

State of the
Environment

Reporting Series

Discussion Paper No. 4

Linking Environmental Management Frameworks



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1.0 Introduction

The Draft State of the Environment (SoE) Report for Western Australia (WA) was released by the Environmental Protection Authority (EPA) in June 2006. The EPA on behalf of the State Government, is responsible for the development of the report which will be finalized in early 2007. The EPA is an independent environmental advisory body and has welcomed the responsibility of coordinating the 2006 State of the Environment Report and is keen to engage the WA community and its stakeholders in such an important task. To this end, a series of SoE discussion papers have been produced to inform community and stakeholders about matters related to the SoE Report.

This paper provides information about the relationship between various government environmental management frameworks and reporting frameworks currently in use. The SoE Working Groups (established to oversee the development of components of the Draft SoE report) have identified the need for an explanatory document that explains how the SoE Report (a reporting framework) is positioned relative to other government environmental management frameworks.

This discussion paper specifically focuses on drawing comparisons with:

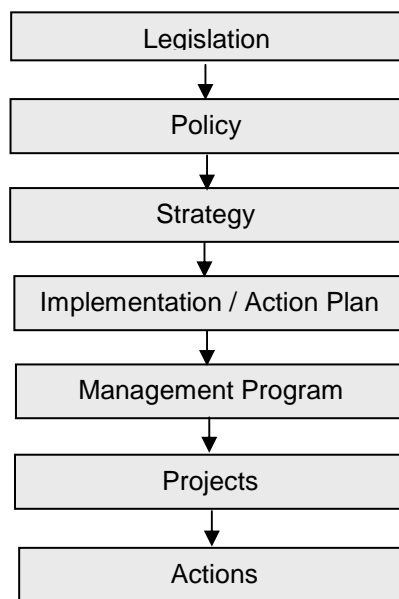
- the Implementation of the State Water Quality Management Strategy (SWQMS),
- the EPA's NRM Framework,
- the National Action Plan for Salinity and Water Quality / National Heritage Trust framework being implemented by Regional NRM Groups, and
- other prioritisation frameworks used by government NRM agencies (eg. Salinity Investment Framework, Waterways Needs Assessment and Preliminary Agency Statement of NRM Priorities in WA).

The EPA recognises that there is some confusion amongst its stakeholders and community about the relative hierarchy of these policies / programs, and the use of differing terminology for the frameworks. This paper aims to highlight the similarities and differences between them and shows how they ultimately contribute to the State of the Environment Report.

2.0 Governance Hierarchy

All environmental management activity in Western Australia should be coordinated to maximize the environmental benefit. In some instances, it has become apparent to the EPA that some lower order governance activities (eg. implementation projects and on-ground actions) are not coordinated with higher order policies and strategies. It is essential that a good governance hierarchy be followed to ensure widespread activities and efforts are coordinated and positive environmental outcomes are realized.

Coordination of all environmental management activities should ideally follow a simple governance hierarchy, whereby higher order statutory legislation feeds policies, that in turn feed the development of strategies and actions plans. Programs, projects and actions are lower in the hierarchy and usually result in actions that deliver on-ground environmental outcomes.



However, complications arise when National, State and / or local policies, strategies or programs are inconsistent with one other. Alternatively, complications may also arise whenever a critical component of the hierarchy is missing.

As the State's environmental advocate, the EPA is keen to ensure that where discrepancies have been identified, that an overarching, coordinating State policy is developed to coordinate lower order activities. The EPA is also keen to provide clarification about the linkages between various policies and programs, so existing work can be synchronized.

It must be recognized that the State of the Environment Report is a reporting framework – effectively being used to assess all aspects of the governance environment hierarchy (from environmental legislation to on-ground actions). In comparison, management frameworks are used to coordinate and focus management activity to produce outcomes that link to strategic objectives and targets.

This difference is important in understanding linkages.

3.0 Overarching Environmental Management Frameworks

3.1 State of the Environment Report

Source

Government of Western Australia (1998) “*Environment Western Australia 1998: State of the Environment Report*”.

