suggested in Ward et al (1998) the performance measures may vary between Ward and ASEC (2001b). Generally the direction for good performance is discussed in the State Of the Environment report but sometimes competing objectives exist and depending on what objectives you want to know then

Table: Core Indicators for Coasts and Oceans

Component	Objective	Formalised / Implicit	Indicator	Performance measure	Type of objective/ indicator (1,2)
Habitats and species		Implicit	Marine species, rare, endangered and threatened		ESD/Action, Measurable
Habitats and species		Implicit	Seabird populations		ESD/use/non human threat/action, Measurable??
Habitats and species		Implicit	Coral reef area		ESD, Measurable
Habitats and species		Implicit	Dune vegetation		ESD, Measurable??
Habitats and species		Implicit	Mangrove area		ESD, Measurable

Habitats and species		Implicit	Saltmarsh area		ESD, Measurable
Habitats and species		Implicit	Seagrass area		ESD, Measurable
Habitats and species		Implicit	Fish populations		ESD, Measurable
Introduced marine species and marine pests		Implicit	Pest numbers		Use/non human threat, Measurable
Introduced marine species and marine pests		Implicit	Species outbreaks		Use/non human threat, Measurable
Fisheries		Implicit	Aquaculture production		ESD, Measurable
Fisheries		Implicit	Fish stocks		ESD, Measurable
Fisheries		Implicit	Seafood quality		ESD, Measurable
Water quality		Implicit	Turbidity		Use/non human threat, Measurable
Water quality		Implicit	Water nutrients (nitrogen)		Use/non human threat, Measurable
Marine and coastal management		Implicit	Coastal care community groups		Action, Measurable
Water quality		Implicit	Coastal discharges		Use/non human threat, Measurable
Coastal settlement and development		Implicit	Coastal population		Use/non human threat, Measurable
Coastal		Implicit	Coastal tourism		Use/non human threat,

settlement and development					Measurable
Fisheries		Implicit	Fishing effects on non-target species		Action, Measurable
Marine and coastal management		Implicit	Marine network participation		Action, Measurable
Marine and coastal management		Implicit	Marine Protected Areas		Action, Measurable
Activities and uses		Implicit	Ship visits		Use/non human threat, Measurable
Activities and uses		Implicit	Shipping accidents		Use/non human threat, Measurable
Climate variability and change		Implicit	Sea level		ESD, Measurable
Climate variability and change		Implicit	Sea surface temperature variability		ESD, Measurable

1. The Oceans Office classifies three forms of Objectives, those for ESD elements (social, economic, environmental), those for Use/non-human threat objectives, and those for Actions (on-ground). Each of these three types of objectives have respective indicators, being ESD indicators, Use/non-human threat indicators, and Action indicators.
2. Objectives and Indicators may be either measurable/operational or not measurable.

Data gathering

Data collection: State Of the Environment is reported at the national level every five years as required by the *Environment Protection and Biodiversity Conservation Act 1999*. The SOE team within Department of Environment and Heritage does not implement on-ground surveys or data collection, they rely on data collection from other State and Commonwealth groups and agencies, ie the SOE assesses available information and tries to influence directions for data collection.

Within the State Of the Environment Coasts and Oceans report probably 1/3rd of the indicators have data reported as a baseline (once off) percentage, area, or number, rather than as a trend over the previous five years. Data reporting may be inconsistent with the State Of the Environment 1996, for example the 'listed' seabird species have risen from 7 species to 35 due mainly to a change in listing of these species. Therefore, for marine planning, changes over time will only become apparent after the 2006 report is released. For about another 1/3 of the indicators data is not nationally available and case studies have been used. IN a number of cases the State Of the Environment report refers to research ad does not present the information and if the National Oceans Office wants to use the data they will have to go back to the primary source.
For about 1/4 of the indicators data is provided as trends over time and could be directly used by the National Oceans Office. However, virtually no indicators have data broken down into marine regions, although some may be compatible with marine regions (ie those that use case studies that happen to be contained within a marine region, and those that have data at a finer scale than a marine region).

Ongoing research to improve data quality: The SOE reports identify gaps and directions for data collection, as well as possible management responses.

Management response

At the national level State of the Environment Reporting in its current form is solely an information tool rather than a framework for management. Some State and Territory governments are required to consider SOE recommendations in their decision-making processes. At a national level, there is no statutory requirement for the Australian Government to adopt any of the management recommendations in the State of the Environment Report. The organisation responsible for State of the Environment reporting often has little control over the responses (if any) that are taken to the pressures and conditions upon which it reports.

Key points

The State Of the Environment system reports on the condition of the environment, the pressures on the condition, and the human responses taking place. Although assessing performance, the SOE system has minimal power to act upon assessments. It is an information tool that collects data from other sources and therefore can only collect data that is already available. This means that the National Oceans Office work will most likely benefit state of environment reports, rather than the other way around. Nevertheless

the SOE could provide a useful framework for aggregation of National Oceans Office data and information. The coast and oceans theme is the most relevant to the National Oceans Office and the original indicator report (Ward et al 1998) provides useful information on how indicators were selected, developed and assessed.

PERFORMANCE ASSESSMENT SYSTEM: **Information collection sheet**			
PAS ID:	PAS 10		
PAS NAME:	**National Regional Evaluation Framework**		
CONTACT'S NAME:	Jacqui Malins		
PHONE NO.	6272 8102	**EMAIL:**	
DATE:	14 January 2003		
REFERENCES/WEB:	Not publicly available: Caveat: this information is drawn from documents dated July 2003and may not represent the current status of the framework.		

Performance Assessment System name:

National Regional Evaluation Framework

Description of the Performance Assessment System

The subject of the Performance Assessment System: Regional communities and programmes that impact upon these.

	Scale:		**Scope**:
	Individual		Ecological
X	Region	X	Economic
	Industry	X	Social
	National		Governance
	International	X	Other: Program performance

Purpose: To provide a consistent approach to monitoring and evaluating the impact of Commonwealth programmes in regions and to assist government to periodically assess the impact of the suite of Commonwealth programmes in meeting the government's regional and broader objectives.

Reason: To provide a whole-of-government assessment on the effectiveness of government in the regions.

Relevance to National Oceans Office: NREF is currently under development and its relevance to the National Oceans Office cannot be determined at this stage. However it is likely that National Oceans Office actions will contribute to regional impacts for which assessment may be required.

The Framework, Components and Prioritisation

Framework: There is an overarching pressure-state-response (P-S-R) framework. Programmes (the response) are assessed using an input-output framework, the impacts of programmes on regions (pressure) is evaluated, and the state of the region (social and economic components of ESD) is monitored. This combines activity-focussed (program evaluation) and resource-focussed (people in a region) frameworks.

Components: As stated above, the three related components (P-S-R): programme monitoring process, evaluation process (impacts on regions) and a regional monitoring process.
Programme monitoring would require agencies to collect input data (eg. number of business who received assistance; and what form of assistance) and output data (eg number of jobs created, satisfaction with programme service/delivery).
Evaluation processes: involving regional case studies will provide assessments of the impact of programmes within a region.
Regional Monitoring Process: will most likely use ABS well-being data to monitor regional changes in social, economic and environmental well-being.

Prioritisation: Framework in development not able to provide information at this stage.

Objectives and indicators (and performance measures)

Objectives: Draft monitoring and evaluation principles have been articulated.

Indicators: Indicators will be developed in the context of each programme's operation (probably use/non human threat and action indicators). Well-being indicators (ESD) likely to be derived from ABS data.

Performance measures: Framework in development not able to provide information at this stage

Data gathering

Data collection:
For programmes, data collection will be the responsibility of the respective agency.
For evaluation processes (impacts of programmes on regions), data will be collected through case studies managed by DOTARS.
For regional monitoring processes, data will be derived from ABS collections.

Ongoing research to improve data quality: Framework is currently under development which includes the development of methodologies and approaches. These will serve to focus data collection and improve its quality.

Management response

The process is being developed. Nevertheless monitoring regions is attempting to inform directions for policy and resulting programmes. The management response is through the regional programmes.

Key points

This system will look at performance assessment of regional programmes, their impacts on regions, and how this affects sustainability of regions, mainly with respects to social and economic aspects of ecologically sustainable development.
Although the NREF is under development it is likely that National Oceans Office actions will contribute to regional impacts (people on the land) for which assessment may be required.

PERFORMANCE ASSESSMENT SYSTEM: **Information collection sheet**			
PAS ID:	PAS 11		
PAS NAME:	**National Natural Resource Management Monitoring and Evaluation Framework**		
CONTACT'S NAME:	Jim Derrick		
PHONE NO.	02 62741637	**EMAIL:**	Jim.Derrick@AFFA.gov.au
DATE:	23/12/2003		
REFERENCES/WEB:	MEWG (2003) National Natural Resource Management Monitoring and Evaluation Framework. National Natural Resource Management Ministerial Council, Canberra. April 2003. MEWG (2003) National Framework for Natural Resource Management Standards and Targets. National Natural Resource Management Ministerial Council, Canberra. April 2003. Website- http://www.deh.gov.au/nrm/monitoring/index.html, Updated 6/11/2003, Accessed 14/1/2004.		

Performance Assessment System name:

National Natural Resource Management Monitoring and Evaluation Framework

Description of the Performance Assessment System

The subject of the Performance Assessment System: Natural resources and their management are the subjects to be monitored and evaluated.

	Scale:		**Scope**:
	Individual	X	Ecological
X	Region		Economic
	Industry	X	Social
X	National		Governance
	International	X	Other: Program performance

Purpose: The National NRM M&E Framework was developed to assess progress towards improved natural resource condition through the development of accurate, cost-effective and timely information on the:

- Health of the nation's land, water, vegetation and biological resources; and
- Performance of programs, strategies and policies which provide national approaches to the conservation, sustainable use and management of these resources.

Reason: The Natural Resource Management Ministerial Council established the Monitoring and Evaluation Working Group (MEWG). The MEWG helped finalise the National Natural Resource Management M&E Framework and the National Framework for NRM Standards and Targets to provide the basis for NRM monitoring and evaluation of programs, strategies, and policies within the scope of the ministerial council. The initial impetus for these frameworks were for performance assessment under the National Action Plan for Salinity and Water Quality and the Natural Heritage Trust.

Relevance to National Oceans Office*:* The Standards and Targets and M&E Frameworks provide the principles and indicators (ESD and Use/non human threat) for evaluating regional plans and programs (eg NHT) in terrestrial regions with respects to NRM. Therefore, they may also have relevance to marine regions. Matters for targets (components) and their indicators may provide some ideas for monitoring in the Ocean although are not comprehensive and only cover environmental issues. The MEWG does not currently collect data as a part of the frameworks, although there is a possibility that the National Land and Water Resources Audit may report using the Frameworks as a base, however this would be many years into the future.

The Framework, Components and Prioritisation

Framework: The National NRM M&E Framework provides a blueprint for monitoring and evaluation frameworks for programs, strategies and policies within the scope of the Council as well as structuring monitoring and evaluation at the national level. The framework is represented diagrammatically in the following table:

	Natural Resource Condition	Program, Strategy and Policy Performance
Monitoring	• Natural resource condition monitoring at local, regional, State/Territory and national levels	• Monitoring of resource condition against Standards and Targets Framework) • Management action monitoring
Evaluation	• Evaluating progress towards improved natural resource condition at the national level	Performance evaluation of programs and strategies

Evaluating models & assumptions

The National Framework for NRM Standards and Targets sets the principles and requirements for natural resource management standards and targets, mainly focussing on the natural resource condition side of the above diagram.

Components: As displayed above, the basic components are natural resource condition and the performance of programs, strategies and policies. The National Framework for NRM Standards and Targets divides the Resource condition and Management actions into the following components, or 'matters for targets' for reporting by Regions:

Matters for which Regional Targets must be set

Resource Condition Matters for Targets

- Land salinity.
- Soil condition.
- Native vegetation communities' integrity.
- Inland aquatic ecosystems integrity (rivers and other wetlands).
- Estuarine, coastal and marine habitats integrity.
- Nutrients in aquatic environments.
- Turbidity / suspended particulate matter in aquatic environments.
- Surface water salinity in freshwater aquatic environments
- Significant native species and ecological communities.
- Ecologically significant invasive species.

Management Action Matters for Targets

- Critical assets identified and protected.
- Water allocation plans developed and implemented.
- Improved land and water management practices adopted.

Objectives and indicators (and performance measures)

Objectives: The National Framework for NRM Standards and Targets has set the national outcomes and regional targets against which performance is to be assessed. The aspirational national outcomes are as follows:

1. The impact of salinity on land and water resources is minimised, avoided or reduced.
2. Biodiversity and the extent, diversity and condition of native ecosystems are maintained or rehabilitated
3. Populations of significant species and ecological communities are maintained or rehabilitated.
4. Ecosystem services and functions are maintained or rehabilitated.
5. Surface and groundwater quality is maintained or enhanced.
6. The impact of threatening processes on locations and systems which are critical for conservation of biodiversity, agricultural production, towns, infrastructure and cultural and social values, is avoided or minimised.
7. Surface water and groundwater is securely allocated for sustainable production purposes and to support human uses and the environment, within the sustainable capacity of the water resource.
8. Sustainable production systems are developed and management practices are in place, which maintain or rehabilitate biodiversity and ecosystem services, maintain or enhance resource quality, maintain productive capacity and prevent and manage degradation.

Regional targets can be characterised as aspirational targets, achievable resource condition targets (similar to Oceans Office 'ESD objectives'), and targets for management actions (Oceans Office 'Use/non human threat and Action objectives').

a). Aspirational targets

As part of the regional planning process, it may be valuable for regions to set out a vision or goals for NRM in their region, which could include long-term "targets" which are aspirational statements about the desired condition of their natural resources in the longer term (eg 50+ years). These goals or "targets" would guide regional planning, and set a context for the measurable and achievable targets required under this Framework. Examples could include: regional extent of native vegetation to be increased to 30% cover; decrease in average salinity in regional streams.

b). Achievable resource condition targets

Within regional plans, regional bodies will be required to set specific, timebound and measurable targets, relating largely to resource condition, against the minimum set of matters for regional targets (set out above). The timeframe for achievement of these targets is likely to be 10-20 years. These targets must be pragmatic and achievable. They would be developed iteratively, including through a benefit/cost analysis. Examples could include: X stream sites within region in specific river condition category by year Y.

c). Management action targets

In addition, regional bodies will be required, as part of their regional plans, to set short term targets (1-5 years), relating mainly to management actions or capacity-building. These targets must contribute to progress towards the longer-term resource condition targets. Only some matters for management targets are specified, as the relevant management solutions to reversing resource degradation are likely to vary substantially

between regions. In setting these targets, regions need to take account of national indicators, and associated guidelines and protocols for measuring and reporting, as set out in the National Framework for NRM Monitoring and Evaluation, so that they use consistent approaches, where these have been identified. Examples include: X km of riparian zone to be fenced and managed for conservation and landscape function.

Objectives for Regional Plans are influenced by the National Framework for NRM Standards and Targets, but specific to each regional plan, and therefore cannot be reported here.

Indicators: A list of recommended indicators for matters for targets is provided in the National NRM M&E Framework, but is under review and therefore is not presented here (see Website- http://www.deh.gov.au/nrm/monitoring/index.html, for updates).

Performance measures: Performance measures are included as a part of the objective (eg as the target) and indicator.

Data gathering

Data collection: There is no data collection.

Ongoing research to improve data quality: Potentially the NLWRA may be involved in collecting data and reporting on Natural Resource Management.

Management response

These are specific to each regional plan, and a part of their management action targets and actions, as well as reviewing and evaluating the plan and its effectiveness.

Key points

Two Frameworks (but one system) have been developed to help assess the performance of natural resources and their management (in terrestrial systems). The frameworks major use will be for assessment of regional plans (eg NAPS&WQ/NHT plans) and program performance (NHT). These frameworks focus mainly on environmental issues rather than social and economic. The Frameworks act as a template or guide for use by regions rather than coordinating the collection of data. Although the frameworks provide a useful way of looking at NRM, the suggested indicators are not comprehensive and gaps do exist in a number of areas.

PERFORMANCE ASSESSMENT SYSTEM: **Information collection sheet**			
PAS ID:	PAS 12		
PAS NAME:	**Sustainable Rivers Audit**		
CONTACT:	Jody Swirepik		
PHONE NO.	02 6279 0179	**EMAIL:**	jody.swirepik@mdbc.gov.au
DATE:	17/2/04		
REFERENCES/WEB:	MDBC (2003) Sustainable Rivers Audit, MDBC, Canberra. Website- http://www.mdbc.gov.au/naturalresources/sra/sra.html, Accessed 17/2/04		

Performance Assessment System name:

Sustainable Rivers Audit

Description of the Performance Assessment System

The subject of the Performance Assessment System: Rivers in the Murray Darling Basin

	Scale:		**Scope:**
	Individual	X	Ecological
X	Region		Economic
	Industry		Social
	National		Governance
	International		Other

Purpose: The Sustainable Rivers Audit (SRA) will assess river health and ecological condition at the valley scale. In itself, it does not assess the sustainability of any river system or the effectiveness of the Cap. However, it will inform debates on river health management and trigger further investigations into the causes of poor river health in the Basin.

Reason: The Murray-Darling Basin Initiative aims to promote and coordinate effective planning and management for the equitable, efficient and sustainable use of the water, land and other environmental resources of the Murray-Darling Basin.
Towards this, a suite of natural resource management policies and programs have been developed by all levels of Government as well as broader community groups. These initiatives contribute to the COAG commitment to improve river health by recognising and formalising water for the environment and improving water quality.

To assess the efficacy of these policies and programs, and to guide future work, the MDB Ministerial Council has agreed to undertake an ongoing audit to ascertain the health of the rivers of the Basin. The need to be able to readily gauge river health at a Basin scale was identified in the review of the Cap on diversions, however the assessment of current river health will necessarily reflect all current and past land and water management activities.

Relevance to National Oceans Office: The Sustainable Rivers Audit is an example of a well-designed, long-term monitoring program to measure ecosystem health.

The Framework, Components and Prioritisation

Framework: This is the ecological component of an ESD framework (the social and economic components are being developed through other processes). Ecological

components are structured hierarchically and results aggregated using expert systems approach. This is a resource-focussed framework. It is a ‘Referential’ approach, where results are reported relative to ‘natural’.

Components : Under the ecological component is hydrology, water quality, macroinvertebrates, fish and physical habitat.

Prioritisation : Components developed through initial consultancy and a series of technical working groups followed by a Pilot Audit. Continuing to evolve. Managed by Commission staff under direction of Taskforce made up of representatives of Commission members and guided by Independent Sustainable Rivers Audit Group.

Objectives and indicators (and performance measures)

Objectives: The Sustainable Rivers Audit does not specify objectives or targets for river health. It explicitly states that what constitutes acceptable river health needs to be determined for each river basin based on community needs and aspirations. The role of the SRA is to provide comparable information on river health across the Basin.

