



# Orange-Senqu River Basin

Orange-Senqu River Commission Secretariat  
Governments of Botswana, Lesotho, Namibia and South Africa

UNDP-GEF  
Orange-Senqu Strategic Action Programme  
(Atlas Project ID 71598)

## **Transboundary Environmental Assessment in the Orange-Senqu River Basin**

**Recommendations of the ORASECOM Council**

Technical Report 14  
Rev 9, 13 June 2013



UNDP-GEF  
Orange-Senqu Strategic Action Programme

## Transboundary Environmental Assessment in the Orange-Senqu River Basin

### Recommendations of the ORASECOM Council

This document was developed by a respective ORASECOM Working Group under the guidance of the Commission's Legal Task Team. The process was facilitated by Dr Owen McIntyre (o.mcintyre@ucc.ie), University College Cork, Ireland, Christoph Mor (christophmo@unops.org), UNDP-GEF Orange-Senqu Strategic Action Programme, South Africa and Dr Peter Tarr (peter.tarr@saiea.com), Southern African Institute for Environmental Assessment (SAIEA), Namibia. Valuable contributions were received from Daniel Malzbender (dbmalzbender@acwr.co.za), African Centre for Water Research, South Africa.

This document has been issued and amended as follows:

Revision	Description	Date	Signed
0	Initial draft for review by the ORASECOM Working Group	11 Oct 2011	PT, mor
1	Consolidated first draft for review by the ORASECOM Working Group	9 Nov 2011	PT, mor
2	Second draft including recommendations of the ORASECOM Working Group	18 Nov 2011	PT, mor
3	Third draft including further comments and general editing	10 Feb 2012	mor
4	Fourth draft, including comments of the legal review team and the ORASECOM Working Group	21 Mar 2012	PT, OMCI, mor
5	Fifth draft, for further inputs from PT, OMCI and mor	24 Aug 2012	mor
6	Sixth draft, with editing and comments from PT, OMCI and mor	5 Nov 2012	PT, OMCI, mor
7	Seventh draft, for further inputs from PT and OMCI	9 Apr 2013	mor
8	Eighth draft, with editing from PT, OMCI and mor	12 May 2013	PT, OMCI, mor
9	Ninth draft, with minor editing from mor	13 Jun 2013	mor

Project executed by:



# Contents

<b>Foreword</b>	<b>1</b>
<b>Executive summary</b>	<b>2</b>
<b>Acknowledgements</b>	<b>3</b>
<b>Abbreviations</b>	<b>4</b>
<b>Definitions</b>	<b>5</b>
<b>1. Background</b>	<b>8</b>
1.1 <i>The Orange-Senqu River basin</i>	8
1.2 <i>Notification and transboundary EA in the international legal context</i>	9
1.3 <i>Notification and environmental assessment in the context of ORASECOM</i>	15
<b>2. Notification</b>	<b>18</b>
2.1 <i>Stages of notification</i>	18
2.2 <i>Procedure for notification</i>	18
<b>3. Environmental assessment</b>	<b>21</b>
3.1 <i>Environmental assessment and management tools</i>	21
3.2 <i>Principles for environmental assessment and management</i>	23
3.3 <i>Minimum requirements for transboundary SEA and EIA</i>	27
<b>4. Recommendations for notification</b>	<b>28</b>
4.1 <i>Roles and responsibilities for notification</i>	28
4.2 <i>Consultation and negotiation</i>	30
<b>5. Recommendations for transboundary communication in environmental assessment</b>	<b>33</b>
5.1 <i>Recommendations for the mandated agency in the State of Origin</i>	33
5.2 <i>Recommendations for the other riparian States</i>	36
5.3 <i>Implications for the Proponent</i>	37
<b>Bibliography</b>	<b>40</b>

<b>Appendix A: List of policies, plans, programmes or projects likely to have transboundary impacts in the context of the ORASECOM Agreement</b>	<b>42</b>
<b>Appendix B: Template for letter of notification</b>	<b>44</b>
<b>Appendix C: Template for response letter (from other riparian State to State of Origin)</b>	<b>47</b>
<b>Appendix D: Indicative check list for evaluating a Scoping Report</b>	<b>49</b>
<b>Appendix E: Indicative check list for evaluating a SEA report</b>	<b>63</b>
<b>Appendix F: Indicative check list for evaluating an EIA report</b>	<b>68</b>
<b>Appendix G: Guidance for conducting an audit</b>	<b>79</b>

# Foreword

Foreword of ORASECOM Council Chair, Heads of Delegations and/or ORASECOM Executive Secretary - To be finalised.

In their meeting in 2005 the Ministers responsible for water in the riparian States of the Orange-Senqu River basin have recognised the need for formal guidance for communication and collaboration on transboundary environmental assessment in the context of the ORASECOM Agreement. Such guidance would, among with other provisions, enable active stakeholder participation in planning, development and conservation of water resources at the basin scale.