Internet ref: www.soe.wa.gov.au or
<http://portal.environment.wa.gov.au/pls/portal/url/item/F30913B72B4CFB1FE03010AC65056C39>

Environmental Protection Authority (2006) “*State of the Environment Report: Western Australia draft*”

Internet ref: www.soe.wa.gov.au or
<http://portal.environment.wa.gov.au/pls/portal/url/item/1508DAB1AC0B1F64E04010AC6E053610>

Purpose

State of the Environment (SoE) Reporting in Western Australia is a reporting framework that assesses the condition of our environment and the major problems occurring. Based on the report’s findings, appropriate recommendations can be developed to address problems, improve policies, develop new legislation, or recommend new programs, policies or on-ground actions. Previously the report was undertaken by the State Government, however the current report is being developed by the EPA. The report not only provides information to the WA community; but also directly contributes to National SoE Reporting and the National Land and Water Resources Audit Report.

Intended Audience

Broad community; key decision makers for the environment.

Application

Statewide – covers all aspects of the environment and all aspects of the governance hierarchy.

Model

SoE reporting tends to be based on the Organisation for Economic Cooperation and Development’s (OECD) pressure-state-response (PSR) model. The OECD model is based on the premise that humans exert pressures on the environment that change the state or condition of natural resources and society then responds to these changes. SoE reports therefore attempt to describe the state / condition of the environment, identify pressures that have caused problems and recommend society’s responses to those problems.

WA’s 1998 SoE Report used a modified version of the PSR model which emphasised environmental policy planning. In addition to addressing condition, pressure and response for environmental issues the social, environmental and economic implications were also examined.

The model for the 2006 SoE Report is based on the previous model, however there is now a need to evaluate the effectiveness of the previous responses. Examining effectiveness will enable an assessment of actions recommended in the 1998 SoE Report and Government's Response to that document.

Hence the model in the 2006 SoE Report is:

- Pressure
- Condition
- Current Response
- Suggested Response
- Implications
- Effectiveness

While most SoE reports are based on the PSR model, reports tend to be structured around environmental themes and issues with associated indicators. This is done to enable easier interpretation and reporting of a complex environment.

Terminology

- Themes

Represent parts of the environment or a natural grouping of natural resource types (eg. land, inland waters, marine, air, biodiversity, cultural heritage, etc).

- Issue (a.k.a.. Problems, threats, 'matters for targets')

Represents something that causes, or has potential to cause, harm or damage to the environment and its values.

- Pressure (a.k.a. triggers)

Represents the key causes of issues.

- Condition (a.k.a. status)

Represents the state of the environment

- Response

Represents activities undertaken to address pressures or to improve the condition of the environment. This can be further broken down into 'current responses' which identifies current activities already implemented, and 'suggested responses' which recommends other activities to produce a desired outcome.

- Indicator (a.k.a. measures)

Represents something that can measure a change in environmental condition or something that affects the environment (pressures).

- Effectiveness

Refers to how successful previous SoE recommendations have been.

3.2 EPA's NRM Framework

Source

Environmental Protection Authority (2004) “*Preliminary Position Statement #8: Environmental Protection in Natural Resource Management*”, June 2004.

Internet ref: http://www.epa.wa.gov.au/docs/2134_PS8.pdf

Purpose

The NRM Framework is a management framework that was proposed by the Environmental Protection Authority. It aims to provide a systematic and unified approach to natural resource management in WA with the objective of ensuring that policy and decision making processes are coordinated with on-ground actions. The EPA intends for this framework to be implemented through a whole-of-government State policy approach.

Intended Audience

All organizations involved with NRM; for example NRM government agencies, NRM regional groups, industry or community groups undertaking NRM activities, etc.

Application

Statewide – all aspects of NRM.

Model

The NRM Framework is based on other well known environmental policies and management frameworks. It is based on key elements of the ISO14004 Environmental Management Systems (EMS) model that has been widely and successfully embraced by industry worldwide, and the National Water Quality Management Strategy (NWQMS) which provides an overarching structure for addressing water based issues in Australia.