Indicators: Indicators were selected after extensive research and consultation involving both the development of a conceptual framework and pilot testing in the field. Measurements are obtained in the field based on a statistically designed sampling planor, in the case of hydrology, calculated from hydrological models. Indicators for some themes are still under development. Composite indicators have been derived using expert rules. All indicators are expressed relative to natural.

Performance measures: The SRA makes the assumption that a system that is closer to 'natural' is more healthy than a system that is further away from 'natural'. This assumption leads to the implicit performance measure 'distance from natural.'

Table: Objectives and Indicators (and performance measures)

Component	Objective	Formalised/ Implicit	Indicator	Performance measure	Type of objective/ indicator (1,2)
Hydrology	None	Explicit	Index calculated from several indicators	Score relative to natural	ESD, Measurable
Water processes	None	Explicit	Under development		ESD, Measurable
Macroinvertebrates	None	Explicit	Index calculated from several indicators	Score relative to natural	ESD, Measurable
Fish	None	Explicit	Index calculated from several indicators	Score relative to natural	ESD, Measurable
Physical habitat	None	Explicit	Under development	Score relative to natural	ESD, Measurable

1. The Oceans Office classifies three forms of Objectives, those for ESD elements (social, economic, environmental), those for Use/non-human threat objectives, and those for Actions (on-ground). Each of these three types of objectives have respective indicators, being ESD indicators, Use/non-human threat indicators, and Action indicators.
2. Objectives and Indicators may be either measurable/operational or not measurable.

Data gathering

Data collection: A Pilot Audit has been carried out in four river basins to test protocols, statistical assumptions and methodology. A proposal for a continuing Audit has been approved in principle by the Ministerial Board subject to funding arrangements. Data will be collected on a regular basis with different frequencies for different components. A complete Audit will be reported on every 6 years.

Ongoing research to improve data quality: The proposal currently under consideration includes research to further develop components, indicators etc.

Management response

The sustainable rivers audit is intended to identify where actions are needed to arrest deterioration, highlight policies and strategies in need of review and assist in setting river health targets under the Integrated Catchment Management policy (MDBMC, 2003). The sustainable rivers framework will be combined with social and economic information to determine management responses in the MDB.

Key points

The Sustainable Rivers Audit is an example of a carefully designed monitoring system to provide ongoing data of known statistical quality on ecosystem health. The role and scope of the SRA has been debated and defined. There has been emphasis on stakeholder involvement (jurisdictional and scientific) over an extended period. Components and indicators have been selected to fit into an overall conceptual framework. The SRA will be implemented in an adaptive manner with continuing testing and refinement. The need to provide comparative information has led to a ‘new’ monitoring system rather than a cobbling together of existing ones. Although existing systems have been considered in the process and the ‘best’ bits selected from each, individual jurisdictions may have some reluctance to signing on to the SRA especially if they have to foot the bill.

PERFORMANCE ASSESSMENT SYSTEM: **Information collection sheet**			
PAS ID:	PAS 13		
PAS NAME:	**National Land and Water Resources Audit**		
CONTACT'S NAME:	Blair Wood Executive Director National Land and Water Resources Audit Level 2, UNISYS Building 91 Northbourne Avenue Turner ACT 2612		
PHONE NO.	02 6257 3067	**EMAIL:**	blair.wood@nlwra.gov.au
DATE:	11/2/2004		
REFERENCES/WEB:	NLWRA (2004a) *National Land and Water Resources Audit.* NLWRA, Canberra.Website- http://www.nlwra.gov.au/, Accessed 11/3/2004 NLWRA (2004b) *Australian Natural Resources Atlas*. NLWRA, Canberra. Website- http://audit.ea.gov.au/ANRA/atlas_home.cfm, Accessed 11/3/2004		

Performance Assessment System name:

National Land and Water Resources Audit.

Description of the Performance Assessment System

The subject of the Performance Assessment System: Natural resources and the impact on those resources from humans.

	Scale:		Scope:
	Individual	X	Ecological
X	Region	X	Economic
X	Industry	X	Social
X	National		Governance
	International		Other

Purpose: From 1997 - 2002 the National Land and Water Resources Audit (the Audit) progressed the collection and collation of primary data and information related to Australia's natural resource management. The legislated objectives of the Audit were:

Objective 1.Clear understanding of the status of, and changes in, the nation's land, vegetation and water resources and implications for their sustainable use.
Objective 2. Providing an interpretation of the costs and benefits - economic, environmental and social - of land and water resource change and any remedial actions.
Objective 3. Developing a national information system of compatible and readily accessible resource data.
Objective 4. Producing national land, vegetation and water - surface and groundwater - assessments as integrated components of the Audit.
Objective 5. Ensuring integration with, and collaboration between, other relevant initiatives.
Objective 6. Providing a framework for monitoring Australia's land and water resources in an ongoing and structured way.

Recommendations to further develop the assessments of Australia's natural resources were identified in the final report of the Audit (2002). The objectives of the second phase of the Audit (2002-2007) are to facilitate improved decision-making on natural resource management by:

- assisting in the identification of natural resource management priorities; and
- allowing the progress of natural resource management investments to be assessed through the development and maintenance of accurate, cost-effective, contemporary, accessible and timely data and information on the nation's natural resources.

Reason: The National Land and Water Resources Audit was established under the *Natural Heritage Trust Act 1997* and reports to the Natural Heritage Ministerial Board. It works with Australian Government, State & Territory agencies, regional natural resource management groups and community stakeholders through the Audit Advisory Council and the Land Water and Bio-diversity Advisory Committee of the NRM Ministerial

Council. The legislated objectives of original Audit are provided in the purpose section. The Natural Heritage Ministerial Board has approved a continuation of the Audit from 2002 through to 30 June 2007.

Relevance to National Ocean's Office: Although in the past the only marine data collected by the NLWRA has been on estuaries and is therefore out of scope of the SEMR, this may be of relevance to other marine regions covered by the National Oceans Office. The condition of estuaries indicator is almost directly useable for marine planning. Other estuaries indicators on value are of case studies and less applicable. Other indicators in the social and economic theme report may be useful as a model for marine region social and economic indicators. The NLWRA could potentially take the responsibility for coordinating data collection and collation for oceans, this would be a natural progression using data collection systems developed for land, fresh water and estuaries.

The Framework, Components and Prioritisation

Framework: There a variety of frameworks within the NLWRA. The National Land and Water Resources Audit itself follows a program assessment framework, where the objectives (as stated in the purpose section above) are actions that must be carried out as part of the project.
The actual issues or outcomes that the Audit is examining are in a pressure-state-response framework. ie looking at land and water natural resource condition and trend (state) and the impacts upon these (pressures) such as social, economic and ecological and potential responses. This is not a neat distinction though and the agriculture, economic and catchments, rivers and estuaries reports do resemble in part, an ESD framework (ie social, economic, ecological costs and benefits over the short and long term). The new Audit has a stronger focus on ESD looking at integrating themes. Each theme report (see below) developed a monitoring framework that could be implemented and maintained over long term.

Components: The original Audit was separated into the following high level components

- Land
- Water
- Biodiversity
- People

To assess these in the practical context the components were divided into the following components reviewed in theme reports:

- Landscape health
- Water resources
- Salinity
- Agriculture
- Rangelands
- Catchments, rivers and estuaries
- Native vegetation

- Biodiversity
- Economic and social issues of natural resource management
- Integrated natural resource information system

The last component deals with actions on how to set up, maintain and utilise information systems. The rest of the components deal with various scales and scopes and are not necessarily mutually exclusive. Components are sub divided in each theme report, usually into state (ESD), pressure (use/non human threat) and response (action) but this depends on the report.

The estuaries component is broken down into components on condition, value, and for each State and Territory further descriptive information on:

- Key messages
- Key needs
- Management arrangements
- Policies
- Community initiatives
- State priorities

Prioritisation: Each theme report developed a framework, based upon pressure-state-response.

Objectives and indicators (and performance measures)

Objectives: The high-level legislated objectives in the original Audit (see purposes section) were action objectives on how to develop information assessment systems. The first and fourth objectives hint at the natural resources to be included in the Audit and the second hints at the pressures (social, economic and ecological) and responses to be included in the Audit. The new Audits objectives are formalised through the Natural Heritage Ministerial Board but not legislated. They deal mainly with actions relating to setting up and maintaining information systems and are therefore action objectives.
In the theme reports objectives are rarely stated and usually implicit as a part of explanations for an indicator/information.

Indicators: A large variety of indicators, data and information are presented in the theme reports. These are generally in a pressure-state-response framework although this depends on the reports. All indicators had to be measurable and the Audit put considerable effort into developing indicators, either from primary or secondary data. Most indicators are probably of minimal value to the National Oceans Office and are therefore not explained in tables here. Indicators, particularly in the economic and social theme report, could provide a useful model for the Oceans Office. The main indicators of direct relevance to the Oceans Office were in the estuaries report (see Table).

Performance measures: Depending on the theme report performance measures were usually stated explicitly. As the Audit generally is setting the baseline rather than reviewing data over time performance measures will be more enlightening when data is updated over time.

Table: Objectives and Indicators (and performance measures)

Component	Objective	Formalised/ Implicit	Indicator	Performance measure	Type of objective/ indicator (1,2)
Estuary condition		Implicit	Estuary condition	Percentage in each condition -Near pristine -Largely unmodified -Modified -Extensively modified (score relative to natural)	ESD, Measurable

Estuary processes		Implicit	Estuary processes	Percentage of estuaries in each estuary type (more a descriptive than performance indicator)	ESD, Measurable
Value: Natural capital: Monetary value		Implicit	Value per hectare	Increasing value (implied)	ESD, Measurable
		Implicit	Value of Estuarine dependent commercial fisheries	Increasing value (implied)	ESD, Not measurable
		Implicit	Value of Estuarine opportunist commercial fisheries	Increasing value (implied)	Use/non human threat, Measurable
		Implicit	Value of Recreational fisheries	Increasing value (implied)	Use/non human threat, Measurable
		Implicit	Value of Indigenous fishing	Increasing value (implied)	Use/non human threat, Measurable
Value: Human-made capital: Monetary value		Implicit	Port infrastructure and revenue	Increasing value (implied)	ESD, Measurable

1. The Oceans Office classifies three forms of Objectives, those for ESD elements (social, economic, environmental), those for Use/non-human threat objectives, and those for Actions (on-ground). Each of these three types of objectives have respective indicators, being ESD indicators, Use/non-human threat indicators, and Action indicators.
2. Objectives and Indicators may be either measurable/operational or not measurable.

Data gathering

Data collection: The main focus of the Audit was to set up information systems, this included determining the monitoring framework, selecting indicators, identifying potential data, collecting and collating data and setting up systems for data collection, assessing and evaluating the data, and making recommendations for future data collection. The Audit was also responsible for setting up a national database system for natural resource information (Australian Natural Resources Atlas- NLWRA 2004b). Although the Audit provides a snapshot or baseline for most themes, it set up systems to ensure that data collection could be repeated in the future. The National Land and Water Resources Audit is continuing to update the Australian Natural Resources Atlas.

For estuary condition and estuary processes the data is accessible and directly useable for marine planning purposes, not in the report but through the Australian Natural Resources Atlas (NLWRA 2004b). Estuary condition is determined through a number of criteria (or condition is an indice of underlying data). Data is based upon available information and expert opinion and provides a snapshot or baseline rather than trends over time. For value of estuaries, data was based upon case studies. Information on estuary management responses and policies in each State is descriptive.

Ongoing research to improve data quality: The new Audit is dealing with how to integrate data, such as economic, social and ecological, to inform policy decisions and management responses. Further information on improvements to management arrangements, monitoring and assessment, institutional arrangements, education and research are stated at the end of the estuaries report.

Management response

The National Land and Water Resources Audit was set up to provide a status of Australia's natural resources and determine change. It was to set up an information system to do this over time, and was to inform on management responses, particularly assessing potential economic, social and ecological implications of changing land and water use. This latter point on management responses was not well covered in most theme reports. The new Audit has a stronger focus on integrating data enabling it to inform on policy and management priorities and management responses.
For each State and Territory, as well as having an assessment of condition of estuaries they have descriptions of:

- Key messages
- Key needs
- Management arrangements
- Policies
- Community initiatives
- State priorities

Key points

The National Land and Water Resources Audit was set up to assess the status and change in natural resources and inform on the costs and benefits - economic, environmental and social - of land and water resource change and any remedial actions. The scope of the Audit does not include marine waters except for the estuaries component. The estuaries condition indicator could be useful for marine regions if they include estuaries within their scope, and the data is readily useable. Indicators for social and economic components may be useful as a model for marine planning.

The NLWRA focussed on setting up information systems, including the development of monitoring frameworks and indicators, collection and collation of data, and its assessment. It would be a natural progression to include marine regions using data collection systems/frameworks developed for land, fresh water and estuaries.

PERFORMANCE ASSESSMENT SYSTEM: Information collection sheet			
PAS ID:	PAS 14		
PAS NAME:	**AMSA: Safety and Protection**		
CONTACT'S NAME:	Australian Maritime Safety Authority		
PHONE NO.	02 6279 5000	**EMAIL:**	generalenquiries@amsa.gov.au
DATE:	3/3/2004		
REFERENCES/WEB:	AMSA (2002) *OH&S (MI) Act incident reports for period 1997/98-2001/02*. Australian Maritime Safety Authority, Canberra. Website http://www.amsa.gov.au/sp/ohs/index.htm, Updated 2/2003, Accessed 3/32004		

Performance Assessment System name:

AMSA Safety and protection

Description of the Performance Assessment System

The subject of the Performance Assessment System: OH&S injuries on ships.

	Scale:		**Scope**:
X	Individual		Ecological
	Region		Economic
	Industry	X	Social
X	National		Governance
	International		Other

Purpose: To review OH&S incidents/injuries on ships.

Reason: The *OH&S (Maritime Industry) Act 1993* first came into force in 1994. The number of OH&S incidents has been reported to AMSA since 1994. The rate of incidents was calculated using the number of seafarers under the *Seafarers Rehabilitation and Compensation Act 1992* as supplied by the Seafarers Safety, Rehabilitation and Compensation Authority. This is because the number of seafarers covered under the *OH&S Act* has not been collected. The numbers are similar under each Act. Masters are required under the Act to submit an Incident Alert to AMSA within 4 hours of the incident and file an Incident Report within 72 hours.

Relevance to National Oceans Office: This is a relevant subject to the National Oceans Office as it deals with OH&S incidents of seafarers on ships (probably not fishing boats). Unfortunately, it does not appear possible to separate out data into marine regions, although talking to AMSA should resolve this possibility.

The Framework, Components and Prioritisation

Framework: Incident/Emergency response framework.

Components: Social wellbeing may include safety, of which OH&S incidents is a component, ie

- Number of incidents reported

Information was also broken down further into components of the injury, including:

- Location of incidents (on the boat)
- Number of injuries by age group
- Incidents per month
- Incidents per rank
- Incidents per ship type
- Mechanism of injury
- Agency of incident (ie machinery)
- Nature of injury

- Bodily location of injury

Prioritisation: Unclear, but it appears that the available data influenced the prioritising of components.

Objectives and indicators (and performance measures)

Objectives: No objectives are stated in the incident report, although there is an implied objective to reduce the number of OH&S incidents (see Table). The objectives of the *OH&S (Maritime Industry) Act 1993* are as follows:

> (a) to secure the health, safety and welfare at work of maritime industry employees; and
> (b) to protect persons at or near workplaces from risks to health and safety arising out of the activities of maritime industry employees at work; and
> (c) to ensure that expert advice is available on occupational health and safety matters affecting maritime industry operators, maritime industry employees and maritime industry contractors; and
> (d) to promote an occupational environment for maritime industry employees that is adapted to their health and safety needs; and
> (e) to foster a cooperative consultative relationship between maritime industry operators and maritime industry employees on the health, safety and welfare of maritime industry employees at work.

Objective (c) appears to most closely relate to the incident report.

Indicators: Indicators appear to have been derived based upon available information collected in incident reports. Indicators are use/non human threat indicators (SeeTable).

Performance measures: There is an implied performance measure to have a reducing number or rate of incidents for overall incidents. The performance measures for the other indicators are not clear.

Table: Objectives and Indicators (and performance measures)

Component	Objective	Formalised / Implicit	Indicator	Performance measure	Type of objective/ indicator (1,2)
Number of incidents reported		Implied	Number of incidents reported	Decreasing trend	Use/non human threat, measurable
Location of incidents		Implied	Location of incidents (on the boat)	Unclear	Use/non human threat,

					measurable
Number of injuries by age group		Implied	Number of injuries by age group	Unclear	Use/non human threat, measurable
Incidents per month		Implied	Incidents per month	Unclear	Use/non human threat, measurable
Incidents per rank		Implied	Incidents per rank	Unclear	Use/non human threat, measurable
Incidents per ship type		Implied	Incidents per ship type	Unclear	Use/non human threat, measurable
Mechanism of injury		Implied	Mechanism of injury	Decrease by machine type	Use/non human threat, measurable
Agency of incident (ie machinery)		Implied	Agency of incident (ie machinery)	Unclear	Use/non human threat, measurable
Nature of injury		Implied	Nature of injury	Unclear	Use/non human threat, measurable
Bodily location of injury		Implied	Bodily location of injury	Unclear	Use/non human threat, measurable

1. The Oceans Office classifies three forms of Objectives, those for ESD elements (social, economic, environmental), those for Use/non-human threat objectives, and those for Actions (on-ground). Each of these three types of objectives have respective indicators, being ESD indicators, Use/non-human threat indicators, and Action indicators.
2. Objectives and Indicators may be either measurable/operational or not measurable.

Data gathering

Data collection: Data is collected and analysed annually by the Australian Maritime Safety Authority through Incident Alerts and Incident Reports that have to be made 4 hours and 72 hours after an OH&S incident occurs, respectively. This review of incident reports covers the period 1997/98-2001/02.

A similar dataset collected by the Australian Maritime Industry Compensation Authority (AMICA) reports on the number of compensation claims and this does not appear to align well with AMSA reports. This reasons for this are under investigation but could be because AMSA reports require an analysis of the injury, which a ship master may not be able to make, or because some injuries are only recognised after the reporting periods (ie 4 and 72 hours) expire. It may also be because compensation claims may be broader than just human injury and relate to belongings.

Ongoing research to improve data quality: Research into the discrepancy between AMSA and AMICA OH&S incident reports is currently underway.

Management response

This report only reports on/evaluates performance and does not make management responses. This report would inform policy decisions and the safety strategy as well as targeted education programs for problem areas.

Key points

OH&S incidents are reported to AMSA as a part of legislation, these are in the form of Incident Alerts and Incident Reports. This review of the Incident Reports (AMSA 2002) provides data on OH&S incidents in shipping in Australia from 1997/98-2001/02. The report provides useful data on OH&S incidents that could be used in a marine PAS. Unfortunately data is not separated into marine regions and whether this is possible to do this would need to be determined by further investigations.