These recommendations are intended to:

- Highlight issues of concern in the basin, especially how transboundary impacts on the river system and associated habitats could foreclose future livelihood and development opportunities.
- Provide guidance on how transboundary impacts should be assessed, using SEA and EIA tools.
- Advise on how to conduct transboundary consultation in the context of the notification requirements.

These recommendations have been developed in the specific context of ORASECOM and are thus geared towards the Orange-Senqu River basin and the water-related issues of that basin. Details on institutional arrangements are linked to the ORASECOM Agreement and ORASECOM structures. However, they could be expanded to a broader geographic or thematic context at a later stage.

These recommendations have been considered and adopted by the ORASECOM Council in its regular meeting on xxx. We wish to thank the members of a respective ORASECOM Working Group together with the Global Environment Facility funded project under ORASECOM for supporting the drafting of this document.

## Executive summary

### *The Orange-Senqu River basin*

With a catchment area of approximately a million square kilometres, the Orange–Senqu River basin is one of the largest in Africa, encompassing the whole of Lesotho and areas of Botswana, Namibia and South Africa. The many tributaries of this westward-flowing river system include the Vaal River in South Africa and the ephemeral Fish River in Namibia.

The basin supports more than 14 million people and the river system plays a vital role in sustaining livelihoods and stimulating economic growth. Water is abstracted for urban, industrial and agricultural use and harnessed for hydroelectric power through several water transfer schemes and larger reservoirs. The combined effect of abstraction and evaporation is a reduction in the natural runoff by more than 50%. The frequency, size and duration of floods are also affected. These changes in flow and the effects of land use in the basin adversely affect the quality of the water, the health of the river and the resources and ecosystems it supports, and the services these provide.

Demand for water is predicted to increase with economic growth and development, affirming the need for effective, efficient and sustainable water resources management to maintain these important ecological functions and secure the basin's resources in the long term.

### *Notification and environmental assessment in the context of the Orange-Senqu River basin*

Recent developments in international water law make it quite clear that there exists a binding duty upon States to notify a co-riparian State(s) of any planned measure or project which is likely to adversely affect that State(s) to a significant extent. Good faith cooperation requires that such notification should be accompanied by the necessary technical information to enable the notified State(s) to evaluate the possible effects, and that the notifying State should not normally proceed to implement or permit the implementation of the project, use or measure pending receipt of a reply from the notified State(s) or, if requested, during the course of consultations or negotiations with the notified State(s) arising from the notification. Where a cooperative institutional structure has been established at the basin level, notification will normally be effected by communicating information on the planned measures to the other riparian States via the relevant institution in accordance with agreed procedures [ORASECOM Agreement Article 7.5].

In order to be meaningful, such notification involves the conduct of an environmental assessment of the measure or project, which includes an assessment of any potential transboundary impacts. Cooperation in the carrying out of such an assessment with the State(s) likely to be affected, and the sharing of its results and findings, is now widely regarded as an essential element of meaningful notification.

This document provides recommendations on the roles and responsibilities of parties involved in notifications and transboundary environmental assessments.

## Acknowledgements

This document was developed and refined by members of the respective ORASECOM Working Group. The following persons participated in the process and are sincerely thanked for their input: David Aniku, Lerato Bapela, John Kaluzi, Mmapula Keaikitse, Abi Kgomotso, David Kleyn, Tefo Lobelo, Manthatisi Machepha, Judith Maifala, Bokang Makututsa, Lebohang Maseru, Thlobohano Matela, Elise Mbandeka, Samukeliswe Mkatshwa, Dumisani Mkhembu, Ntaoleng Mochaba, Salagae Modukanele, Thabiso Mohapi, Tracy Molefi, Nthame Monare, Tlhobahano Matela, Othero Mulele, Shishani Munyika, Lechane Motshwarakgole, Laura Namene, Peter van Niekerk, Benjamin Ofosu-Koranteng, Jan Potgieter, Peter Pyke, Kevin Roberts, Portia Segomelo, Matebele Setefane, Thato Setloboko, Freddy Sikabongo, Rod Schwab and Charles Tseole.

When compiling this document the Guidelines for Impact Assessment in the Indian Ocean Region and the Capacity Building for Good Practice in Biodiversity and Impact Assessment were particularly helpful. The ORASECOM Agreement, the Revised SADC Protocol on Shared Watercourses, the Espoo Convention and Kiev Protocol, and various other guidelines on the use of environmental safeguard tools in the context of policies, plans, programmes and projects with transboundary impacts have been consulted. In particular, the Transboundary EIA Guidelines for the Caspian Sea Region, as well as the Mekong River Commission's Guidelines on Implementation of the Procedures for Notification, Prior Consultation and Agreement were useful references.

Lenka Thamae and Rapule Pule of the ORASECOM Secretariat are thanked for their guidance and support throughout the process.