The NRM Framework consists of several important components in a logical sequence, consisting of:

- Commitment phase – establishing a vision / mission statement and setting environmental values for each natural resource.
- Planning phase – setting objectives and targets / benchmarks related to the environmental values of each natural resource.
- Implementation – forming management programs and undertaking monitoring and reporting relating to that natural resource.
- Review – undertaking evaluations and making recommendations to either improve or maintain the values or condition of the natural resource.

The NRM Framework recognizes that many different languages are being used by natural resource managers depending on which policies or programs they are funded by. However, the NRM Framework works on the premise that it is the model approach that should be universally embraced and not necessarily the terminology. Not with standing the above, environmental values should be seen as a common linkage between all NRM related policies and programs.

Terminology

- Vision Statement

Refers to a statement of desired condition for the environment.

- Mission Statement

Refers to a statement of environmental commitment for an organization.

- Environmental Value

Refers to a beneficial use of the environment and / or an ecosystem health condition where:

Beneficial use means the use of the environment, or any portion thereof, which is conducive to public health or aesthetic enjoyment and which requires the protection from the effects of emissions or environmental harm; or that identified and declared within the Environmental Protection Act (1986) to be a beneficial use to be protected under an approved policy.

Ecosystem health condition means a condition of the ecosystem that is relevant to the maintenance of ecological structure, ecological function or ecological process and which requires the protection from the effects of emissions or environmental harm; or that identified and declared to be a beneficial use to be protected under an approved policy [*Environmental Protection Act (1986)*]. Examples of Environmental Values may include such values as ecosystem health protection, drinking water, recreation, visual amenity, spiritual / cultural significance, etc.

- Environmental Objectives

Represent the long-term goals that when achieved should ensure that environmental values remain protected.

- Environmental Targets

Refers to a numerical value or narrative statement that serves as a time-based management milestone towards meeting the objective.

- Environmental Benchmarks (a.k.a. standards, criteria)

Refers to an environmental threshold or limit (usually numerical) that when exceeded represents an undesirable environmental condition. Exceedance usually indicates a failure to meet the objective and may trigger a management response to remedy the situation.

- Evaluation

Refers to the systematic assessment of the appropriateness, effectiveness and efficiency of a policy or program, with the aim of providing accountability and providing feedback with information about what worked and what didn't.

Relationship to SoE Reporting

The NRM Framework represents the tool that the EPA will utilize when auditing the environmental performance of the NRM sectors (1998 SoE Report; Governments Response to Salinity Taskforce Report, 2002). This has already been done for the Wood Production (Forest Management Plan) and the Fisheries sectors. Specifically, it will be used to assess whether natural resources are being managed in a sustainable manner. A preliminary assessment of the sustainability of natural resource sectors has been presented in the Draft State of the Environment Report, 2006.

It is also intended that environmental values for natural resource assets will eventually be used to report overall resource condition. Values have already been developed in close consultation with the community for Cockburn Sound and are also in progress for the North West Shelf, and the Swan Canning and Peel Harvey estuarine systems. The determination of environmental values for natural resources is still in its infancy in WA, however this concept will be further progressed in coming years.

3.3 Implementation Framework for the SWQMS

Source

Government of Western Australia (2003) “*State Water Quality Management Strategy #6: Implementation Framework for Western Australia for the Australian and New Zealand Guidelines for Fresh and Marine Water Quality and Water Quality Monitoring and Reporting (Guidelines Nos. 4&7: National Water Quality Management Strategy)*”.

Internet ref:

http://portal.water.wa.gov.au/portal/page/portal/dow/ADMIN_CONTENT/Water_quality/SWQ%206.pdf

Purpose

This document is part of the State Water Quality Management Strategy (SWQMS) series and has been endorsed by Cabinet and the EPA. It has been developed specifically to help implement the National Water Quality Management Strategy in Western Australia. The framework provides a systematic, coordinated, and goals-based approach to managing water quality problems and addressing sustainable water use.