PERFORMANCE ASSESSMENT SYSTEM: **Information collection sheet**			
PAS ID:	PAS 15		
PAS NAME:	**Marine Matters**		
CONTACT'S NAME:	Rupert Summerson		
PHONE NO.	02 6272 4615	**EMAIL:**	rupert.summerson@brs.gov.au
CONTACT'S NAME:	James Larcombe		
PHONE NO.	02 6272 3388	**EMAIL:**	james.larcombe@brs.gov.au
DATE:	16/02/2004		
REFERENCES/WEB:	Larcombe, J., Brooks, K., Charalambou, C., Fenton, M., Fisher, M., Kinloch, M. and Summerson, R. (2002). *Marine Matters – Atlas of marine activities and coastal communities in Australia's South-East Marine Region*. Bureau of Rural Sciences, Canberra. 202 p.		

Performance Assessment System name:

Marine Matters: Atlas of marine activities and coastal communities in Australia's South-East Marine Region

Description of the Performance Assessment System

The subject of the Performance Assessment System: Human uses and coastal communities in the South-east Marine Region

	Scale:		**Scope**:
	Individual	X	Ecological
X	Region	X	Economic
X	Industry	X	Social
X	National	X	Governance
	International		Other

Purpose: To deliver a comprehensive information resource on human uses of the marine environment and their relationship to coastal communities. The product was intended to inform the regional marine planning process and is not a performance assessment system per se.

Reason Seen as a useful contribution to the regional marine planning process.

Relevance to National Oceans Office: Produced specifically for use by the National Oceans Office in the regional marine planning process.

The Framework, Components and Prioritisation

Framework : A comprehensive compilation of available information. No specific framework.

Components: Marine Matters comprises four sections:
- Fisheries in the SEMR
- Town resource cluster analysis
- Social context of the region
- Selected human uses of the SEMR

Fisheries in the SEMR

State fisheries	**Effort/Catch**	**Commonwealth fisheries**	**Effort/Catch**
Marine scalefish (SA)	E	Bottom trawl	E
Inshore trawl and Danish seine (VIC)	E	Danish seine	E
Ocean general (VIC)	E	Gillnet	E

Inshore scalefish, gillnet and hook & trap (TAS)	E	Purse seine, pole and line	E
Diversified inshore scalefish (TAS)	E	Pelagic longline	E
Inshore beach seine and purse seine (TAS)	E	Japanese pelagic longline	E
Commercial dive fishery (TAS)	E	Dropline and bottom longline	E
Ocean fish trawl and prawn trawl (NSW)	E	Squid jig	E
Ocean hauling and trap & line (NSW)	E	Scallop	C
Rock lobster (SE States)	C		
Abalone (SE States)	E		
Scallop (SE States)	C		
Giant crab (TAS, VIC)	C		
Recreational (SE States)	E		

Combined fisheries information	
State	**Commonwealth**
All State fisheries catch	All Commonwealth fisheries catch
All State fisheries landed value	All Commonwealth fisheries
All State fisheries	All Commonwealth fisheries
All fisheries catch	
All fisheries landed value	

Town resource cluster analysis

Town resource cluster analyses were carried out for the following nine localities: Sydney, Wollongong, Ulladulla, Bermagui, Eden, Lakes Entrance, Hobart, Portland and Beachport.

Social context of the SEMR

Social context maps			
Locational maps & SLAs	**Population & demography**	**Family income, income support & education**	**Labour force & employment**
SLAs SA	Total population	Median weekly household income	Labour force participation
SLAs VIC	Indigenous persons	Gov pension recipients	Employment in comm. fishing
SLAs NSW	Population growth	People who left school at 16	Unemployment rate
SLAs TAS	Total dependency ratio	Popn. w/ vocational educn. qualifications	Youth unemployment rate

	Child dependency ratio	Popn. w/ higher educn. qualifications	
	Elderly dependency ratio	Index of relative disadvantage (SEIFA)	
	Median age		
	Change in population median age		
	Population sex ratio		
	Net migration		

Selected human uses themes

Theme	**Maps**
Ports and shipping	Shipping routes and traffic - general Shipping routes and traffic – categorised by type/origin/destination Major & minor ports Major port statistics Lighthouses
Petroleum exploration and development	Offshore petroleum titles 2001 2-D seismic surveys 3-D seismic surveys Oil and gas wells Petroleum fields and infrastructure
Natural heritage	Marine and coastal protected areas
Cultural heritage	Maritime heritage sites (historic lighthouses, customs houses, coastal fortifications and shipwrecks)
Indigenous heritage	Native title applications and land-use agreements
Aquaculture	Aquaculture index map Aquaculture areas – SA, VIC, NSW Aquaculture areas – TAS
Recreation	Charter boat operations Yacht races Volunteer coast guard and coastal patrol stations
Research	Research infrastructure (wave rider buoys, tide gauges and marine research institutes) Research voyages
Defence	Defence training areas
Ocean disposal	Ocean disposal sites (by category of material)
Submarine cables	Submarine cables (past, present and proposed)
Jurisdictional boundaries	Jurisdictional and administrative boundaries

Prioritisation: The intention was to compile a comprehensive information resource on human uses and activities in the SEMR. Priority was given to major industrial uses (fisheries, commercial shipping and the oil & gas industry) and to themes that best described the demographic of coastal communities and their interaction with economic aspects of the fisheries resource. Following these, priority was given first to activities resulting in fixed infrastructure (ports and harbours, oil & gas platforms, aquaculture facilities, research infrastructure (e.g. tide gauges) and submarine cables, etc), then to issues relating to land-use, ownership or title (eg protected areas, defence training areas, native title, etc) and finally to activities, the representation of which is based on past activities.

Objectives and indicators (and performance measures)

Objectives: Marine Matters was not designed as a performance assessment system. Therefore it does not have objectives against which performance is to be measured.

Indicators: A large number of indicators were used and vary both from component to component (section) and within each component. Some themes also use multiple indicators. The Fisheries Section included trends over the period from 1996 – 1999 in catch and landed value as a means of providing context to the current state of the fishery. As far as possible, trends were also included in the Social Context and Selected Human Uses Sections though trends in some themes (ege submarine cables) were not necessarily appropriate.

The Cultural Heritage theme, in the Selected Human Uses section (component) has four indicators (shipwrecks, lighthouses on the Register of the National Estate, Customs Houses and coastal defence sites). See Table.

Performance measures: Marine Matters was not designed as a performance assessment system therefore it does not specify performance measures.

Table: Objectives and Indicators (and performance measures)

Component	Objective	Formalised/ Implicit	Indicator	Performance measure	Type of objective/ indicator (1,2)
Fisheries	None		Mostly fishing effort Person days/ km^2/year Also incl. operations, hooks set, diver hours		Use/non-human threat, Measurable
Town resource cluster analyses	None		Location of primary & secondary resource catchments Number of trawl businesses using		Use/non-human threat, Measurable

			primary, secondary and minor resource catchments		
Social context	None		• Population & demography • Family income, income support & eduction • Labour force & employment Usually % of population		ESD, Measurable
Selected human uses	None		Varies across the themes. For example, cultural heritage values are represented by shipwrecks, lighthouses, customs houses & coastal defence sites.		Use/non-human threat, Measurable

1. The Oceans Office classifies three forms of Objectives, those for ESD elements (social, economic, environmental), those for Use/non-human threat objectives, and those for Actions (on-ground). Each of these three types of objectives have respective indicators, being ESD indicators, Use/non-human threat indicators, and Action indicators.
2. Objectives and Indicators may be either measurable/operational or not measurable.

Data gathering

Data collection: With the exception of some themes in the Selected Human Uses section and the Town Resource Cluster Analyses, data are collected by agencies with responsibilities in these fields. Fisheries data for Commonwealth fisheries is held by AFMA, for State fisheries mostly by State fisheries management authorities. Data for the Social Context section was obtained through ABS. Data for the Selected Human Uses came from a wide variety of sources. The table below lists the datasets, the sources of the data and, in the data collection/maintenance column, identifies whether the data was collected as a one-off of is the responsibility of particular agencies.

Name of dataset	Source	Data collection/maintenance
Shipping routes and traffic	NOO/AMSA/BTE/Lloyds	One off
Passenger ferries	NOO	One off
Traffic separation scheme	RAN Hydrographic Office	RAN HO
Ports	NOO/AAPMA	One off
Shipyards	NOO	One off
Slipways[1]	NOO	One off
Lighthouses	UK Admiralty/AMSA/NOO	One off
Lighthouse ranges	NOO	One off
Customs houses	DEH/NOO	One off
Coastal defence sites	DEH/NOO	One off
Shipwrecks[2]	DEH/ANSD/States	DEH/ANSD
Shipwrecks on Macquarie Island[2]	DEH/ANSD/Tasmania	DEH/ANSD/Tasmania
Charter boat operators	Telstra/NOO	One off
Yacht races	NOO	One off
Marinas and yacht clubs[1]	Telstra/NOO	One off
Coastguard & Coastal Patrol Stations	AVCG/AVCP/NOO	One off
Coastguard & Coast Patrol Vessel ranges	NOO	One off
Defence training areas[2]	RAN Hydrographic Office	RAN HO
Submarine cables	RAN/NSR Consulting	RAN HO
Jurisdictional & administrative boundaries	GA	GA
Schedule of Native Title Applications	NNTT/States	NNTT/States

Register of Native Title Applications	NNTT/States	NNTT/States
Indigenous Land Use Agreements	NNTT/States	NNTT/States
Aquaculture – NSW	NSW Fisheries	NSW Fisheries
Aquaculture – Vic (x2)	DNRE	DNRE
SA Aquaculture Management Zones	PIRSA	PIRSA
SA Aquaculture Sites	PIRSA	PIRSA
Tasmanian Marine Farm Zones	DPIWE	DPIWE
Tasmanian Salmonid Farm Leases	DPIWE	DPIWE
Tasmanian Special Lease Areas	DPIWE	DPIWE
Marine Protected Areas	DEH/States	DEH/States
Ramsar wetlands	DEH/States	DEH/States
Coastal protected areas	DEH/States	DEH/States
Macquarie Island WHA	DEH	DEH
Research vessel tracks	CSIRO/GA/AAD	CSIRO/GA/AAD
Marine research institutes	NOO	One off
Wave rider buoys[2]	DEH	DEH
Tide gauges[2]	NTF	NTF
Ammunition dumps[2]	DEH	DEH
Chemical dumps[2]	DEH	DEH
Vessel dumps[2]	DEH	DEH
Miscellaneous dumps[2]	DEH	DEH
Official dumping grounds[2]	DEH	DEH
Oil and gas platforms	GA	GA
Oil and gas fields	GA	GA
Oil & gas pipelines	GA	GA
Oil and gas wells	GA	GA
Duke Energy gas pipeline[2]	Duke Energy	Duke Energy
Current petroleum lease areas	GA	GA
New petroleum release areas	GA	GA
2D seismic surveys[2]	ASB/Seismic Australia	ASB/Seismic Australia

3D seismic surveys[2]	ASB	ASB

Notes.

1. BRS is maintaining and updating these datasets for Introduced Marine Pest research.
2. These datasets are maintained in a non-spatial data format.

Ongoing research to improve data quality: With a few exceptions outlined most data used in Marine Matters is collected and maintained by other agencies.

BRS is actively engaged in a project, funded through the NOO and FRDC, to improve access to fisheries data at the national level.

Management response

No specific management responses are linked to Marine Matters.

Key points

Marine Matters was a data compilation activity. It was not directed towards assessing performance of anything in particular. Some of the indicators and/or data could address yet to be specified objectives and included in a performance assessment system for the South-east Regional Marine Plan.

PERFORMANCE ASSESSMENT SYSTEM: **Information collection sheet**			
PAS ID:	PAS 16		
PAS NAME:	**Australian Fisheries Management Authority- Annual Report**		
CONTACTS NAME:	Jean Chesson		
PHONE NO.	(02) 6272 5893	**EMAIL:**	Jean.Chesson@brs.gov.au
DATE:	9 March 2004		
REFERENCES/WEB:	Australian Fisheries Management Authority (2002). *AFMA Annual Report 2001-2002*. AFMA, Canberra, 198pp.		

Performance Assessment System name:

AFMA Annual Report

Description of the Performance Assessment System

The subject of the Performance Assessment System:
The Australian Fisheries Management Authority.

	Scale:		Scope:
	Individual	X	Ecological
	Region	X	Economic
X	Industry (statutory authority)		Social
	National	X	Governance
	International		Other

Purpose*:*To report to the Australian Government.

Reason: Required under Section 9 of the Commonwealth Authorities and Companies Act 1997

Relevance to National Oceans Office: Deals with fisheries management and therefore includes indicators and data of direct relevance to Oceans Policy. Good example of performance assessment structure using outcomes/outputs framework and an explicit link to legislated objectives.

The Framework, Components and Prioritisation

Framework : Outcomes and outputs.
Overarching outcome:

- Ecologically sustainable and economically efficient Commonwealth fisheries

Outputs:

- Fisheries Policy and Planning
- Fisheries Administration.

Components: Outcome subdivided into 5 subcomponents:

- Target and byproduct species
- Bycatch species
- Broader marine ecosystem
- Productivity of Commonwealth fisheries
- Economic efficiency of Commonwealth fisheries

Outputs subdivided as follows:

- Output 1: Fisheries policy and planning
    - Management of domestic fisheries
    - Management of international tuna fisheries

- Output 2: Fisheries administration
    - Domestic fisheries compliance
    - Foreign fisheries compliance
    - Data collection
    - Licensing and revenue collection

In addition, the Annual Report reports on performance against each of the Fishery Management Plans and on governance issues

Prioritisation: Follow from interpretation of legislative objectives (see Diagram 2 on page 20 of the Annual Report)

Objectives and indicators (and performance measures)

Objectives: Formalised objectives for most outcomes, some explicit (see table below). Objectives for outputs expressed as performance targets (See Table 2 on p41 of the report)

Indicators: Indicators for outcomes listed in table below.
Indicators for outputs expressed as a descriptive 'performance report'
Indicators of the corporate governance framework are:

- Equal employment opportunities including the number of Aboriginal and Torres Strait Islanders employed, and females in senior management positions. Merit is the basis for promotion but female staff have been sponsored to undertake training to assist their development.
- Industrial democracy such as workplace bargaining, conducting regular managers meetings, staff suggestion scheme, communication between managers and staff.
- Training and development. Provide structured training programs targeted at building skills in all staff
- Graduate program to identify and develop suitable qualified graduates into fisheries management.
- Occupational health and safety. Number of incidents in a year and the provision of programs on healthy lifestyle, and other aspects such as safety, fire and emergency evacuation and first aid.

Table: Objectives and Indicators (and performance measures)

Component	Objective	Formalised/ Implicit	Indicator	Performance measure	Type of objective/ indicator (1,2)
Target and byproduct species	Ecological sustainability	formalised	1. Percentage of target and byproduct species fished in a manner that maintains stock in a specified state. (Unclear whether this is meant to be percentage of all species, or percentage	None given for this indicator. Individual stocks have biological reference points that	ESD objective Use indicator

			of fish within a species)	can be used to construct performance measures for individual stocks.	
			2. Percentage of target and byproduct species indentified as at risk or vulnerable as a result of fishing for which and agreed recovery program is in place		ESD objective Action indicator
Bycatch species	Ecological viability	Formalised	1. Percentage of bycatch species assessed as being ecologically viable		ESD objective ESD indicator
			2. Percentage of bycatch species identified as at risk or vulnerable as a result of fishing, for which an agreed recovery program is in place		ESD objective Action indicator
Broader marine ecosystem	1. Fishing is conducted in a manner that does not compromise the integrity of the broader marine ecosystem	Formalised	Number of initiatives in place to protect the broader marine ecosystem		Use objective Action indicator
	2. Where the integrity of the broader marine ecosystem is determined to be compromised, fishing is conducted in	Formalised	Percentage of marine ecosystems identified as being at risk or		Action objective Action indicator

	a manner that promotes recovery		vulnerable as a result of fishing for which an agreed recovery program is in place.		
Productivity of Commonwealth fisheries	Not stated. Assume maintain/increase productivity	Implicit	Changes in volume and value of production		Use objective Use indicator
Economic efficiency	Not stated. Assume maintain/increase economic efficiency	Implicit	1. Percentage of fisheries where constraints to economic efficiency have been removed		Use objective Action indicator
			2. Value of fishing concessions		Use objective Use indicator

1. The Oceans Office classifies three forms of Objectives, those for ESD elements (social, economic, environmental), those for Use/non-human threat objectives, and those for Actions (on-ground). Each of these three types of objectives have respective indicators, being ESD indicators, Use/non-human threat indicators, and Action indicators.
2. Objectives and Indicators may be either measurable/operational or not measurable.

Data gathering

Data collection: Regular data collection and analysis through a variety of mechanisms including stock assessment process (reported in Fishery Status Reports, see PAS 5), Australian Fisheries Statistics (PAS 1) and Australian Fisheries Surveys (PAS 2).

Ongoing research to improve data quality: Ongoing research related to stock assessment and other ecological components. Less obvious that there is a process specifically directed at performance reporting.

Management response

Explicit and implicit responses included in the report.

Key points

Status of retained fish stocks is of direct interest to the Oceans Office as subset of its ESD objectives. Productivity and economic efficiency of fisheries is of direct interest to the Oceans Office as a subset of its use/non-human threat objectives. Impacts of fisheries on bycatch species and the broader marine ecosystem are of direct interest to the Oceans Office in formulating its action objectives.

The AFMA Annual Report is a good example of a structured PAS. The objective/indicator/performance measure terminology differs and is not always consistent, but the basic ideas are there.

PERFORMANCE ASSESSMENT SYSTEM: **Information collection sheet**			
PAS ID:	PAS 17		
PAS NAME:	**DOTARS Program Evaluation**		
CONTACT'S NAME:	Leanne Johnson Bureau of Transport and Regional Economics GPO Box 501 Canberra ACT, 2601		
PHONE NO.		**EMAIL:**	
CONTACT'S NAME:	Nick Bogiatzis Regional Programmes Reform Taskforce DOTARS		
PHONE NO.	02 6274 7111	**EMAIL:**	
DATE:	27/2/2004		
REFERENCES/WEB:	Johnson, L (2004) Review of regional social indicators from recent DOTARS projects, Pp105-117, in Pritchard, B Curtic, A Spriggs,J & Le Heron, R (eds) Social dimensions of the triple bottom line in rural Australia. BRS, Canberra.		

Performance Assessment System name:

DOTARS Program evaluation.

Description of the Performance Assessment System

This proforma provides an overview of performance assessment systems developed for the Department of Transport and Regional Services (DOTARS). These systems were developed for internal reporting and are not publicly available. This overview is based on knowledge from BRS involvement with the development of DOTARS performance assessment systems (in 2002) and through a more recent review of social indicator systems in Johnson (2003).

The subject of the Performance Assessment System: Programs that improve human wellbeing in regions.

	Scale:		**Scope:**
	Individual	X	Ecological
X	Region	X	Economic
	Industry	X	Social
	National	X	Governance
	International	X	Other: Programs

Purpose: The general goal of the indicator and performance assessment systems were to assess regional wellbeing with one project assessing the performance of DOTARS Programs in improving regional wellbeing.

Reason: The Department of Transport and Regional Services (DOTARS) has a responsibility to evaluate the performance of its programs in improving regional wellbeing.

Relevance to National Oceans Office: DOTARS is developing indicators and performance assessment systems for the evaluation of regional wellbeing (mainly social and economic) and the performance of its programs in improving regional wellbeing. These social and economic indicators for programs and for regional wellbeing may inform the development of social and economic performance assessment in marine planning. Johnson (2003) provides a useful breakdown of the social components of regional wellbeing.

The Framework, Components and Prioritisation

Framework: These frameworks are based on ESD (mainly social, economic and sometimes governance and environment) and program evaluation frameworks (ie objectives, monitoring, evaluation and management response).

Components: In general the social components in the three projects could be separated into the following components.

- Population and demography
- Education

- Health
- Crime
- Housing
- Income equity
- Labour market
- Access to services
- Social capital
- Governance
- Aggregate social wellbeing

(From Johnson 2003).

Each of these components are further subdivided into subcomponents in Johnson (2003). For the subcomponents indicators were assigned but have not been specified. Environmental and governance components were more haphazard and less structured. Economic components were included in each project but out of scope of Johnson's (2003) review.

Prioritisation: The relative importance of each major component in the three projects is described in Johnson (2003). In general components were developed depending on stakeholder workshops and to satisfy the objectives of the projects. For the two indicator projects selection of components may have been more adhoc and based upon availability of information, whereas for the PAS project components were selected in a more structured manner to address the project objectives, program objectives and regional wellbeing.

Objectives and indicators (and performance measures)

Objectives: In general the indicator systems had high level ESD and human use/non human threat objectives. The PAS also had action (governance) objectives to assess program performance. ESD and use/non human threat objectives usually did not link directly to specific indicators. Objectives are formalised at the high level but are not legislated. At the indicator level objectives and performance measures were often implicit rather than being explicit. Objectives are specific to each project and not publicly available and have not been included here.

Indicators: Indicators were not usually directly connected to objectives. Indicators were generally derived through workshops and by examination of data that could be sourced from eg Australian Bureau of Statistics. In one project all indicator had to be measurable and therefore indicators were only included if they could be measured, in the other projects availability of data was important but indicators were still developed for governance and social capital for which data is not directly available. The purpose of an indicator is often unclear, for example the indicators under the crime and health components are difficult to assign to either ESD or use/non human threat indicators. As stated in Johnson (2003) sometimes indicators do not actually appear to directly answer the component they are under (under health some indicators measure access to health

rather than health itself). Specific indicators are specific to each project and not publicly available and have not been included here.

Performance measures: Indicators are usually interpreted through trends although the performance measure is generally implicit and this can make interpretation of the indicator quite difficult.

Data gathering

Data collection: Whether the data was available depended on the indicator or performance assessment system, one project had a high reliance upon data availability, whereas another was more conceptual and developed indicators that may or may not have available data. Often data is based upon Australian Bureau of Statistics for ESD, or use/non human threat components but for the PAS project program effectiveness was based upon DOTARS collected information. Data collection is variable and was once off for one project (as it assesses priority regions), whereas the intention is for longer term measurement for the two other projects.

Ongoing research to improve data quality: This is mainly for social capital and governance components. Methods for assessing programs are being developed.

Management response

Two projects assessed priority regions for program intervention, whereas the other project was more involved in developing indicators for monitoring regional wellbeing over time. The projects were set up to inform policy and program directions.

Key points

This proforma provides an overview of two indicator projects and one PAS developed for DOTARS. Each projects objectives influenced the selection of components and indicators. The three projects were developed for internal reviews and their information is not publicly available. Nevertheless some useful broad components and sub-components have been identified for regional wellbeing (as displayed in Johnson 2003). These components could inform marine planning when identifying the impacts of marine use on social regional wellbeing.

PERFORMANCE ASSESSMENT SYSTEM: **Information collection sheet**			
PAS ID:	PAS 18		
PAS NAME:	**Port Monitoring**		
CONTACT'S NAME:	Simon Barry		
PHONE NO.	02 6272 4144	**EMAIL:**	Simon.barry@brs.gov.au
DATE:	8 March 2004		
REFERENCES/WEB:	Not publicly available		

Performance Assessment System name:

Port Monitoring

Description of the Performance Assessment System

The subject of the Performance Assessment System: The state of introduced marine pests in Australian ports.

	Scale:		**Scope**:
	Individual	X	Ecological
	Region		Economic
	Industry		Social
X	National		Governance
	International		Other

Purpose: To monitor the status of introduced marine pests in Australian ports.

Reason: A part of the National System for the Prevention and Management of Marine Pest Incursions. (See PAS 7.)

Relevance to National Oceans Office: Data is likely to be of direct interest to the Office. Will address one component of the state of the marine environment. The same monitoring framework (sites, sampling design, data collection methods) could be extended to collect data on other ecological components and to other locations (eg not just commercial trading ports).

The Framework, Components and Prioritisation

Framework: Monitoring of 'events', ie introduction of marine pests.

Components: Marine pests. Which ones and which attributes under discussion.

Prioritization: Under discussion.

Objectives and indicators (and performance measures)

Objectives: Implicit overall objective to prevent and manage marine pest incursions. This is an action objective, but the status of marine pests is an ESD indicator that could be used to measure the state of the marine ecosystem.

Indicators: Under development.

Performance measures: Performance measures more likely to be determined as part of PAS 7 rather than within the monitoring system itself.

Table: Objectives and Indicators (and performance measures)

Component	Objective	Formalised/ Implicit	Indicator	Performance measure	Type of objective/ indicator (1,2)
Marine pests	Prevent and manage marine pest incursions	Implicit	Status of marine pests in Australian commercial trading ports, waterways, boat harbours, marinas, etc: details to be determined	To be determined, may not be applicable	Objective: action Indicator: ESD

1. The Oceans Office classifies three forms of Objectives, those for ESD elements (social, economic, environmental), those for Use/non-human threat objectives, and those for Actions (on-ground). Each of these three types of objectives has respective indicators, being ESD indicators, Use/non-human threat indicators, and Action indicators.
2. Objectives and Indicators may be either measurable/operational or not measurable.

Data gathering

Data collection: Under development. Base line studies have been completed for all ports.

Ongoing research to improve data quality: Under development.

Management response

Results of commercial trading ports, waterways, boat harbours, marinas, etc monitoring expected to link with management responses as part of the National System for Prevention and Management of Marine Pest Incursions. As monitoring system is under development, these links are not yet explicit.

Key points

The Oceans Office should continue a close relationship with this initiative. It is likely to produce data that can be used directly in PAS for regional plans. The monitoring system could be extended to collect data on other aspects of the marine environment

PERFORMANCE ASSESSMENT SYSTEM: Information collection sheet			
PAS ID:	PAS 19		
PAS NAME:	**Australia's State of the Forests Report 2003- Reporting against Montreal Process criteria and indicators**		
CONTACT'S NAME:	Geoff Dunn, National Forest Inventory, Bureau of Rural Sciences		
PHONE NO.	Ph: 02 6272 4583	**EMAIL:**	geoffrey.dunn@brs.gov.au
DATE:	16/2/2004		
REFERENCES/WEB:	National Forest Inventory (2003) *Australia's State of the Forests Report 2003*. Bureau of Rural Sciences, Canberra. Website- http://www.affa.gov.au/content/output.cfm?ObjectID=1F434DF7-3882-42C6-9BD9F1ED1336D03E&contType=outputs, Updated 9/12/2003, Accessed 16/2/2004.		

Performance Assessment System name:

Australia's State of the Forests Report 2003- Reporting against Montreal Process criteria and indicators

Description of the Performance Assessment System

The subject of the Performance Assessment System: Forests and their values.

	Scale:		**Scope**:
	Individual	X	Ecological
X	Region (State/territories)	X	Economic
	Industry	X	Social
X	National	X	Governance
X	International		Other

Purpose: To report on the ecological sustainable development of Australia's forests.

Reason: This is Australia's second State of the Forests Report. It fulfils Australia's five yearly public reporting commitment identified in the 1992 *National Forest Policy Statement*, and also serves as Australia's report to the international Montreal Process on criteria and indicators of sustainable forest management.

Relevance to National Ocean's Office: This performance assessment system does not have data relevant for Regional Marine Plans. However, the system is resource-focussed examining human use of natural ecosystems and this is the same focus as regional marine planning. The State of the Forests Report uses Montreal Process criteria (objectives) and indicators that may be applicable, with minor adjustments, to Regional Marine Planning.

The Framework, Components and Prioritisation

Framework: The State of the Forests Report uses an ESD framework (social, economic, environment and governance and their positive and negative values). It is Resource-focussed in the main with one criterion examining governance.

Components: There are seven criteria and 74 indicators: the seven criteria include biological diversity, productive capacity, ecosystem health and vitality, contributions to soil and water resources, contribution to global carbon cycles, socio-economic benefits, and legal, institutional and economic framework. The indicators are presented in the Table below.

Prioritisation: Criteria and indicators were developed internationally with input from members states. Rio de Janiero hosted the UN Conference on Environment and Development (UNCED) in June 1992. After this conference Canada convened an International Seminar of Experts on Sustainable Development of Boreal and Temperate Forests in Montreal. This seminar focussed on developing criteria and indicators for sustainable management of temperate and boreal forests and these criteria and indicators became commonly known as the Montreal Process. Soon after the Montreal seminar the Montreal Process Working Group was formed to further develop the Criteria and

Indicators. This working group had representatives from Argentina, Australia, Canada, Chile, China, Japan, Republic of Korea, Mexico, New Zealand, Russian Federation, United States of America, and Uruguay. These countries contain 90% of the worlds temperate forests and 60% of the worlds forests. The Montreal Process Working Group developed a framework of seven criteria and 67 indicators and this was endorsed as a statement of political commitment known as the 'Santiago Declaration' (MIG, 1997). The implementation of the criteria and indicators was an iterative process where countries tested indicators in their countries and reported back on progress, difficulties and improvements.

Objectives and indicators (and performance measures)

Objectives: The Australia's State of the Forests Report 2003 explicitly states that objectives have not been included in the report, preferring the reader and the Montreal Process to make their own assessments based upon the data. Originally, the seven high-level Montreal Process criteria (upon which this report is based) were more in the form of objectives, although these are high-level criteria rather than measurable/operational. Indicators under each criterion are not linked to operational objectives, although they do have rationales and further description which help to explain the purpose, or objective, of the indicator.

Indicators: Australia's State of the Forests Report 2003 fulfils Australia's five yearly public reporting commitment identified in the *National Forest Policy Statement 1992*, and also serves as Australia's report to the international Montreal Process on criteria and indicators of sustainable forest management. Seven broad criteria and 74 indicators were developed during regional consultations with forest management and conservation agencies and other stakeholders around the country (see Table). Using consistent indicators also enables comparisons between countries in forest status and management. Six of the criteria and their indicators are either ESD or use/non human threat indicators with few action indicators. The majority of the governance criterion's indicators are action indicators (Table).

Numerous indicators are stated for each Criterion. Although we have stated that most indicators are measurable, this may be more a statement of degree with many indicators having to be interpreted in the Australian context and for most indicators a variety of data is presented, therefore making the indicator an indice of available information. Also, most indicators are able to be reported but may have data gaps, particularly in different States/Territories. Most data is presented for each State/Territory. Other divisions depend on the specific indicator.

Performance measures: 'Australia's State of the Forests report' states that performance measures will not be provided and interpretation of indicators is up to the reader. For this reason performance measure have not been included. To some extent implicit performance measures are provided as a part of the rationale.

Table: Objectives and Indicators (and performance measures)

Objective	Component	Formalised/ Implicit	Indicator	Type of objective/ indicator (1,2)
1 Conservation of	1.1 Ecosystem diversity	Formalised	1.1a Extent of forest area by forest type and tenure	Sustainable, Measurable

Objective	Component	Formalised/ Implicit	Indicator	Type of objective/ indicator (1,2)
biological diversity				
		Formalised	1.1b Forest growth stage by tenure	Sustainable, Measurable
		Formalised	1.1e Fragmentation of forests	Sustainable, Measurable
	1.2 Species diversity	Formalised	1.2a Forest-dwelling species	Sustainable, Measurable
		Formalised	1.2b Status of forest-dwelling species	Sustainable, Measurable
		Formalised	1.2c Species monitoring	Sustainable, Not measurable
	1.3 Genetic diversity	Formalised	1.3a Genetic variation in forest-dwelling species	Sustainable, Not measurable
		Formalised	1.3c Genetic resource conservation	Use/non human threat, Measurable
2 Maintenance of productive capacity of forest ecosystems		Formalised	2.1a Forest available for timber production	Use/non human threat, Measurable
		Formalised	2.1b Growing stock in native forests available for timber production	Use/non human threat, Not measurable
		Formalised	2.1c Plantation resources	Use/non human threat, Measurable
		Formalised	2.1d Removal of wood products	Use/non human threat, Measurable
		Formalised	2.1e Non-timber forest products	Use/non human threat, Measurable
		Formalised	2.1f Effectiveness of plantation establishment	Action, Measurable
		Formalised	2.1g Regeneration in harvested areas	Use/non human threat, Not measurable
		Formalised	2.1h Genetic conservation of plantation species	Use/non human threat, Measurable
3 Maintenance of ecosystem health and vitality		Formalised	3.1a Factors affecting forest health	ESD, Measurable
		Formalised	3.1b Air pollution	Use/non human threat, Measurable
		Formalised	3.1c Changes in forest ecology as indicated by changed biophysical and chemical components	ESD, Measurable
4 Conservation and maintenance of soil and water resources		Formalised	4.1a Soil erosion hazard	Use/non human threat, Not measurable
		Formalised	4.1b Protection of soil and water by forests	Use/non human threat, Measurable
		Formalised	4.1c Stream flow in forested catchments	Use/non human threat, Measurable
		Formalised	4.1d Soil organic matter	ESD, Measurable
		Formalised	4.1e Soil physical damage	Use/non human threat, Measurable
		Formalised	4.1f Biodiversity of water bodies	ESD-Use/non human threat, Measurable
		Formalised	4.1g Physico-chemical properties of water bodies	ESD, Measurable
		Formalised	4.1h Persistent toxic substances	Use/non human threat, Measurable

Objective	Component	Formalised/ Implicit	Indicator	Type of objective/ indicator (1,2)
5 Maintenance of forest contribution to global carbon cycles		Formalised	5.1a Forest biomass and carbon stocks	Use/non human threat, Measurable
		Formalised	5.1b Forest contribution to the carbon budget	Use/non human threat, Measurable
		Formalised	5.1c Forest products and the global carbon budget	Use/non human threat, Measurable
6 Maintenance and enhancement of long term multiple socio-economic benefits to meet the needs of societies	6.1 Production and consumption	Formalised	6.1a Wood product values and volume	Use/non human threat, Measurable
		Formalised	6.1b Non-wood product value and quantities	Use/non human threat, Measurable
		Formalised	6.1c Wood supply and consumption	Use/non human threat, Measurable
		Formalised	6.1d Value of forest products	ESD, Measurable
		Formalised	6.1e Recycling	Use/non human threat, Measurable
		Formalised	6.1f Non-wood supply and consumption	Use/non human threat, Measurable
	6.2 Recreation and tourism	Formalised	6.2a Forests for recreation and tourism	Use/non human threat, Measurable
		Formalised	6.2b Visitor activities	Use/non human threat, Measurable
		Formalised	6.2c Visitor numbers	Use/non human threat, Measurable
		Formalised	6.2d Unacceptable visitor impacts	Use/non human threat, Measurable
	6.3 Investment in the forest sector	Formalised	6.3a Value of investment	Use/non human threat, Measurable
		Formalised	6.3b Research and development expenditure	Action, Measurable
		Formalised	6.3c New technologies	Action, Measurable
		Formalised	6.3d Return on investment	Use/non human threat, Measurable
	6.4 Cultural, social and spiritual needs and values	Formalised	6.4a (i) Areas formally managed to protect indigenous values	ESD, Measurable
		Formalised	6.4a(ii) Areas formally managed to protect places of non-indigenous value	ESD, Measurable
		Formalised	6.4b Non-consumptive use forest values	Use/non human threat, Measurable
	6.5 Employment and community needs	Formalised	6.5a Employment	ESD, Measurable
		Formalised	6.5b Wage and injury rates	ESD-Use/non human threat, Measurable
		Formalised	6.5c(i) Viability of forest-dependent communities	ESD, Measurable
		Formalised	6.5c (ii) Viability of forest-dependent Indigenous communities	ESD, Measurable
		Formalised	6.5d Land for Indigenous needs	ESD, Measurable

Objective	Component	Formalised/ Implicit	Indicator	Type of objective/ indicator (1,2)
	6.6 Indigenous participation and management	Formalised	6.6a Maintaining and enhancing Indigenous values	ESD, Measurable
Chapter 7: Legal, institutional and economic framework for forest conservation and sustainable management	7.1 Legal framework	Formalised	7.1a Indigenous peoples' property rights	Unsure, Measurable
		Formalised	7.1b Planning, assessment and review	Unsure, Measurable
		Formalised	7.1c Public participation	Action, Measurable
		Formalised	7.1d Best practice codes	Action-ESD, Measurable
		Formalised	7.1e Specific values and participation by Indigenous people	Unsure, Measurable
	7.2 Institutional framework	Formalised	7.2a Public information and education	Action, Measurable
		Formalised	7.2b Planning and review	Action, Measurable
		Formalised	7.2c Developing skills	Action, Measurable
		Formalised	7.2d Infrastructure	Use/non human threat-Action, Measurable
		Formalised	7.2e Enforcement	Action, Measurable
	7.3 Economic framework	Formalised	7.3a Investment and taxation	Action, Measurable
		Formalised	7.3b Trade policies	Action, Measurable
	7.4 Capacity to measure and monitor	Formalised	7.4a Availability of data	Action, Measurable
		Formalised	7.4b Monitoring and reporting	Action, Measurable
		Formalised	7.4c Compatibility with other countries	Action, Measurable
	7.5 Capacity to conduct and apply research and development	Formalised	7.5a Research on forest ecosystems	Action, Measurable
		Formalised	7.5b Assessing environmental and social forest values	ESD-Action, Not measurable
		Formalised	7.5c New technologies and their consequences	Action, Not measurable
		Formalised	7.5d Predicting human impacts	Action, Measurable
		Formalised	7.5e Predicting impacts of climate change on forests	Action, Measurable
		Formalised	7.5f Silviculture and utilisation research	Action, Measurable

1. The Oceans Office classifies three forms of Objectives, those for ESD elements (social, economic, environmental), those for Use/non-human threat objectives, and those for Actions (on-ground). Each of these three types of objectives have respective indicators, being ESD indicators, Use/non-human threat indicators, and Action indicators.
2. Objectives and Indicators may be either measurable/operational or not measurable.