Intended Audience

All organizations associated with management of water resources; but primarily the government agencies tasked with day-to-day management of water resources.

Application

Statewide – all aspects associated with management of water resources.

Model

The SWQMS Implementation Framework is based on the National Water Quality Management Strategy. The NWQMS does not explicitly mention the use of any established model in developing the strategy. It does, however, establish the foundations of an EMS-like systematic approach within the framework by establishing environmental values, management goals and water quality objectives, decision criteria, monitoring and management responses.

WA’s Implementation Framework helps to further clarify an EMS approach for implementing the Strategy:

- Environmental Values
- Environmental Quality Objectives
- Environmental Quality Criteria
- Implementation Strategy
- Monitoring Performance
- Reporting
- Evaluation
- Review & Recommendations

Terminology

- Environmental Value

Refers to a particular value or use of the environment that is important for a healthy ecosystem or for public use, welfare, safety or health which requires protection from the effects of pollution, waste discharges and deposits (ANZECC and ARMCANZ, 2000).

- Environmental Quality Objective

Refers to a specific management goal for a part of the environment. The goals can be based on ecology (describing the desired level of ecosystem health) or socially based (describing the environmental quality required to maintain human uses).

- Environmental Quality Criteria

Refers to the numerical value or narrative statements that serve as levels to determine whether a more detailed assessment of environmental quality is required (termed environmental quality guidelines) or whether a management response is required (environmental quality standards).

- Environmental Quality Guideline

Refers to a numerical value or narrative statement which, if met, indicates there is a strong likelihood that the Environmental Quality Objective has been achieved.

- Environmental Quality Standard

Refers to a numerical value or narrative statement which, if exceeded, indicates that there is an unacceptable risk that the Environmental Quality Objective has not been achieved and a management response is required.

- Environmental Targets

Refers to numerical value or narrative statements that serve as time-bound management milestones.

Relationship to SoE Reporting

The Implementation Framework for the SWQMS represents the tool that the EPA will utilize when auditing the environmental performance of the water sector. It will be used to assess whether aquatic ecosystems and potable water supplies are being managed in a sustainable manner. The results of this audit are presented in the Draft SoE Report, 2006. It should be noted that this framework parallels that of the EPA's NRM Framework; however, it is focused specifically on the management of water resources.

It is also intended that environmental values for water resource assets will eventually be used to report the overall condition of inland and marine waters. As the determination of environmental values is still in its infancy in WA, this concept will be further developed in the coming years.

In addition, objectives and targets developed under this framework may be useful in contributing towards objectives and 'suggested responses' in future SoE Reports.

3.4 Prioritisation Frameworks

Source

Water and Rivers Commission (2002) “*Statewide Waterways Needs Assessment: Prioritising Action for Waterways Management in Western Australia*”, WRM31, June 2002.

Internet ref:

http://portal.water.wa.gov.au/portal/page/portal/DOE_ADMIN/TECH_REPORTS_REPOSITORY/TAB1019581/WRM31.pdf

Department of Environment (2003) “*Salinity Investment Framework: Interim Report – Phase I*”, SLUI 32, October 2003.

Internet ref:

http://portal.water.wa.gov.au/portal/page/portal/dow/ADMIN_CONTENT/salinity/SALINITY_Technical_reports/SLUI32.pdf

Department of Agriculture, Department of Conservation and Land Management, Department of Environment, Department of Fisheries (2003) “*Preliminary Agency Statement of Natural Resource Management Priorities in Western Australia*”, November 2003.

Internet ref:

http://portal.water.wa.gov.au/portal/page/portal/DOE_ADMIN/TECH_REPORTS_REPOSITORY/TAB1019688/NRM_ASSESTS_0310.pdf

Purpose

The Statewide Waterways Needs Assessment is a prioritization framework developed by the Water and Rivers Commission to ascertain which waterways should receive priority management attention. It was intended to clarify waterways management responsibilities and to identify priority assets within regions and across the State for better management and investment decision making.

The Salinity Investment Framework (SIF) is a prioritization framework commissioned by the State Salinity Council and developed by Department of Environment. It was created to guide investment for the management of salinity across the South-West Agricultural Zone.