Data gathering

Data collection: Data collection is by State agencies and industry and collated by the National Forest Inventory (Bureau of Rural Sciences) for reporting every five years, as a requirement of the *National Forest Policy Statement 1992* and the Montreal Process, the last State of the Forests Report was in 1998 with the most recent edition being in 2003. There is a wide variation in the indicators reported with some indicators being comprehensive statistical analyses, some being qualitative date and some only having case studies. Each indicators data was assessed for coverage, currency and frequency. Out of 74 indicators, 16 had comprehensive data coverage, currency and frequency, 2 do not have any data and 56 have intermediate levels of data. In general most biodiversity, production, and general ecosystem indicators have data reported as trends over time, for 3 years or more. In the case of social issues and governance data is often presented as presence/absence without trends over time.

Ongoing research to improve data quality: Data is continuously being tested and updated through the NFI and State agencies. Mechanisms are put in place to improve the comprehensiveness of data collection and fill gaps, such as in the privately managed forests and for non timber products of forests.

Management response

To date management responses have mainly been aimed at testing data, for its robustness and applicability across regions, determining methods for aggregating and collating data. Management responses have also aimed at governance mechanisms such as institutions policies and procedures.

Key points

Like the marine planning process the Australian State of the Forests Report evaluates human uses of a ‘natural’ ecosystem (positive and negative values) and is focussed on all impacts on the resource/region. Therefore criteria and indicators, but not data may be applicable to the marine planning process. The major difference between forestry areas and marine regions is that management of the forest is primarily the responsibility of one government agency, whereas marine planning involves interactions between many government agencies.

PERFORMANCE ASSESSMENT SYSTEM: **Information collection sheet**			
PAS ID:	PAS 20		
PAS NAME:	**Standing Committee on Agriculture and Resource Management: Indicators for Sustainable Agriculture**		
CONTACT'S NAME:	Jim Donaldson		
PHONE NO.	6272 5232	**EMAIL:**	Jim.Donaldson@affa.gov.au
DATE:	16/2/2004		
REFERENCES/WEB:	Standing Committee on Agriculture and Resource Management (1998). *Sustainable Agriculture: Assessing Australia's Recent Performance*, Vol. Report 70, CSIRO Publishing, Collingwood.		

Performance Assessment System name:

Standing Committee on Agriculture and Resource Management: Indicators for Sustainable Agriculture

Description of the Performance Assessment System

The subject of the Performance Assessment System: The sustainability of Agriculture.

	Scale:		**Scope**:
	Individual	X	Ecological
X	Region	X	Economic
X	Industry	X	Social
X	National	X	Governance
	International		Other

Purpose: The question that was asked was 'Is agriculture sustainable?'. Sustainable agriculture was defined as:

> the use of farming practices and systems which maintain or enhance: the economic viability of agricultural production; the natural resource base; and other ecosystems which are influenced by agricultural activities

Reason: This projects was initiated by the Standing Committee on Agriculture in 1991 to determine whether agriculture was sustainable. It was signed off by the Standing Committee on Agriculture and Resource Management (SCARM). The intention was that this process would be repeated in a number of years and therefore a lot of work went into identifying indicators that could be measured repeatedly.

Relevance to National Ocean's Office: This project does not occur in a region relevant to the National Oceans Office and agriculture is not particularly relevant. Nevertheless, this report does evaluate an industry that uses natural resources and a key use of this project may be the identification of useful model social, governance and economic indicators for marine planning. The development of indicators was a drawn out process and involved substantial testing, but the main criteria for selection of an indicator was availability of data and application at local, regional and national levels.

The Framework, Components and Prioritisation

Framework: This framework looks at an activity and all impacts that affect the ability of that activity to continue. This is quite a different focus to most other frameworks examined in this stocktake.

Components: A set of principles, components and indicators/attributes were developed for sustainable agriculture. Sustainable agriculture was divided into five components (Figure 1) and under each component was an indicator (component) and measurable attributes (indicators) (Table).

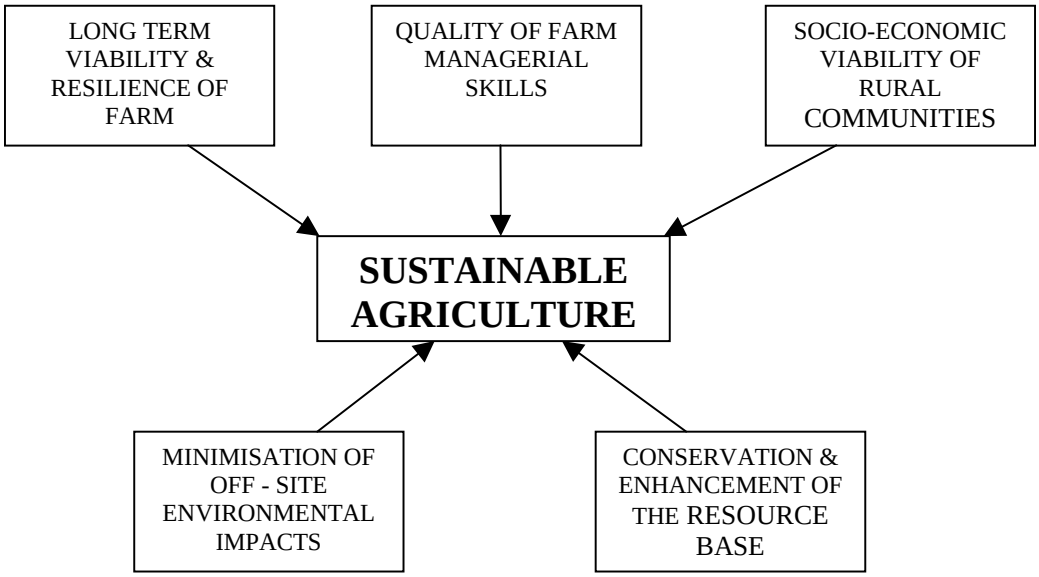


Figure 1: Basic components of sustainable agriculture (Source: SCARM 1998)

Prioritisation: The set of principles, components and indicators/attributes were refined and tested in various agricultural systems and regions over years until they were finalised and reported on by the National Collaborative Project on Indicators for Sustainable Agriculture under SCARM (Standing Committee on Agriculture and Resource Management) and SLWRMC (Sustainable Land and Water Resources Management Committee).

Objectives and indicators (and performance measures)

Objectives: Objectives were not stated for indicators in the report although the description for each indicator discusses implicit objectives, for example what trends are desirable and what is undesirable. Higher-level principles and components have statements similar to objectives. These often don't seem to link directly to measurable indicators.

Indicators: A number of attributes (indicators) were selected to inform on each indicator (component) (Table). These were not intended to be comprehensive, with the two most important criteria in determining the effectiveness of an attribute being the availability of appropriate data and the ability to use the data at regional, state and national levels (SCARM, 1998) (see Table).

Performance measures: Performance measures were provided, to a certain extent, as a part of the rationale for each indicator.

Table: Objectives and Indicators (and performance measures)

Component	Objective	Formalised / Implicit	Indicator	Type of objective/ indicator (1,2)
Long-term Real Net Farm Income		Implicit	Real net farm income	Use/non human threat, Measurable
		Implicit	Total factor productivity	Use/non human threat, Measurable
		Implicit	Farmers' terms of trade	A contextual variable, not an indicator of farm income , Measurable
		Implicit	Average real net farm income	Use/non human threat, Measurable
		Implicit	Debt servicing ratio	Use/non human threat, Measurable
Natural Resource Condition		Implicit	Nutrient balance: P and K	ESD, Measurable
		Implicit	Soil condition: acidity and sodicity	ESD, Measurable
		Implicit	Rangeland condition and trend	ESD, Measurable
		Implicit	Agricultural plant species diversity	ESD, Measurable
		Implicit	Water utilisation by vegetation	Use/non human threat, Measurable
Off-site Environmental Impacts		Implicit	Chemical residues in products	Use/non human threat, Measurable
		Implicit	Salinity in streams	Use/non human threat, Measurable

		Implicit	Dust storm index	Use/non human threat, Measurable
		Implicit	Impact of agriculture on native vegetation	Use/non human threat, Measurable
Managerial Skills		Implicit	Level of farmer education	Either ESD or a predictor of future action, Measurable
		Implicit	Extent of participation in training and Landcare	Either ESD or a predictor of future action, Measurable
		Implicit	Implementation of sustainable practices	Action, Measurable
Socio-Economic Impacts		Implicit	Age structure of the agricultural workforce	Use/non human threat-A predictor of future action, Measurable
		Implicit	Access to key services	Action, Measurable

1. The Oceans Office classifies three forms of Objectives, those for ESD elements (social, economic, environmental), those for Use/non-human threat objectives, and those for Actions (on-ground). Each of these three types of objectives have respective indicators, being ESD indicators, Use/non-human threat indicators, and Action indicators.
2. Objectives and Indicators may be either measurable/operational or not measurable.

Data gathering

Data collection: Data was tested in regional case studies, with the two most important criteria in determining the effectiveness of an indicator being the availability of appropriate data and the ability to use the data at regional, state and national levels. The indicators were finalised and reported on by the National Collaborative Project on Indicators for Sustainable Agriculture. Data collection was a once off and although the intention at the time was to repeat collection, this has not occurred to date.

Ongoing research to improve data quality: None, although may be about to occur through NHT funded project.

Management response

This project was intended to review the current status rather than make management responses. Nevertheless a number of potential management responses are stated within the text of the report, although this was not a formalised part of the review.

Key points

This project evaluated agriculture, an activity, and its sustainability. The development of indicators was a drawn out process and involved substantial testing, but the main criteria for selection of an indicator was availability of data and application at local, regional and national levels. A key use of this project may be the identification of useful social, governance and economic indicators.

PERFORMANCE ASSESSMENT SYSTEM: **Information collection sheet**			
PAS ID:	PAS 21		
PAS NAME:	**Overcoming Indigenous Disadvantage: key indicators 2003**		
CONTACT'S NAME:	Dr Robyn Sheen, Head of Secretariat Steering Committee for the Review of Government Service Provision		
PHONE NO.	03 9653 2184	**EMAIL:**	or email steering committee secretariat gsp@pc.gov.au
DATE:	16/2/2004		
REFERENCES/WEB:	Steering committee for the review of government service provision (2003) *Overcoming indigenous disadvantage: Key indicators 2003.* Productivity Commission, Canberra. Website- http://www.pc.gov.au/gsp/reports/indigenous/keyindicators2003/, Updated 17/11/2003, Accessed 16/2/2004		

Performance Assessment System name:

Overcoming Indigenous Disadvantage: key indicators 2003

Description of the Performance Assessment System

The subject of the Performance Assessment System: Indigenous disadvantage.

	Scale:		**Scope**:
	Individual		Ecological
X	Region (State)	X	Economic
	Industry	X	Social
X	National		Governance
	International		Other

Purpose: To inform whether Australian government policy programs and interventions are achieving positive outcomes on issues where Indigenous people are disadvantaged. This will help guide where further work is needed. The second objective is that the Report should be meaningful to Indigenous people. The vision is that Indigenous people will one day enjoy the same overall standard of living as other Australians. They will be as healthy, live as long, and participate as fully in the social and economic life of the nation.

Reason: COAG has also been looking towards the 'bigger picture' – whether government actions are leading to the achievement of improved outcomes for Indigenous people. In April 2002, the Council of Australian Governments and the Prime Minister requested the Steering Committee for the Review of Government Service Provision to produce a regular report against key indicators of Indigenous disadvantage.

Relevance to National Oceans Office: The scale of these indicators, focussing at the State and National levels, reduces their usefulness for regional marine planning. Although, as this is a COAG agreed framework the National Oceans Office needs to be aware of the potential impacts its policies, plans and programs may have on indigenous disadvantage. The Oceans Office may wish to use these outcome indicators to monitor progress on indigenous issues.

The Framework, Components and Prioritisation

Framework: The indicator framework (see figure below) is a 'preventive model' which attempts to tackle outcome inequalities by focusing on the causal factors (in the 'strategic areas for action'). This we would refer to in this stocktake report as a pressure-state-response model. The state/condition are the 'priority outcomes below', and these are impacted by negative pressures, the impacts of which are monitored in the 'headline indicators' and the 'strategic areas for action' (see below). The responses are the 'policy responses' made by government departments (and other agencies and groups) and these responses are being measured through separate government action plans and policies.

Components: The components of the framework include the sustainability outcomes identified in the Figure. These are impacted by pressures that are monitored through the headline components/indicators and at a lower sub-component level being the 'strategic areas for action' components. Although the framework report states that this is a logical flow for objectives and indicators, often linkages between the three levels are less clear, or impacts may be mixed across many indicators. Having said this, within the explanation of each indicator the linkages are explained.

Prioritisation: This approach has a strategic focus (ie indigenous disadvantage), and drew on valuable work previously undertaken by the Ministerial Council for Aboriginal and Torres-Strait Islander Affairs (MCATSIA). The performance assessment system framework was developed by a working group consisting of representatives from central agencies, the Ministerial Council for Aboriginal and Torres Strait Islander Affairs (MCATSIA), the Aboriginal and Torres Strait Islander Commission (ATSIC). In addition, the Australian Bureau of Statistics (ABS) and the Australian Institute of Health and Welfare (AIHW) were in the working group. The framework was refined through a consultation process and signed off by COAG and the Prime Minister.

The strategic areas were those selected for their potential to have a significant and lasting impact in reducing Indigenous disadvantage.

Figure Framework diagram

Priority Outcomes

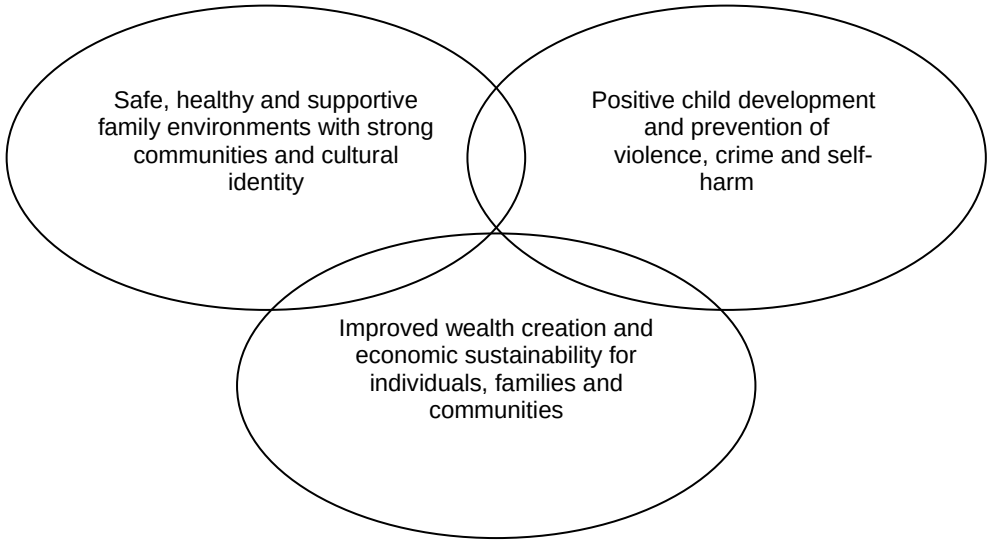
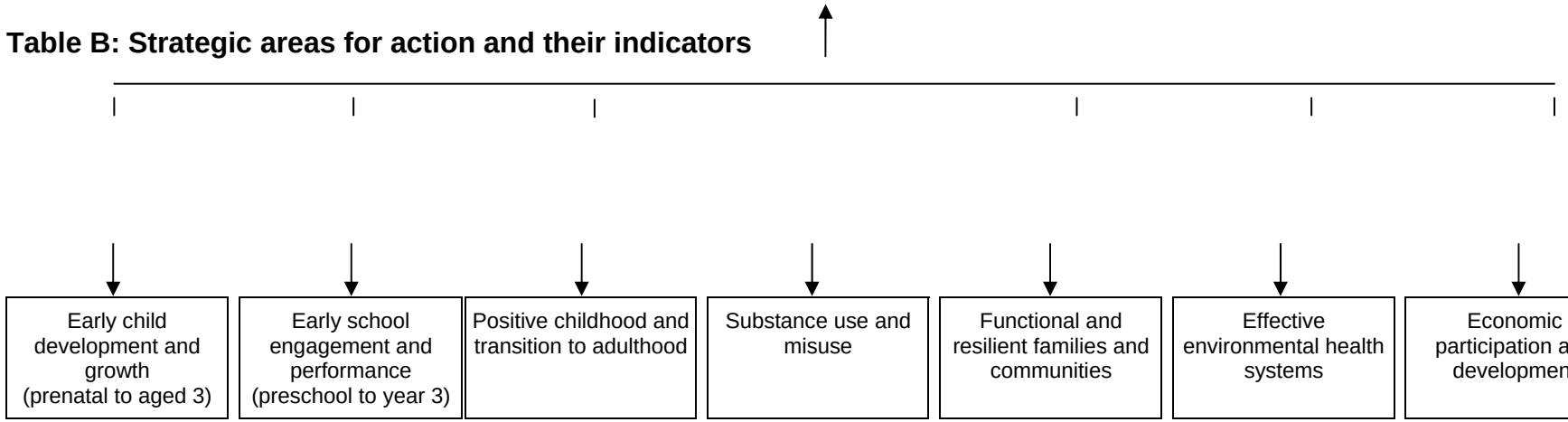


Table A: Headline indicators for disadvantage

- Life expectancy
- Rates of disability and/or core activity restrictions
- Years 10 and 12 retention and attainment
- Post secondary education – participation and attainment
- Labour force participation and unemployment
- Household and individual income
- Home ownership
- Suicide and self-harm
- Substantiated child protection
- Deaths from homicide and hospitalisations for assault
- Victim rates for crime
- Imprisonment and juvenile detention rates

Table B: Strategic areas for action and their indicators



Early child development and growth (prenatal to aged 3)	Early school engagement and performance (preschool to year 3)	Positive childhood and transition to adulthood	Substance use and misuse	Functional and resilient families and communities	Effective environmental health systems	Economic participation and development
– Rates of hospital admission for infectious diseases – Infant mortality – Birthweight – Hearing impediments	– Preschool and school attendance – Year 3 literacy and numeracy – Primary school children with dental caries	– Years 5 and 7 literacy and numeracy – Retention at year 9 – Indigenous cultural studies in school curriculum and involvement of Indigenous people in development and delivery of Indigenous studies – Participation in organised sport, arts or community group activities – Juvenile	– Alcohol and tobacco consumption – Alcohol related crime and statistics – Drug and other substance use	– Children in long term care and protection orders – Repeat offending – Access to the nearest health professional – Proportion of Indigenous people with access to their traditional lands	– Rates of diseases associated with poor environmental health (including water and food borne diseases, trachoma, tuberculosis and rheumatic heart disease) – Overcrowding in housing – Access to clean water and functional sewerage	– Employment (full-time/part-time) by sector (public/private), industry and occupation – CDEP participation – Long term unemployment – Self employment – Indigenous owned or controlled land – Accredited training in leadership, finance or management – Case studies in

	diversions as a proportion of all juvenile offenders	governance arrangements
	– Transition from school to work	

Objectives and indicators (and performance measures)

Objectives: The priority outcomes stated in the three ovals above are high level objectives. These are formalised as part of the framework. These high level outcomes are not measured as a part of the framework. Two of the three outcomes are ESD objectives, whereas the other outcome is a use/non human threat objective.

The headline indicators (see Table A above) being measured are expected to influence the achievement of the high level outcomes (the ovals above).

Strategic change indicators are expected to logically influence the headline indicators.

The text in the report explains how each headline indicator and strategic change indicator is to be interpreted and this provides an implicit objective. In most cases the implicit objective is obvious for each indicator, but this is not the case for all indicators.

Indicators: The headline indicators stated in Table A above provide an indication on how key areas of disadvantage are improving or getting worse. Headline indicators are generally reported at a National and State level, and over time, often the last 3 to 4 years. Some headline indicators are also disaggregated into genders. Three of the headline indicators are ESD indicators whereas 9 are use/non human threat indicators. None of the headline indicators are action indicators.

The Strategic area for action (components) have a number of key strategic change indicators stated in Table B above. The aims of the strategic change indicators are to be amenable to government policies and programs by assisting policy makers focus on the causes of social and economic disadvantage, so that over time, improvements in the headline indicators will be achieved. These indicators have a strong logic or evidence base, and are amenable to policy interventions. Although as in the headline indicators, no one government program or policy is likely to be the sole influence on an indicator. In general all strategic change indicators are use/non human threat indicators, although two are monitoring actions being access to water and sewerage, and access to health services. As with the

headline indicators the strategic change indicators focus on National and State scales, comparing the indigenous population with the total population, and often separating data into gender. Unlike the headline indicators data is not often reported over time (except crime where most are), with most recent data being reported.

Most indicators are measurable and reportable. Although the data behind the indicators may not always be complete. For the strategic change indicators there was a strong focus on quantitative data, however two indicators, culture, and governance were included even though quantitative national data does not exist and they were reported on using case studies.

Performance measures: Performance measures are not explicitly stated but are explained as a part of the text under each Indicator. Performance is reported comparing indigenous with total population, females and males, and different States/Territories. In general, trends over time are the main performance measure for headline indicators, but not for strategic change indicators.

Data gathering

Data collection: This performance assessment system does not collect primary data, it collates data obtained through other sources, particularly ABS and AIHW. Data is being collated by the Steering Committee of the Review of Government Service Provision. The intention is to report yearly, and most headline indicators are reported over at least the past 3 years to determine trends over time, whereas the most recent available data has mainly been used for strategic change indicators. Data reported under each indicator usually is broken down into National and State scales, comparing the indigenous population with the total population, and often separating data into gender. Further division of data may be in Tables that were not included in this report and are to be released in the future.
For some indicators the data could be improved, for example it does not cover all States as the data is not available. Or data is variable between states such as for crime where national datasets do not exist. In some cases indigenous people have not been identified in the dataset, and agreements are being developed with dataset holders to incorporate indigenous. Another problem with the data is that often 'disadvantage' such as child abuse, disabilities, drug abuse are often under reported. The reliability and robustness of the data is explained for headline indicators in chapter 3 and for strategic change indicators, within each chapter (chapters 5-11).

Ongoing research to improve data quality: Some data gaps are being investigated such as disability in indigenous people and there are potential case studies and the development of methodology and surveys for data collection for issues such as culture, and governance. Often indigenous people are not identified in datasets and changes are being made to these datasets to allow distinction of indigenous and non indigenous people.

Management response

This report specifically states that it is not involved in management responses. It provides an overall view of indigenous disadvantage and how it is changing. It is intended to inform the many policy makers in numerous governments who deal with indigenous disadvantage so that they can track the outcomes of their programs (combined with others). The strategic indicators particularly are focussed at the program level so that program managers can see how these are changing and the framework then provides a logical link to higher-level ESD outcomes and headline indicators to inform program managers.

Key points

This is an interesting performance assessment system using a pressure-state-response framework focussed at humans. It focuses on monitoring the pressures (indigenous disadvantage) on indigenous people (state) to inform government programs relating to indigenous people (responses). The framework has high-level ESD outcomes, headline indicators of disadvantage (use/non human threat) and strategic change indicators of

disadvantage (use/non human threat, some action). Monitoring the latter will show how government policies and programs influence indigenous disadvantage and how these influence higher level outcomes.

The scale of these indicators, focussing at the State and national levels, reduces their usefulness for regional marine planning. Although, as this is a COAG agreed framework the National Oceans Office needs to be aware of the potential impacts its policies, plans and programs may have on indigenous disadvantage. The Oceans Office may wish to use these outcome indicators to monitor progress on indigenous issues.

PERFORMANCE ASSESSMENT SYSTEM: **Information collection sheet**			
PAS ID:	PAS 22		
PAS NAME:	**ATSIC: Putting the pieces together: Regional Plans, data and outcomes**		
CONTACT'S NAME:	Office of Evaluation and Audit Level 3, Lovett Tower ATSIC PO Box 17, Woden, ACT 2606		
PHONE NO.	(02) 6121 4855	**EMAIL:**	
DATE:	16/2/2004		
REFERENCES/WEB:	ATSIC (Aboriginal and Torres Strait Islander Commission) (2003), *Putting the pieces together: Regional plans, data and outcomes, evaluation of the information needs of Regional Councils constituted under the Aboriginal and Torres Strait Islander Commission Act 1989,* Office of Evaluation and Audit, ATSIC, Canberra. Website- http://www.atsic.gov.au/about_atsic/Office_Evaluation_Audit/Docs/Report03.pdf. Accessed 16/2/2004		

Performance Assessment System name:

ATSIC: Putting the pieces together: Regional Plans, data and outcomes

Description of the Performance Assessment System

The subject of the Performance Assessment System: Data relevant for regional planning by ATSIC Regional Councils.

	Scale:		**Scope**:
	Individual	X	Ecological
X	Region	X	Economic
	Industry	X	Social
	National	X	Governance
	International		Other

Most emphasis is on social and economic.

Purpose: The absence of reliable and comprehensive data on Indigenous programs has been a major impediment to evaluating program performance. While that issue is now being advanced nationally under the auspices of the Council of Australian Governments, there remains unfinished business to satisfy regional requirements.
In broad terms the evaluation has focused on:

- · determining what information Regional Councils need to plan effectively;
- · assessing the information available to Councils to assist in planning;
- · identifying information gaps that inhibit Council planning; and
- · developing a conceptual framework to assist Regional Councils in the process of preparing regional plans.

The context within which this evaluation has taken place has served to reinforce the significance of regional planning to improve the economic, social and cultural status of Aboriginal and Torres Strait Islander people.

Reason: The *ATSIC Act 1989* established the Office of Evaluation and Audit (OEA). The key functions of OEA are to evaluate and audit the operations of the Aboriginal and Torres Strait Islander Commission, as well as other portfolio agencies identified in the ATSIC Act. The focus of this evaluation is the information required by Regional Councils constituted under the *Aboriginal and Torres Strait Islander Commission Act l989* to discharge their statutory function of regional planning. The results of the study were taken up by ATSIS (Aboriginal and Torres Strait Islander Services) Research and Statistical Services Unit.

Relevance to National Oceans Office: This report provides a neat overview of data relating to indigenous issues, that has the potential for use in regional plans. Although its focus is ATSIC Regional Councils rather than marine regions, the specified indicators and data could be useful for regional marine plans, particularly those involved with capacity building. Relevant datasets have been identified, the responsible agency, relevant data, scale and usefulness for regional plans. Gaps have also been identified.

The Framework, Components and Prioritisation

Framework: This is an ESD framework focusing mainly on social and economic, with some environmental and governance components. At the level of operational indicators the focus is mainly on 'negative issues' that can by addressed by Regional Plans and therefore is mainly the 'state' of a P-S-R framework.

Components: Data requirements by Regional Councils can be classified under the following broad categories, although these are not mutually exclusive:

- demographic;
- economic;
- social and cultural; and
- environment

These were further sub-divided into 'data requirements' as follows:

- demographic;
    - the natural increase (births>deaths).
    - migratory movements (the movement of people into and out of a specific geographic area).
- economic;
    - Economic sector data.
    - Labourforce data.
    - Income data.
    - Investments/expenditure data flows.
    - Welfare payments.
- social and cultural; and
    - Health.
    - Education and training.
    - Housing.
    - Law and justice.
    - Culture.
- environment
    - Land use.
    - Existing natural resources.
    - Parks and places of cultural significance and heritage.
    - Water quality.
    - Mining and exploration of natural resources.
    - These have been further subdivided in the report (see Table), and then under this second level are potential operational indicators.

Each of these sub-components were further subdivided until operational indicators and data could be identified.

Prioritisation: This was not clear, but was based upon reviewing the datasets.

Objectives and indicators (and performance measures)

Objectives: This report is reviewing potential data, it's availability and usefulness for including in Regional Council regional plans. Each Regional Council identifies its own vision, goals, values, principles and priorities for it's region within the regional plan and therefore these differ substantially between regions. As a result we have not specified objectives in this proforma as these are explicitly defined in each regional plan. Having said that discussion of the indicators does sometimes provide an implicit objective.

Indicators: There are far to many indicators examined in the report to repeat them all here. Components of demographic, social and cultural, economic and environmental were sub-divided (see the components section above) and each of these was further subdivided until operational indicators and data could be specified (see report). The availability of data for these indicators is then examined from a review of census, surveys, and potential key administrative collections. Potential for overcoming data requirement gaps are also stated. The majority of indicators are ESD indicators, as defined by the Oceans Office, and this is because the focus of the report is on ESD outcomes. A few human use/non human threat and action indicators are also specified, although without performance measures it is difficult to identify the reason for their inclusion.

Performance measures: These are not stated.

Data gathering

Data collection: This report reviews potential data for regional plans and its availability and usefulness. Data availability and usefulness is provided under the component headings stated in the components section, above. Relevant datasets, the agency responsible for collection, key data, the collection frequency and publication, scale, and ability to be used at a regional scale are all discussed in chapters 5 and 6 in the report. This report does not collect and display data, it only provides an evaluation of the potential of data for regional plans.

Ongoing research to improve data quality: Data gaps that need to be filled are identified in chapter 7. The report recommends, due to changing responsibilities in Indigenous Affairs, that a statistical group be set-up within ATSIS, this is known as the Research and Statistical Services Unit. The report also recommended that national databases needed to be improved to assist Regional Councils and ATSIC to provide policy advise to government, and that these databases needed to be able to apply at National, State and regional levels.

Management response

Some high level management responses were suggested such as a framework, setting up a data unit which was put in place in ATSIC and later within ATSIS (Aboriginal and Torres Strait Islander Services) Research and Statistical Services Unit.

Key points

There is a requirement for ATSIC Regional Councils to develop regional plans and monitor performance. This report provides an overview of data relating to indigenous issues, that has the potential for use in regional plans. Although its focus is ATSIC Regional Council areas rather than marine regions, the specified indicators and data could be useful for regional marine plans. Relevant datasets have been identified, the responsible agency, relevant operational/measured data, the scale and usefulness for regional plans. Data gaps have also been identified in the report. This report was finalised just after ATSIC was restructured. The ATSIS (Aboriginal and Torres Strait Islander Services) Research and Statistical Services Unit is most likely to take over the running of data monitoring and the recommendations from this report.

PERFORMANCE ASSESSMENT SYSTEM: Information collection sheet			
PAS ID:	PAS 23		
PAS NAME:	**Strategic assessments- Fishery**		
CONTACT'S NAME:	Fisheries Assessments Director, Sustainable Fisheries Section Department of the Environment and Heritage GPO Box 787 CANBERRA ACT 2601		
PHONE NO.	(02) 6274 1917	**EMAIL:**	sustainablefisheries@deh.gov.au
DATE:	3/3/2004		
REFERENCES/WEB:	Department of Environment and Heritage (2004) *Approved wildlife trade operations*. DEH, Canberra. Website- http://www.deh.gov.au/biodiversity/trade-use/sources/operations/index.html#commercial, Updated 26/2/2004, Accessed 3/3/2004 Department of Environment and Heritage (2003a) *EPBC Act Assessment and Approvals: Strategic assessments*. DEH, Canberra. Website- http://www.deh.gov.au/epbc/assessmentsapprovals/strategic/index.html, Updated 3/9/2003, Accessed 3/3/2004. Department of Environment and Heritage (2003b) *Strategic assessment notices*. DEH, Canberra. Website- http://www.deh.gov.au/cgi-bin/epbc/epbc_ap.pl?name=strategic&limit=7&text_search= Environment Australia (2001) *Guidelines for the Ecologically Sustainable Management of Fisheries*. EA, Canberra. Website- http://www.deh.gov.au/coasts/fisheries/assessment/guidelines.html#principle1 Updated 9/2/2004, Accessed 3/3/2004		

Performance Assessment System name:

Strategic assessments- Fishery.

Description of the Performance Assessment System

The subject of the Performance Assessment System: Fishery's environmental performance.

	Scale:		**Scope**:
	Individual	X	Ecological
	Region		Economic
X	Industry		Social
	National	X	Governance
	International		Other

Purpose: Objectives of the *EPBC Act 1999* include protection of the environment, promotion of ecologically sustainable use and the conservation of biodiversity. The Act provides an assessment and approval process for actions within a proposed policy, program or plan that are likely to have a significant impact on matters of national environmental significance. Some of these matters include nationally threatened species and ecological communities, the marine environment, and internationally protected migratory species. The strategic assessment process may also assist with gaining approval for exports of fisheries products (approved wildlife trade operation).

Reason: A strategic assessment is a legislated requirement to assess the environmental performance of fisheries under Part 10 of the *EPBC Act*, assessments relating to impacts on protected marine species (Part 13) and those required for approval of export of fisheries product (Part 13A). Fisheries use a strategic assessment framework and part of this includes assessment against the *Guidelines for the Ecologically Sustainable Management of Fisheries*.

Relevance to National Oceans Office: This process is a performance assessment system for fisheries. A number of fisheries have been assessed that fall within the SEMR or will be applicable to other marine plans under oceans policy. Fisheries are assessed for process and also against standard outcomes in the *Guidelines for the Ecologically Sustainable Management of Fisheries*. This is the most comprehensive performance assessment of the ecological sustainability of marine fisheries (fish stocks, bycatch and general ecosystem impacts) however the reports are usually specifically written to answer Department of Environment and Heritage requirements and to some extent are a 'once off' and this may reduce their usefulness for the National Oceans Office. Nevertheless the strategic assessment reports provide an insight into the data that is collected and analysed for each fishery.

The Framework, Components and Prioritisation

Framework: Environmental impact assessment.

Components: The strategic assessment framework is broken down into process components, the outcome components are covered by the *guidelines for the ecologically sustainable management of fisheries* and include impacts on the fish stocks (primary targeted species and byproduct) and the ecosystem. The ecosystem is divided into impacts on bycatch species, impacts on threatened species and communities and impacts on the general ecosystem. The general ecosystem is further subdivided into

1. Impacts on ecological communities
    - Benthic communities
    - Ecologically related, associated or dependent species
    - Water column communities
2. Impacts on food chains
    - Structure
    - Productivity/flows
3. Impacts on the physical environment
    - Physical habitat
    - Water quality.

Prioritisation: Risk assessment is used, particularly in the case of the ecosystem components, to determine which issues need to be tackled.

Objectives and indicators (and performance measures)

Objectives: The overarching strategic assessment framework provides legislated actions for developing and carrying out a strategic assessment. The *guidelines for the ecologically sustainable management of fisheries* provide outcome objectives against which fisheries are to be assessed. These objectives are ESD and use/non human threat objectives (see Table). The guidelines were based upon the Marine Stewardship Council's Standard.

Indicators: Indicators are specific to each fishery but must satisfy requirements with respects to information and assessment.

Performance measures: Performance measures are usually stated within the objective for each component. They are also stated, depending on the component, as reference points- targets and/or limits, or through terms such as minimising or avoiding.

Table: Objectives and Indicators (and performance measures)

Component	Objective	Formalised/ Implicit	Indicator	Performance measure	Type of objective/ indicator (1,2)
Primary stocks and by-product	The fishery shall be conducted at catch levels that maintain ecologically viable stock levels at an agreed point or range, with acceptable levels of probability	Formalised	Specific to each fishery	see objective	ESD, Measurable
	Where the fished stock(s) are below a defined reference point, the fishery will be managed to promote recovery to ecologically viable stock levels within nominated timeframes.	Formalised	Specific to each fishery	see objective	Use/non human threat, Measurable
Bycatch	The fishery is conducted in a manner that does not threaten bycatch species.	Formalised	Specific to each fishery	see objective	Use/non human threat, Measurable
Threatened species and Threatened	The fishery is conducted in a manner that avoids mortality of, or injuries to, endangered, threatened or protected	Formalised	Specific to each fishery	see objective	Use/non human threat, Measurable

communities	species and avoids or minimises impacts on threatened ecological communities				
General ecosystem	The fishery is conducted, in a manner that minimises the impact of fishing operations on the ecosystem generally.	Formalised	Specific to each fishery	see objective	Use/non human threat, Not measurable

1. The Oceans Office classifies three forms of Objectives, those for ESD elements (social, economic, environmental), those for Use/non-human threat objectives, and those for Actions (on-ground). Each of these three types of objectives have respective indicators, being ESD indicators, Use/non-human threat indicators, and Action indicators.
2. Objectives and Indicators may be either measurable/operational or not measurable.

Data gathering

Data collection: Data is collected by the fishery management agency and compiled in a strategic assessment based upon the strategic assessment framework and the *Guidelines for the Ecologically Sustainable Management of Fisheries* as a part of the submission to Department of Environment and Heritage. Strategic assessments are a once off, although are reviewed. The format of the strategic assessments are often written to specifically answer the objectives, information, assessment and management responses in the *Guidelines* and it would be necessary for the National Oceans Office to obtain the primary data from the fishery management agency rather than being able to pick up and utilise the strategic assessment documents for input into marine planning. The strategic assessments are provided in DEH (2003b) website http://www.deh.gov.au/cgi-bin/epbc/epbc_ap.pl?name=strategic&limit=7&text_search=,
and for approvals of wildlife trade operations (2004) website http://www.deh.gov.au/biodiversity/trade-use/sources/operations/index.html#commercial.

Ongoing research to improve data quality: Research in recent years has focussed on risk assessments of general ecosystem components which were previously poorly researched.