The framework used in the “*preliminary agency statement of NRM priorities in WA*” is an adaptation of the Salinity Investment Framework. This prioritization framework intends to guide investment, focus government agency attention, and provide guidance to NRM regional groups in developing their regional strategic plans.

All three prioritization frameworks represent a shift in government thinking from management program approaches (where money is thinly spread across many assets) to an asset focused approach (where money is directed to specific assets on a priority basis).

Intended Audience

State Government NRM agencies and regional NRM groups specifically.

Application

Waterways: Statewide – aspects relating to management and prioritization of inland waterways (not other wetlands);

SIF: South-West Agricultural Zone – aspects relating to management prioritization of the impacts / threats of salinity;

NRM Priorities: Statewide – aspects relating to management prioritization of inland water resources, agricultural lands, biodiversity, and fisheries.

Model

All three of the above prioritization frameworks are loosely based on the OECD's Pressure-Condition-Response model that is commonly used for SoE reporting.

The waterways prioritization framework is the most similar to the OECD model focusing on condition, pressures, response components. However, environmental, social and economic values were also integrated after being recognized as a key component of the decision making process.

- Pressure
- State
- Response
- Value

The SIF has adopted a similar model to that used above, instead focusing on asset values (environmental, social and economic) and threats (primarily the effects of salinisation). Feasibility has also been integrated as a measure of community / government capacity to ensure a positive outcome is realized. The SIF also recognized that specific goals or visions for each asset are needed to help shape the prioritization process.

- Goals
- Value
- Threat
- Feasibility

The NRM prioritization framework used the same approach as for the SIF; however, the threats were examined in a much broader context – not just salinisation. The prioritization framework was applied to water resource assets, fisheries, agricultural assets and biodiversity assets.

- Value
- Threat
- Feasibility

Terminology

- Objectives / goals

Refers to existing goals / objectives within State strategies or policies for management of natural resources.

- Asset (a.k.a. natural resource)

Refers to a specific natural resource or part of the environment.

- Values

Refers to the important attributes of an asset that are associated with the environment, society or the economy. It was generally recognized that an asset's value could change depending on scale (ie. perceived importance at the local community, regional or State scales).

- Threats

Refers to potential impacts or pressures on natural resources.

- Feasibility

Refers to the capacity of government or community to realize a positive outcome. It could consider things related to the management solution such as cost, urgency, technical feasibility, realistic goals, combined threats, and current community capability.

Relationship to SoE Reporting

All of the above-mentioned frameworks rely on the determination of values and threats for WA's natural resources. In most cases, values were ascertained using government agencies perception with stakeholder consultation. In some instances, community consultation has been used, but most often expert assessment was used. For prioritisation purposes, values were simplified into low, moderate and high classes. Some of this existing (unsimplified) information may provide an initial foundation for establishing EPA endorsed 'environmental values' under the NRM Framework and SWQMS policy approaches.

Threats for prioritisation methods were largely ascertained from existing government information and were simplified in a similar way to values. Similar information is reported in the SoE Report as 'issues'.

The prioritisation of the State's NRM assets may be useful for SoE reporting purposes when looking at current responses and sustainable management approaches. The SoE Report should provide information as to whether current high priority assets have benefited from an improvement in either condition or pressure (or both). The results of these prioritisation frameworks and targeted management attention can then be duly reported on and their effectiveness determined.

3.5 Implementing the National Action Plan for Salinity & Water Quality / National Heritage Trust

Source

Department of Environment and Heritage & Department of Agriculture, Fisheries and Forestry (2002). *“Using the National Standards and Targets Framework and the National Monitoring and Evaluation Framework”*, Natural Resource Management Ministerial Council, October 2002.