Management response

Each objective has management responses that should be considered (see Table)

Table: Objectives and management responses in the *Guidelines for the Ecologically Sustainable Management of Fisheries*

Component	Objective	Management response
Primary stocks and by-product	The fishery shall be conducted at catch levels that maintain ecologically viable stock levels at an agreed point or range, with acceptable levels of probability	1.1.6 There are reference points (target and/or limit), that trigger management actions including a biological bottom line and/or a catch or effort upper limit beyond which the stock should not be taken. 1.1.7 There are management strategies in place capable of controlling the level of take. 1.1.8 Fishing is conducted in a manner that does not threaten stocks of by-product species. (Guidelines 1.1.1 to 1.1.7 should be applied to by-product species to an appropriate level) 1.1.9 The management response, considering uncertainties in the assessment and precautionary management actions, has a high chance of achieving the objective.
	Where the fished stock(s) are below a defined reference point, the fishery will be managed to promote recovery to ecologically viable stock levels within nominated timeframes.	1.2.1 A precautionary recovery strategy is in place specifying management actions, or staged management responses, which are linked to reference points. The recovery strategy should apply until the stock recovers, and should aim for recovery within a specific time period appropriate to the biology of the stock. 1.2.2 If the stock is estimated as being at or below the biological and / or effort bottom line, management responses such as a zero targeted catch, temporary fishery closure or a 'whole of fishery' effort or quota reduction are implemented
Bycatch	The fishery is conducted in a manner that does not threaten bycatch species.	2.1.3 Measures are in place to avoid capture and mortality of bycatch species unless it is determined that the level of catch is sustainable (except in relation to endangered, threatened or protected species). Steps must be taken to develop suitable technology if none is available. 2.1.4 An indicator group of bycatch species is monitored. 2.1.5 There are decision rules that trigger additional management measures when there are significant perturbations in the indicator species numbers.

		2.1.6 The management response, considering uncertainties in the assessment and precautionary management actions, has a high chance of achieving the objective.
Threatened species and Threatened communities	The fishery is conducted in a manner that avoids mortality of, or injuries to, endangered, threatened or protected species and avoids or minimises impacts on threatened ecological communities	2.2.4 There are measures in place to avoid capture and/or mortality of endangered, threatened or protected species. 2.2.5 There are measures in place to avoid impact on threatened ecological communities. 2.2.6 The management response, considering uncertainties in the assessment and precautionary management actions, has a high chance of achieving the objective.
General ecosystem	The fishery is conducted, in a manner that minimises the impact of fishing operations on the ecosystem generally.	2.3.3 Management actions are in place to ensure significant damage to ecosystems does not arise from the impacts described in 2.3.1. 2.3.4 There are decision rules that trigger further management responses when monitoring detects impacts on selected ecosystem indicators beyond a predetermined level, or where action is indicated by application of the precautionary approach. 2.3.5 The management response, considering uncertainties in the assessment and precautionary management actions, has a high chance of achieving the objective

(From Environment Australia 2001)

In addition the outcomes and conditions from the strategic assessment must be included in the management plan for the fishery. If the Commonwealth minister is satisfied and endorses the management of the fishery and any action in accordance with the management plan or arrangements will not be in breach of the Act,

Key points

Fisheries which occur in Commonwealth waters, impact upon matters of national environmental significance, may need to complete a strategic assessment under the *EPBC Act 1999*. The EPBC Act has a strategic assessments framework that sets the procedures that need to be followed when created a strategic assessment. Incorporated within this framework are the *Guidelines for the Ecologically Sustainable Management of Fisheries* which fisheries performance are assessed against. Each fishery compiles data and information to help answer the standard *Guidelines*. In many cases the strategic assessment report specifically answers the objectives, information, assessment and management responses within the *Guidelines* and may not be directly applicable to marine planning.

PERFORMANCE ASSESSMENT SYSTEM: **Information collection sheet**			
PAS ID:	PAS 24		
PAS NAME:	**Strategic assessments - Petroleum**		
CONTACT:	Sue Kruse Department of Industry, Tourism and Resources Level 4, 51 Allara Street, Canberra City ACT 2600 GPO Box 9839, Canberra ACT 2601 Ph: 02 6213 7973 Fax: 02 6213 7818 Internet: http://www.industry.gov.au		
PHONE NO.	02 6213 7973	**EMAIL:**	sue.kruse@industry.gov.au
DATE:	19/2/02		
REFERENCES/WEB:			

Performance Assessment System name:

Strategic Assessments - Petroleum

Description of the Performance Assessment System

The subject of the Performance Assessment System: To be defined. Possibly the process of developing and implementing environment plans for offshore petroleum activities.

	Scale:		**Scope**:
	Individual	X	Ecological
	Region		Economic
X	Industry		Social
	National	X	Governance
	International		Other:

Purpose: To establish a relationship between the Petroleum (Submerged Lands) (Management of Environment) Regulations 1999 and the Environment Protection and Biodiversity Conservation Bill 1999.

Reason: Both pieces of legislation referred to above can govern environmental requirements for offshore petroleum activities. Investigations are currently underway to determine if a Strategic Assessment under Chapter 10 of the EPBC Act could resolve ambiguities.

Relevance to National Oceans Office: This is not a performance assessment system as such at this stage, but it could lead to one or to changes in the current arrangements for Environmental Plans (PAS 4). A Strategic Assessment, if performed, could provide relevant information to the Office on the environmental performance of offshore petroleum activities. Alternatively, depending on its nature it may provide objectives and ongoing performance information on governance arrangements.

The Framework, Components and Prioritisation

Framework: Not applicable at this stage.

Components : Not applicable at this stage, but under EPBC Act is expected to be primarily environmental and/or governance.

Prioritisation: Not applicable.

Objectives and indicators (and performance measures)

Objectives : Objects of the EPBC Act are listed in Chapter 1. In broad terms they cover protection of the environment and promotion of ecologically sustainable development through the conservation and ecologically sustainable use of natural resources. No operational objectives for Strategic Assessment at this stage.

Indicators and Performance measures: Not developed at this stage.

Data gathering

Data collection: Not applicable at this stage.

Ongoing research to improve data quality: Not applicable at this stage.

Management response

Not applicable at this stage

Key points

This entry is primarily to flag the possibility of the Strategic Assessment provision of the EPBC Act being used for offshore petroleum activities. It could result in the current Environment Plan process being accepted as fulfilling requirements under the EPBC Act or it could result in additional or alternative objectives and performance assessment systems.

PERFORMANCE ASSESSMENT SYSTEM: **Information collection sheet**			
PAS ID:	PAS 25		
PAS NAME:	**Measuring Australia's Progress- ABS Headline Indicators**		
CONTACT'S NAME:	Jon Hall, Australian Bureau of Statistics, Belconnen, ACT		
PHONE NO.		**EMAIL:**	Jon.Hall@abs.gov.au
DATE:	18/2/2004		
REFERENCES/WEB:	ABS (2002) *Measuring Australia's Progress,* Catalogue no. 1370. Australian Bureau of Statistics, Canberra. Hall, J. (2003) Measuring Australia's Progress, in: Pritchard, B Curtis, A Spriggs, J and Le Heron, R. (eds.). *Social dimensions of the triple bottom line in rural Australia,* Pg 93-104.		

Performance Assessment System name:

Measuring Australia's Progress- ABS Headline Indicators

Description of the Performance Assessment System

The subject of the Performance Assessment System: Australia's progress with respects to ecologically sustainable development over the last 10 years.

	Scale:		**Scope**:
	Individual	X	Ecological
X	Region	X	Economic
	Industry	X	Social
X	National		Governance
	International		Other

Purpose: To measure whether life in Australia has improved, especially in the past decade?

Reason: The production of this report was influenced by the *National Strategy on Ecologically Sustainable Development 1992* and international sustainable development initiatives.

Relevance to National Oceans Office*:* The most relevance for the National Oceans Office is probably the strong focus on social and economic indicators that may be used as a model for regional plans. There is a marine ecosystem supplementary indicator. Although data is usually presented at the National or State scale and therefore ABS would have to be contacted to obtain data that could be used for regional marine plans.

The Framework, Components and Prioritisation

Framework: The framework is basically an ESD framework looking at how social, economic and environmental 'wealth' are improving. This is focussed on the resource rather than specific industries or sectors.

Components: The wealth of the nation was divided into components (domains) of wealth, being assets or capital, for example

- Social capital
- Human capital
- Natural capital
- Produced and financial capital

Each domain is further divided into headline dimensions (see Table) and most dimensions have a headline indicator, and a supplementary indicator. Although crime and housing headline dimensions have two indicators and social attachment does not have an indicator as yet. There were also some supplementary domains and corresponding supplementary indicators.

Prioritisation: The approach to measuring progress was developed, considering:

- international standards or practices
- current policy issues and debates
- the views of stakeholders and the general Australian public

The progress indicators were chosen in four steps:

1. Define the three broad domains of progress (social, economic and environmental).
2. Compile a list of potential dimensions of progress within each of the three domains.
3. Choose a subset of dimensions for which indicators would be sought.
4. Choose an indicator (or indicators) to give statistical expression to each of those dimensions.

Indicators had to satisfy a number of criteria to be selected (Hall, 2003).

Objectives and indicators (and performance measures)

Objectives: Measuring Australia's Progress intentionally does not state objectives at a measurable level. Although the report does have some discussion of the indicators. The ABS states in the report that readers are to make up their own minds about the indicators, although some indicators, particularly the environmental indicators do have obvious implicit objectives.

Indicators: Australia's Progress was divided into four domains of progress, each of these were separated into Headline dimensions, and for each Headline dimension it has at least one Headline Indicator and one Supplementary indicator (see Table). Some 'supplementary dimensions' also had supplementary indicators. Indicators had to satisfy a number of criteria to be selected (ABS, 2002; Hall, 2003). This project was set- up to measure outcomes, to measure how Australia is progressing as a nation. For this reason the majority of indicators are 'ESD Indicators'. Almost all indicators are available and measurable, these were criteria for selection.

Performance measures: The data are presented in a variety of ways and they vary. But some common features are discussed for each:

- national, disaggregated national and (occasionally) international progress;
- direction and rate of change; and
- recent and longer term progress.

Table: Objectives and Indicators (and performance measures)

Component	Objective	Formalised/ Implicit	Headline Indicator	Supplementary indicator	Performance measure	Type of objective/ indicator (1,2)
Health		Implicit	Life expectancy at birth	Proportions of people surviving to ages 50 and 70; Infant mortality rate; Burden of disease		ESD, Measurable
Education and training		Implicit	People aged 25-64 years with a vocational or higher education qualification	Education participation rate for those aged 15–19; Year 7/8 to Year 12 apparent retention rate		ESD, Measurable
Work		Implicit	Unemployment rate	Extended labour force under utilisation rate; Long-term unemployment rate; Retrenchment rate; Casual employees; People in part-time jobs; People in jobs		Use/non human threat, Measurable

				with longer hours (50 hours a week or more); Average hours per week, full-time workers		
Biodiversity		Implicit	Extinct, endangered and vulnerable birds and mammals			ESD, Measurable
Land clearance		Implicit	Annual area of land cleared			Use/non human threat, Measurable
Land degradation		Implicit	Salinity, assets at risk in areas affected, or with a high potential to develop, salinity			Use/non human threat, Measurable
Inland waters		Implicit	Water management areas, proportion where use exceeded 70% of sustainable yield	Water diversions: Murray-Darling Basin; River condition (biota) index; Net water use; River environment index		Use/non human threat, Measurable
Air quality		Implicit	Fine particle concentrations, days health standards exceeded, selected capital cities	Highest one hour averages of SO2, selected regional centres; Days when ozone concentrations exceeded guidelines, selected capital cities; Consumption of ozone depleting substances		Use/non human threat, Measurable
Greenhouse gases		Implicit	Net greenhouse gas emissions	Total greenhouse gas emissions (including land clearance); CO2-e emissions, net, per capita and per $ GDP		Use/non human threat, Measurable
National wealth		Implicit	Real national net worth per capita	Real national assets and liabilities per capita; Real net capital stock per capita; Economically demonstrated resources (minerals and energy) per capita; Real net foreign debt		ESD, Measurable
National income		Implicit	Real net national disposable income per capita	Real Gross Domestic Product per capita ; Proportion of the population in work; Terms of trade		ESD, Measurable
Economic disadvantage and inequality		Implicit	Real equivalised average weekly disposable income of households in the second and third deciles of the income distribution	Real equivalised average weekly disposable income of groups of higher income households; Children without an employed parent; Real equivalised weekly disposable income of households at selected income percentiles; Ratios of income of households at selected income percentiles; Share of total income received by households in low and high income groups; Gini coefficient;		Use/non human threat, Measurable

				Proportion of households with income below both the half mean and half median income of all households		
Housing		Implicit	No headline indicator	Households with housing affordability problems; Households with insufficient or spare bedrooms		Use/non human threat, not Measurable
Crime		Implicit	Unlawful entry with intent and assault (victimisation rates)	Homicide rate; Imprisonment rates		Use/non human threat, Measurable
Social attachment		Implicit	No headline indicator	Attendance at live performances; Participation in organised sports; Voluntary work; Marriage and divorce rates; Persons living alone; Waking-time spent alone; Homelessness; Suicide and drug-related death rates (indicators in the Work dimension are also relevant)		Unsure, not measurable, Supplementary is measurable
Supplementary Component 'Dimensions'						
Land use		Implicit		Native forest area		Unclear, Measurable
Marine ecosystems		Implicit		Estuarine condition index; Oil spill sightings and national plan responses		ESD-Use/non human threat, Measurable
Invasive species		Implicit		Birds and mammals threatened by invasive species; Distribution of weeds of national significance		Use/non human threat, Measurable
Waste		Implicit		Quantities of solid waste disposed of at landfills		Use/non human threat, Measurable
Consumption		Implicit		Real final consumption expenditure per capita		Use/non human threat, Measurable
Saving		Implicit		Net national saving as a proportion of GDP		ESD Measurable
Inflation		Implicit		Consumer price index; Domestic final demand price index		Use/non human threat, Measurable
Capital formation		Implicit		Real gross fixed capital formation per		ESD

				capita		Measurable
Productivity		Implicit		Multifactor productivity; Labour productivity		Use/non human threat, not Measurable
Knowledge and innovation		Implicit		Expenditure on research and development expenditure, as a proportion of GDP; Expenditure on education, as a proportion of GDP; Managers and professionals, as a proportion of total employment; Investment in software, as a proportion of GDP; Proportion of businesses with Website or Homepage		Use/non human threat, Measurable
Competitiveness		Implicit		Real effective exchange rate		Use/non human threat, Measurable
Openness		Implicit		Ratio of imports to GDP; Ratio of foreign investment inflow to GDP		Use/non human threat, Measurable
Communication and transport		Implicit		Computer ownership and internet access, households; Passenger vehicles per 1,000 people		ESD, Measurable
Culture and leisure		Implicit		No indicators		ESD, Not measurable
Governance, democracy and citizenship		Implicit		No indicators		Use/non human threat, Not measurable

(adapted from ABS 2002)

1. The Oceans Office classifies three forms of Objectives, those for ESD elements (social, economic, environmental), those for Use/non-human threat objectives, and those for Actions (on-ground). Each of these three types of objectives have respective indicators, being ESD indicators, Use/non-human threat indicators, and Action indicators.
2. Objectives and Indicators may be either measurable/operational or not measurable.

Data gathering

Data collection: The majority of data was sourced directly from Australian Bureau of Statistics databases, with accessibility and availability being important selection criteria for selection. Although a few indicators and their data collection are yet to be developed, as noted above. This report is intended to be repeated and a new report is in progress.

Ongoing research to improve data quality:
Ongoing research is continuing into available indicators as well as those indicators for which data is not available.

Management response

The production of this report was intended to inform public debate and therefore decisions on overall progress is left up to the reader and the dimensions of progress are not combined. The argument for this was that different measurements were hard to combine. Also weightings were necessary if they were to be combined and they preferred weightings to be left to the reader. However, the selection of 'important' headline indicators and 'less important' supplementary indicators suggests weightings, plus leaving out indicators is a form of weighting indicators for their importance.

No management responses are suggested, although some headline dimensions have implicit management responses, such as for land clearing, and education and training.

Key points

This report is Measuring Australia's Progress, it has selected a set of key indicators from ABS databases, called headline indicators and supplementary indicators that are not necessarily comprehensive but are indicative. The intention is to inform community debate and high level policy decisions rather than determine specific management responses. Even so, the indicators selected and their explanations do involve a degree of interpretation.
This report is most useful in providing ideas for potential social and economic indicators that may be used for marine planning. The data for these indicators would have to be sourced directly from ABS as the report does not provide data in a format useful for marine planning, ie it is National or State level and not sector specific. Most data is available for indicators however the ABS have identified a few data gaps which may be filled in the future.

PERFORMANCE ASSESSMENT SYSTEM: **Information collection sheet**			
PAS ID:	PAS 26		
PAS NAME:	**Tasmania together**		
CONTACT'S NAME:	Tasmania *Together* Progress Board GPO Box 123 Hobart 7001		
PHONE NO.	(03) 6233 5958	**EMAIL:**	secretariat@tasmaniatogether.tas.gov.au
DATE:	3/3/2004		
REFERENCES/WEB:	Tasmania Together Progress Board (2003). *Tasmania Together.* Tasmania Together Progress Board, Hobart. Website- http://www.tasmaniatogether.tas.gov.au, Updated 27/10/2003, Accessed 3/3/2004		

Performance Assessment System name:

Tasmania Together

Description of the Performance Assessment System

The subject of the Performance Assessment System: The State of Tasmania

	Scale:		**Scope**:
	Individual	X	Ecological
X	Region	X	Economic
	Industry	X	Social
	National	X	Governance
	International		Other

Purpose: Comprehensive framework for tackling the problems of Tasmania and setting a long-term vision for what Tasmanians want to achieve. An ambitious and long-term vision that aims to change the status quo.

Reason: Reason for development not stated, but implementation and reporting over 20 year period covered by the *Tasmania Together Progress Board Act 2001*.

Relevance to National Oceans Office: An example of a carefully designed performance assessment system with extensive consultation. Covers Tasmania and therefore should be complementary with the SERMP, ie SERMP 'use' objectives should include contributions to Tasmania Together sustainability objectives for human systems. Environmental objectives do not include specific reference to oceans.

The Framework, Components and Prioritisation

Framework: Sustainable development/triple bottom line.

Components : An overall vision subdivided into 24 goals under 5 headings: our community, our culture, our democracy, our economy, our environment. Goals further subdivided into 'standards' (more like criteria).

Prioritisation: Components developed through extensive consultation over a 2 year period.

Objectives and indicators (and performance measures)

Objectives : Hierarchical structure: vision, goals, standards with standards being essentially operational objectives. All explicit.

Indicators and Performance measures: One of more indicators for each standard (implicit sub-objectives where there is more than one indicator per standard). Current value (benchmark) and targets for every 5 years up to 2020 stated for each indicator.
Total number of indicators =212.
Too many to list in table.
See document http://www.tasmaniatogether.tas.gov.au/tastog_original/intro.html
Difficult to classify as 'ESD', 'use' 'action' as all objectives tend to be phrased as action objectives even though they clearly describe ESD objectives. For example Goal 1 is stated 'Ensure all Tasmanians have a reasonable standard of living with regard to food, shelter, . . .'
Majority could be classed as ESD objectives (the desired state of human and natural systems) although written as action objectives. Some are 'true' action objectives. Very few 'use' objectives.
Where there is more than one indicator per standard there can be a mix of indicator types. For example, one indicator may be a ESD indicator (which can be appropriate to measure performance against an action) and another indicator may be an action indicator.