Internet ref: <http://www.nrm.gov.au/monitoring/reporting/>

Purpose

The National Action Plan for Salinity and Water Quality (NAP) and the National Heritage Trust (NHT) programs aim to ensure that environmental (on-ground) improvements occur via a targeted strategic approach at the regional level. To do this, Regional NRM Groups have been asked to prepare strategic regional plans that outline targets at various timeframes, the actions required to meet the targets, and to identify the investment required to deliver positive on-ground environmental outcomes. The program has been backed by Bilateral Agreements between the Commonwealth and State through the Natural Resource Ministerial Council.

Intended Audience

State Government NRM agencies and regional NRM groups specifically.

Application

NRM Regions – aspects of NRM specifically relating to the objectives of the NAP / NHT programs.

Model

The NAP and NHT programs have developed their own model for implementation, rather than using the existing national or international models. This has caused considerable confusion for those implementing related programs and policies. The general NAP / NHT program logic is based on foundation, action, change and achievement components spread over a 50 years plus timeframe. The general approach does take on some EMS-like characteristics although the sequential, systematic approach is not obvious.

A Standards and Targets Framework has established national outcome-statements for NRM. ‘Matters for targets’ have been selected to focus NRM planning and investment and to deliver specific outcomes. The framework hinges around three different types of targets: aspirational (long term vision / goals), resource condition (medium term targets for desired environmental condition) and management action (short term targets relating to outcomes).

A Monitoring and Evaluation Framework has also been established to measure progress against the targets. Indicators are selected for resource condition, management actions, and socio-economic areas. In addition, reporting and evaluation components are established to assess progress towards the targets.

A rough approximation of the NAP/NHT model would be:

- Aspirational Targets
- Resource Condition Targets
- Management Action Targets
- Monitoring & Evaluation
- Implementation
- Reporting

Terminology

- Aspirational Target (a.k.a. vision)

Represents vision or long term goals for the environment with a >50 year timeframe.

- Resource Condition Target (a mix between objectives and targets)

Represents medium term 10-20 year targets for desired environmental condition.

- Management Action Target

Represents short term 1-5 year targets relating to deliverance of on-ground actions or capacity building.

- Matters for Targets (a.k.a. issues, problems)

Refers to issue or problem areas that help to focus NRM attention, planning and investment for the NHT & NAP programs. (eg. land salinity, nutrients in aquatic environments, development of water allocation plans).

- Evaluation

Refers to assessing performance towards improved natural resource condition and improved program performance via appropriateness, effectiveness and efficiency components.

- Indicators

Refers to something that measures changes to resource condition (relating to ‘matters for targets’), management actions or socio-economic factors.

Relationship to SoE Reporting

Although the NAP / NHT program approach and terminology differ significantly with the SoE reporting process, there are considerable synergies between them. Aspirational targets and resource condition targets are related to setting vision and goals for specific parts of the environment. In this context, regional visions and goals could link to theme vision / objectives in the SoE Report.

Many of the ‘matters for targets’ are similar to environmental issues previously addressed in WA SoE reports. This means that indicators being used for the NAP / NHT programs should be the same as those being used by government agencies (and therefore aligned with those in the SoE Report).

Setting resource condition and management action targets require an understanding of baseline environmental condition, benchmarks and standards. Assessing progress towards the above mentioned targets will require considerable investment in monitoring programs to assess environmental condition. The data and information obtained from this monitoring will prove extremely valuable for SoE reporting purposes.

In addition, any information that NRM regional groups develop in consultation with the community (especially with regard to setting environmental values for specific natural resources) will prove extremely valuable for linking to the NRM Framework, SWQMS and future SoE reporting.

4.0 Discussion

Environmental management is an important part of looking after our natural resources. Natural resource management is one type of environmental management and has been readily embraced in Western Australia. As with any type of management activity, coordination and consistency is necessary to ensure effective and efficient environmental outcomes are realized across a broad scale. However, many environmental and natural resource management programs and policies in Western Australia are not aligned and some are inconsistent. This may be apparent for several reasons.

Firstly, the State lacks a single piece of legislation or a whole-of-State policy to ensure a formal coordinated approach on environmental management and natural resource management. In many regards, it would be very difficult to make this a practical reality. The State is currently supported by environmental legislation including the *Environmental Protection Act 1986* and the *Conservation and Land Management Act 1984*; however, neither is equipped to deal with day-to-day management operations outside of public managed lands (ie. the conservation estate).