Data gathering

Data collection: The Progress Board will report on progress towards achieving the benchmarks, annually for the first three years and then biennially. Major reviews of Tasmania *Together* will be conducted by the Progress Board every five years. These will involve extensive community consultation.

Ongoing research to improve data quality: The Progress Board is able to recommend changes to the benchmarks to Parliament. Under the functions identified in the Tasmania *Together* Progress Board Act 2001, the Board is to "coordinate the process of further developing, refining and revising the goals and benchmarks".

Management response

Entire system is presented in terms of actions, ie management responses. Since these are at a high level (eg "Ensure that all Tasmanians have a reasonable standard of living") it is not clear who will take action if targets are not met. Presumably there will be a government response prompted by public agitation.

Key points

A useful example of a well-structured performance assessment system with explicit objectives and performance measures. Subject is a geographical region (Tasmania) and therefore objectives expressed mainly as desired state of that region (the natural, human and social capital).

Since the SEMR is geographically close to Tasmania, it would be appropriate for the desired outcomes of the SERMP to align with the articulated goals of Tasmania where appropriate. In other words, the ‘use’ objectives of the SERMP should include contributions to the ESD objectives of Tasmania Together.

PERFORMANCE ASSESSMENT SYSTEM: **Information collection sheet**			
PAS ID:	PAS 27		
PAS NAME:	**ATSIC: Outcome data measurement: Unfinished business**		
CONTACT'S NAME:	Office of Evaluation and Audit Level 3, Lovett Tower ATSIC PO Box 17, Woden, ACT 2606		
PHONE NO.	(02) 6121 4855	**EMAIL:**	
DATE:	20/2/2004		
REFERENCES/WEB:	ATSIC (Aboriginal and Torres Strait Islander Commission) (2002), *Outcome data measurement. Unfinished business. Evaluation of data for outcome measurement for selected Indigenous service delivery programs*, Office of Evaluation and Audit, ATSIC, Elect Printing, Canberra. Website, http://www.atsic.gov.au/about_atsic/Office_Evaluation_Audit/Docs/data_measurement.pdf, Accessed 20/2/2004		

Performance Assessment System name:

ATSIC: Outcome data measurement: Unfinished business

Description of the Performance Assessment System

The subject of the Performance Assessment System: Data useful for outcome measurement in selected Indigenous service delivery programs.

	Scale:		**Scope**:
	Individual		Ecological
X	Region	X	Economic
	Industry	X	Social
X	National		Governance
	International	X	Other: program performance

Purpose: The evaluation considered issues surrounding the need for data to assess program performance at the national level to measure outcomes for the Indigenous population as a whole. The project had two objectives:

- identify the scope and nature of data on outcomes and program performances to improve outcomes for Indigenous peoples; and
- report on the availability of the data and on their potential use in evaluation, program and policy formulation and delivery.

The evaluation task was restricted to four service delivery programs (see components section) and was also limited to national data sources or those of high importance in terms of their relevance to the measurement of socio-economic outcomes for the Indigenous population.

Reason: The *ATSIC Act 1989* established the Office of Evaluation and Audit (OEA). The key functions of OEA are to evaluate and audit the operations of the Aboriginal and Torres Strait Islander Commission, as well as other portfolio agencies identified in the ATSIC Act. This project was initiated in response to both internal data requirements and external data initiatives. In its broader evaluation and monitoring role, the Office of Evaluation and Audit (OEA) was looking for cheaper and more cost-effective ways of doing evaluations. This included greater emphasis on the use of data for program monitoring and outcome improvements for Indigenous peoples.

Relevance to National Oceans Office: This report provides an overview of data that may be useful when assessing indigenous program performance against outcomes. Although the focus is indigenous program performance the extensive review of national datasets provides useful indicators for measuring performance of programs with respects to social and economic outcomes. The datasets reviewed are at a national level which may decrease their usefulness for regional marine planning, although applicability to regional planning (Regional Councils) has been discussed for each dataset.

The Framework, Components and Prioritisation

Framework: This project took an ESD framework looking mainly at social and economic outcomes from program management. These social outcomes were subdivided into components, and 4 key components were selected (see below). To some extent the operational indicators fell into a pressure-state-response model.
ATSIC itself, at the time of this report (2002), was following an output-outcome performance assessment system framework.

Components: The components to be examined were refined for a quick review and included Service delivery programs (sectors) selected for this evaluation were:

- law and justice
- health
- education and training
- housing and infrastructure

Each of the high-level components stated above, ie law and justice, health, education and training and housing and infrastructure have been further sub-divided

Prioritisation: A stated above, the components, or sectors, were limited to four. This evaluation was also limited to national data sources or those of high importance in terms of their relevance to the measurement of socio-economic outcomes for the Indigenous population. Over
75 data sources were assessed to determine the extent to which they could be used for measuring program outcomes and performance. Based on the quality of the data, and the extent of coverage of identification of Indigenous peoples, each of these data sets was categorised under one of the following categories:

- reasonably good quality
- should be used with caution
- not useful due to small number of Indigenous peoples in the sample or collection
- not relevant because datasets do not identify Indigenous peoples (or clients)

Classification of data sets according to the first two categories was arbitrary. This categorisation should only be viewed as a broad guideline for program managers on the usefulness of specific datasets covered in this evaluation. Of the total datasets examined 22 were considered to be of reasonably good quality to be used to measure program outcomes for Indigenous people.

Objectives and indicators (and performance measures)

Objectives: This report provides an review of data sources relevant to ATSIC program management (for social and economic outcomes). For the some Law and Justice, and some Education and training indicators objectives may be implicit within the description of the data. For the Health component the outcome objectives have been stated at an almost operational level. But generally, this is a data review.

Indicators: An overview of key data sources (including program content, agency (ies) responsible for delivery, and an up-to-date inventory of available data) from the national statistical system is provided for the four components of law and justice; health; education and training; and housing and infrastructure and their sub-components. For each of the four components, performance indicators have been stated at the end of each chapter. The major data gaps were highlighted where possible, with a commentary on existing outcome measures. The components selected and subsequently the indicators selected tended towards what National Oceans Office considers threat type indicators, or ESD issues that are being affected by some threat, so for example crime, rental housing, and particularly health where the indicators measure threats to health (workforce issues or access to health services). The large number of programs reviewed and the indicators and data suggested make it unrealistic to describe these in detail in this proforma and readers should refer to the report for further details. Almost all the indicators suggested are operational/measured to some extent, although in some cases they may not be statistically robust, or may not be statistically robust at the regional level.

Performance measures: Generally these were not stated, sometimes they were a part of the indicator.

Data gathering

Data collection: The following was recorded about each national program (dataset) reviewed:

- project description,
- objective of program,
- scope/coverage,
- collection methodology/data source,
- project database- agency responsible for maintenance,
- year of commencement of data/series available,
- key data contents,
- indigenous status available,
- geographic level,
- data storage,
- dissemination of data, and
- comments.

This project was created to review/identify the potential for national datasets for reporting on indigenous program outcomes, rather than to actually collect data. Although the review is two years old it may still provide some useful insights into social and economic indicators and potential datasets.

Ongoing research to improve data quality: This was a once off project. A statistics unit was set up within ATSIC and later within ATSIS to develop monitoring and evaluation processes and were informed by this report and a latter report. The later report on 'Putting the pieces together: Regional plans, data and outcomes' used a similar approach although looked at data that could be used for regional plans (see PAS 22).

Management response

This review of data for program managers involved in indigenous programs evaluates the usefulness of datasets and makes suggestions for which datasets are best for program managers. However, the report does not make any more specific suggestions for management responses and does not take any management responses. The statistics unit within ATSIC was set-up near the conclusion of this review.

Key points

This report provides an overview of data that may be useful when assessing indigenous program performance against outcomes. Although the focus is indigenous program performance the extensive review of national datasets provides useful indicators for measuring performance of programs with respects to social and economic outcomes.

Appendix C: Systems that are not included in this report and the reasons why.

Table. Systems that are not included in this report and the reasons why.

Performance Assessment System	Agency	Description	Reason for not including	Reference/contact
DEH Headline Sustainability Indicators	DEH	Measures a set of 24 indicators to report against the National Strategy for ESD 1992	Indicators for the Headline sustainability report are predominantly selected from State Of Environment reports. Therefore the addition of this report does not add much new data, over and above the SOE review. The model is very similar to the ABS report 'Measuring Australia's Progress' and therefore the latter was included.	http://www.deh.gov.au/esd/national/indicators/index.html Updated 19/9/2003, Accessed 16/2/2004
NHT/NAP Regional Plans	Regional Boards/committees	Australian land has been divided into NHT/NAP regions. Each of these regions must produce a Regional NRM Plan. BRS (Benj Whitworth) has been involved with reviewing these NRM plans, including: SA Lower Murray and South East, Vic Glenelg, Corangamite, Port Phillip, West Gippsland, East Gippsland, NSW SE and Southern. Tasmania has not yet produced Regional plans.	These NRM Regional plans would border the SEMR if it included State waters. However the SEMR is only Commonwealth waters. Each plan is highly specific on its objectives, targets and indicators (if they have indicators) and therefore difficult to make generalisations. Most Regional Plans make few references to marine issues, although latter Plans particularly SA SE and the Vic Gippsland Plans and Port Phillip make more references and have interesting objectives. Although the Regional Plans are important it is difficult to see how they could be cross-referenced. The SE RMP Action to be involved with the NRM Regional Planning process will presumably inform the SE Regional Marine Plan. The criteria used to assess NRM Regional Plans (see below) including PAS will give an indication of what is in each Plan. The Framework for monitoring and Evaluation has been developed, however few plans have well developed performance indicators at present.	Benj Whitworth BRS 6272 3192
Regional NRM Plan: Accreditation	Commonwealth and each State jointly agree on the accreditation criteria as a part of a Bilateral	Each Regional NRM Plan is accredited against criteria. The criteria are agreed to by the State and Commonwealth as a part of a bilateral agreement. Generally the Accreditation follows the issues provided in Attachment D	The 'Accreditation of Regional NRM Plans' provides a template for accrediting the 'process' of producing Regional NRM Plans (which are performance assessment systems) and is therefore out of the scope of this Project. Nevertheless the template provides some useful insights into what each Region must include within its Regional NRM Plan and therefore the Accreditation Criteria have been added as Attachment D. The Accreditation criteria might provide a useful checklist for Marine Plans.	See Attachment D
National	DAFF	A review of the Landcare program	Although possibly useful for issues to do with participation and	http://www.daff.gov.au/content/o

Performance Assessment System	Agency	Description	Reason for not including	Reference/contact
Landcare Program Review			capacity building in regional marine planning we didnt have time to assess this performance assessment system.	utput.cfm?ObjectID=DA3501AE-27D6-4138-96773B23D82CB952&contType=outputs, Updated 29/10/2003, Accessed 16/2/2004
AAA: Framework for evaluation	DAFF	An evaluation of the Agriculture Advancing Australia package and its programs	This performance assessment has been reviewed previously by BRS and was thought to not be particularly useful for the marine planning process because part of its focus is National and the other part of reviewing programs against their specific objectives. The evaluation is also in progress and confidential at this stage.	Benj Whitworth 6272 3192
Agriculture EMS Framework	DAFF/Agriculture industry	Australia's National Framework for Environmental Management Systems in Agriculture provides an overarching framework for EMS	This National EMS framework is not a performance assessment system, it is an overarching framework. It is true that EMS are performance assessment systems however in the agriculture sector EMS is being driven by industry and are therefore outside the scope of this report.	http://www.affa.gov.au/content/publications.cfm?category=Natural%20Resource%20Management&ObjectID=6166032A-0172-4C4B-A8A251F2E18912CE, Updated 18/10/2002, Accessed 16/2/2004
AMSA Oil response	AMSA	AMSA Oil spill incidents	The number of incidents cannot provide a useful means or reporting performance over time, ie too few.	AMSA (2003) *Marine Environment Protection: Incident and exercise reports.* Website- http://www.amsa.gov.au/me/incident/incident.htm, Updated 7/7/2003, Accessed 9/3/2004
AMSA AUSREP	AMSA	AUSREP: Established in accordance with the International Convention for Safety of Life, AUSREP, the Australian Ship Reporting System, is operated by the Australian Maritime Safety Authority through the Rescue Coordination Centre (RCC). Ships report position and AMSA follows procedures if a ship doesnt report potentially including emergency response	Reported on in the Marine Matters proforma and therefore it was doubling up.	AMSA (2004) *AUSREP (Australian Ship Reporting System)*, AMSA, Canberra. Website- http://www.amsa.gov.au/aussar/AUSREP/CONTENT.HTM. Updated 2/2003, Accessed 9/3/2004

Performance Assessment System	Agency	Description	Reason for not including	Reference/contact
Economic indicators for the Commercial Fisheries of South Australia	PIRSA	An annual report detailing a range of economic indicators for South Australia's commercial fisheries including: gross values of production, cost of management, and a range of financial performance indicators including flow on effects into the regional and State economies.	Similar in design to the ABARE Australian Fisheries Surveys.	EconSearch Pty.Ltd (08) 8357 9560

Appendix D: Accreditation of integrated catchment/Regional NRM plans (Example from South Australian Bilateral)

- The following process, details and criteria are agreed for accrediting catchment/regional natural resource management (NRM) plans that are developed through an interactive process between catchments/regions, relevant State/Territory governments and the Commonwealth.
- The Commonwealth and the relevant State/Territory governments will be responsible for accrediting the plans. Plans will be accredited on the basis of their goals and objectives, analytical base, strategic planning, priority actions, proposed targets and outcomes, and accountability and performance monitoring and reporting arrangements.

Integrated catchment/regional natural resource management plans

- Bilateral agreements between the Commonwealth and each State and Territory will:
  - define boundaries for the agreed region; and
  - identify or establish appropriate regional bodies to be responsible for developing catchment/regional NRM plans through a community consultation process for the region.
- Integrated catchment/regional NRM plans will need to be implemented within bilaterally agreed arrangements for management and accountability applying to regional bodies. Accountability arrangements must integrate with the broader accountability framework of the relevant funding program. For regions covered by the National Action Plan for Salinity and Water Quality, arrangements must be consistent with those outlined in the Intergovernmental Agreement. The Natural Heritage Trust bilateral agreements with each State and Territory will determine the arrangements for the other regions. The significant management role of local government in the coastal zone will be addressed in this manner.
- Bilateral and/or regional agreements will allow for different circumstances, steps or timelines for accreditation in each jurisdiction and region.
- Communities will be involved in the development of targets and outcomes for each integrated catchment/regional NRM plans that advance natural resources management issues within the agreed National Framework for NRM Standards and Targets.
- Catchment/regional NRM plans will cover the full range of NRM issues – across terrestrial, freshwater, coastal, estuarine and marine ecosystems where relevant. Government investment in accredited NRM plans will be consistent with the goals and objectives of the relevant program:
  - investment under the National Action Plan for Salinity and Water Quality will focus on action to prevent, stabilise and reverse trends in salinity and to improve water quality and reliability that affects sustainable production, biodiversity and infrastructure;

  - investment under the Natural Heritage Trust will focus on actions which are consistent with the Trust's objectives relating to biodiversity conservation, sustainable natural resource use, and capacity building and institutional change.

- Consistent with a precautionary approach to addressing NRM issues, plans will be accredited and actions undertaken on information available providing adaptive management approaches are adopted and an appropriate process for continuous improvement of the plan exists.
- Funding will be directed to implementing accredited plans through a rolling investment strategy/business plan, which will be used to assess on-going performance-based payments. Funding will be provided:
  - for well planned or time critical actions to achieve priority NRM outcomes, particularly in the context of the minimum required set of targets (consistent with the National Framework for NRM Standards and Targets); and
  - to support the development or refinement of plans through information gathering, modelling of strategies and the development of targets, and community involvement.
- Funding for priority actions prior to final accreditation may be provided where:
  - the agreed framework for an integrated catchment / regional NRM plan exists;
  - the actions are a priority from a national, regional or basin-wide perspective; or
  - as otherwise agreed in a bilateral agreement.

Accreditation criteria for integrated catchment/regional natural resource management plans

- Plans will be based on the principles of conservation and sustainable use of natural resources. Scientific analysis of natural resource conditions, problems and priorities carried out at the catchment/regional level will underpin plans. Plans should include:
  - an overview of the region's environmental, social and economic resources including a description of the upstream inputs to the region and how these operate together as a system;
  - identification of regional natural resource assets of international, national or state value; and
  - identification of impacts of resource use and management on environment, social, and economic assets within and external to the region.
- Effective participation by all key stakeholders is required to ensure plans are based on a community process, are accurate, comprehensive, well coordinated and able to be implemented.

  - Indigenous communities, local government, state agencies, resource managers, industry and communities, academic/scientific community and environmental groups should be involved where relevant.
  - Stakeholders' roles, responsibilities and capacity to implement actions to achieve the targets will be identified.

- Plans will focus on the causes rather than symptoms of problems.
  - Plans will incorporate any improved policy frameworks agreed in bilateral agreements, to protect the natural resource base of sustainable production, to protect environmental values and to ameliorate negative impacts arising from proposed strategies and actions.
  - Where caps on extractive use of water or measures to improve environmental flows, or limits on the use of other natural resources are agreed as part of bilateral agreements, strategies to implement these measures that take account of natural resource management targets and regional social and economic goals will be outlined.
- Integrated catchment/regional NRM plans will demonstrate consistency with other planning processes and legislative requirements, agreed national and state outcomes and strategies and targets that have been collectively agreed by relevant jurisdictions in other forums.
- Strategic, prioritised and achievable actions will address the range of NRM issues that are identified as priorities in the region, including issues of national, state or regional significance.
  - The range of possible actions to address the priority issues and the social, economic, environmental impacts of these actions will be evaluated (quantifying, where appropriate, the costs and benefits of options, as well as the implications of taking no action).
  - Economic, social and environmental impacts and associated trade-offs will be clearly outlined.
  - Regional targets and milestones consistent with the agreed National Framework for NRM Standards and Targets, and strategies to meet these targets should be detailed.
- Continuous development and improvement of the plan involving all relevant stakeholders is expected. Evaluation processes for reviewing the plan, evaluating actions under the plan, and reporting on progress will meet the requirements of the National NRM Monitoring and Evaluation Framework.
  - The plan will identify processes to assess effectiveness in achieving intended results and identify who is accountable for delivering on commitments, financial management, and performance monitoring and reporting arrangements.
  - The process for developing and refining integrated catchment/regional NRM plans must include clear requirements for periodic review against agreed milestones and updating to take account of new information.