Many other pieces of legislation exist in relation to natural resource management of water supplies, fish stocks, forestry, mining activities, land use planning and agriculture. Many have been developed over a long timeframe with various management styles and philosophies being applied. Some relevant legislation has been recently redrafted or updated to incorporate the desirable principles of sustainable management (eg. *Fish Resources Management Act 1994*, *Forest Products Act 2000*, *Planning and Development Act 2005*).

The second reason is there is no dedicated agency responsible for coordinating all management activities relating to natural resource management. The Environmental Protection Authority, a statutory advisory body, has an overriding responsibility to ensure the environment remains protected for the long term. However, this is largely limited to providing advice to State Government on environmental matters – not managing activities. The NRM Council, a non-statutory advisory body, also provides advice to government in relation to natural resource management activities associated with the National Action Plan for Salinity and Water Quality and the National Heritage Trust programs specifically.

There are many State Government agencies, regional and community groups involved in natural resource management. Although there is a significant amount of cooperation between these agencies, there are still various programs and policies that are inconsistent. This problem extends beyond the use of various terminology and governance hierarchy highlighted in this document.

In September 2006, a review was released on the status of NRM in Western Australia (the Hick's Review). It recognized that under the current complex legislative and operating environment, it was not appropriate to introduce new NRM legislation. It did however; recommend the development of a whole-of-government NRM policy and strategic plan. This is the first step towards ensuring a consistent and coordinated approach to NRM.

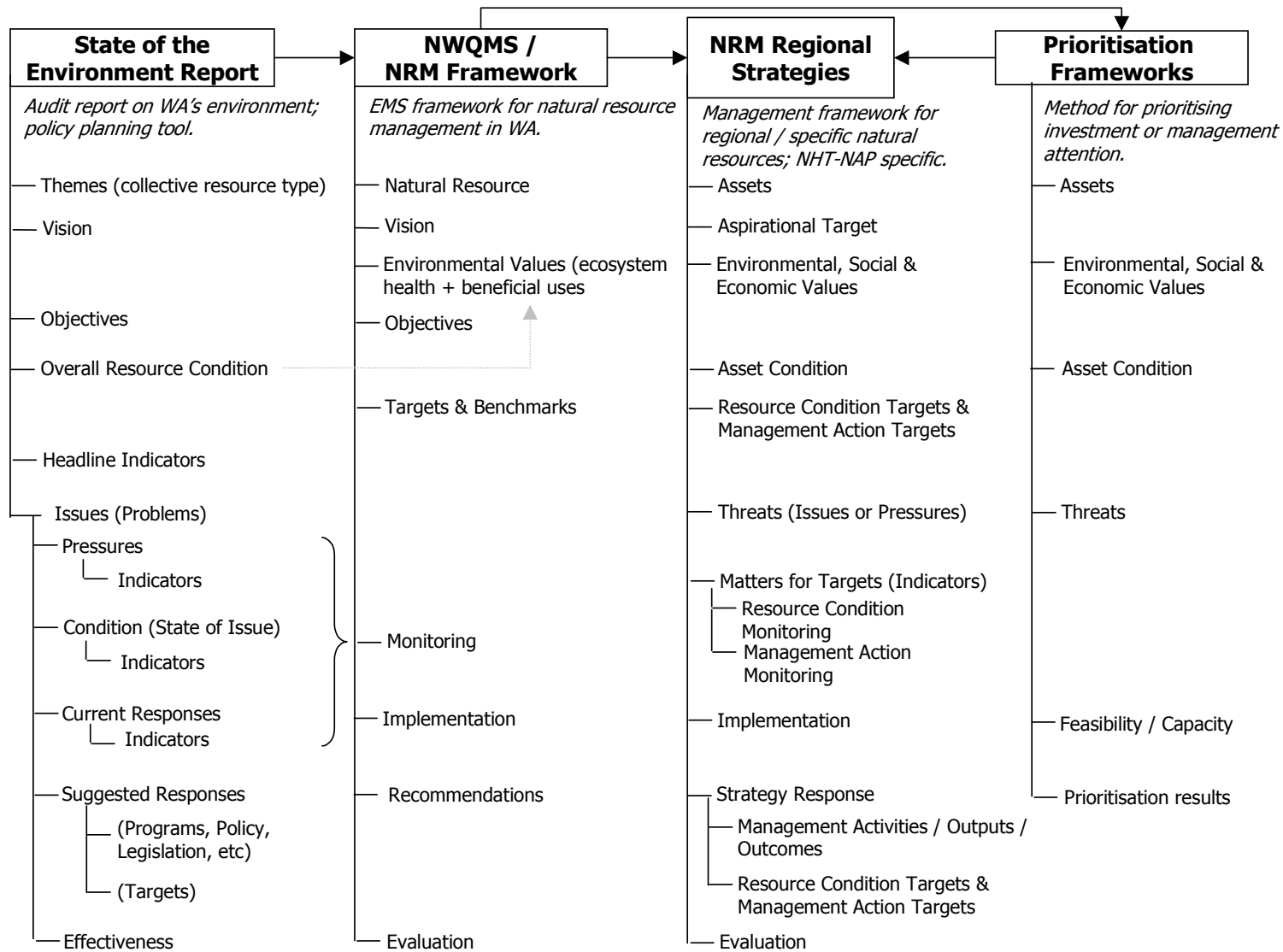
The EPA had already identified these shortcomings and made similar recommendations in its *Position Statement #8: Natural Resource Management* released in 2005. The EPA would be keen, as an independent environmental statutory authority, to undertake the development of the natural resource management policy for the State. The policy would be relevant, but not limited to, the current style of NRM delivery (i.e. NAP / NHT).

The policy would hinge on the concept of determining community endorsed environmental values. The benefit of determining specific environmental values for specific natural resource assets is that they can be protected under the *Environmental Protection Act 1986*. It also establishes a common reference point for developing objectives, targets, programs and projects. Industry, government and community can work in a coordinated, consistent and efficient manner towards protecting an agreed suite of environmental values, with common objectives, targets and management activities. This NRM Framework concept has been used to determine environmental values for Cockburn Sound which is now protected under a State Environmental Policy (SEP). Some NRM regional groups have also been applying the concept (in a broad sense) in developing their regional plans.

Currently, environmental values are being determined for the Peel Harvey estuary, Swan Canning estuary, and marine waters of the Northwest Shelf. The process of consultation is a lengthy one involving all stakeholders and community in the vicinity of the environmental asset. However, once completed, endorsement of a suite of environmental values ensures a consistent, coordinated and efficient approach to protecting and managing the asset.

Following the development of a State NRM Policy, an implementation plan would need to be developed. Implementation would mean aligning existing activities with the NRM Framework proposed by the EPA. This would not necessarily mean that existing programs and projects would have to be redesigned or altered – but it would mean that existing processes and management activities would need to be aligned with the components of the framework in a logical hierarchy. This would include the determination of environmental values as a starting point and modification of objectives, targets, and management activities if required.

FIGURE 1: COMPARISON OF RELATED TERMS WITHIN GOVERNMENT ENVIRONMENTAL MANAGEMENT FRAMEWORKS*



* it should be noted that although many components of the frameworks show many similarities, each has its own distinct purpose and relationship to the governance hierarchy.

5.0 References

ANZECC and ARMCANZ 2000, *Australian and New Zealand Guidelines for Fresh and Marine Water Quality.*, Australian and New Zealand Environment Conservation Council and Agriculture and Resource Management Council of Australia and New Zealand, Canberra, ACT.

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<http://portal.environment.wa.gov.au/pls/portal/url/item/1508DAB1AC0B1F64E04010AC6E053610>

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http://portal.water.wa.gov.au/portal/page/portal/DOE_ADMIN/TECH_REPORTS_REPOSITORY/TAB1019581/WRM31.pdf