## Abbreviations

<i>AIDS</i>	<i>Acquired Immune Deficiency Syndrome</i>
<i>CBBLA</i>	<i>Capacity Building for Good Practice in Biodiversity and Impact Assessment</i>
<i>CBD</i>	<i>Convention on Biological Diversity</i>
<i>EA</i>	<i>Environmental Assessment</i>
<i>EIA</i>	<i>Environmental Impact Assessment</i>
<i>EMP</i>	<i>Environmental Management Plan</i>
<i>GEF</i>	<i>Global Environment Facility</i>
<i>HIV</i>	<i>Human Immunodeficiency Virus</i>
<i>IALA</i>	<i>International Association for Impact Assessment</i>
<i>I&amp;APs</i>	<i>Interested and Affected Parties</i>
<i>ICJ</i>	<i>International Court of Justice</i>
<i>IUCN</i>	<i>The World Conservation Union</i>
<i>ORASECOM</i>	<i>Orange-Senqu River Commission</i>
<i>PCDP</i>	<i>Public Consultation and Disclosure Plan</i>
<i>SADC</i>	<i>Southern African Development Community</i>
<i>SAIEA</i>	<i>Southern African Institute for Environmental Assessment</i>
<i>SEA</i>	<i>Strategic Environmental Assessment</i>
<i>SHE</i>	<i>Safety, Health and Environment</i>
<i>TOR</i>	<i>Terms of Reference</i>
<i>UNDP</i>	<i>United Nations Development Programme</i>
<i>UNEP</i>	<i>United Nations Environment Programme</i>

## Definitions

*Alternatives:* A possible course of action in place of another that would meet the same purpose and need. An alternative can include other locations/sites, routes, layouts, processes, designs, schedules and/or inputs. The ‘without project’ alternative provides a benchmark against which to evaluate changes; development should result in net benefit to society and should avoid negative impacts.

*Appreciable impact:* impacts that are relatively large in number or amount or extent, and therefore big enough to be estimated or measured.

*Ecosystem approach:* As advocated by the Convention on Biological Diversity (CBD), the ecosystem approach recognises that people and their environment are part of the broader ecosystems on which they depend. Environmental management should therefore be implemented in an integrated way.

*Environment:* Includes all components of the environment, namely humans, flora, fauna, soil, climate, air, water, landscape, natural sites, material assets, cultural heritage and the interaction among these components.

*Environmental assessment (EA):* A process that is used to identify, predict and assess the potential positive and negative impacts of a proposed development on the environment and to propose appropriate management actions that will enable the avoidance or minimisation of impacts.

*Strategic Environmental Assessment (SEA):* The application of impact assessment to policies, plans, and programmes. Impact assessments at strategic level encourage an ‘opportunities and constraints’ type approach to development, where such things as natural resources and ecosystem services at landscape scale define the ‘framework’ within which development can take place and the types of development that could be sustained.

*Environmental Impact Assessment (EIA):* The application of impact assessment to a specific project. Typically, an EIA is carried out on a project that is already defined (i.e. in feasibility stage).

*Environmental Quality Objective:* An EQO specifies a target for environmental quality. If EQOs are set by enforceable regulations, they are usually referred to as Environmental Quality Standards.

*Impacts:* Impacts are effects on the environment:

*Direct impacts* are those that take place at the same time and in the same space as the activity.

*Indirect impacts* occur later in time or at a different place from the activity.

*Cumulative impacts* are the combined or additive effects on the environment of individual projects over time or of several projects in one geographical area. They may seem to be insignificant when seen in isolation, but collectively they may have a significant effect.

*Irreversible impact*: An impact that cannot be reversed in time, it results in the irreplaceable loss of a resource.

*Inter-generational equity*: Inter-generational equity implies that the current generation chooses a development path that does not jeopardize the ability of future generations to achieve similar or better development options.

*Monitoring*: Actions taken to observe, take samples or measure specific variables in order to track changes, measure performance of compliance, and/or detect problems. The objective of monitoring should always be to improve management.

*Notification*: Notification is the formal process whereby States officially inform other States when they are planning to carry out activities that may cause significant adverse effects upon other States.

*Offset*: An offset replaces or provides 'like for like or better' substitutes for residual negative impacts on the environment. Such offsets could include formal commitment to managing substitute areas of comparable or greater value for conservation, entering into a secure and permanent conservation agreement with the conservation authority, setting aside protected natural areas, establishing a trust fund for conservation, thereby enabling land acquisition and/or management, etc. Offsets focus on areas of recognised value to conservation and on ensuring the persistence of landscape-scale processes.

*Opportunity cost*: The lost opportunities that might result from the implementation of a certain alternative. For example, a mine in a national park will likely reduce the tourism potential of the area. Therefore, there are opportunity costs to the building of the mine, namely the reduction of actual and potential touristic activity.

*Party*: Means, unless the text indicates otherwise, a Contracting Party to a Convention, Agreement or Protocol.

*Party of origin*: Is a Party within whose territory and/or under whose jurisdiction a policy, plan, programme or project, is to be developed and implemented

*Affected party*: Is a Party whose environment or other related interest is likely to be affected by a policy, plan, programme or project, envisaged and/or developed in a neighbouring country.

*Precautionary principle:* Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

*Public:* Means one or more natural or legal persons and, in accordance with national legislation or practice, their associations, organizations or groups.

*Risk:* Likelihood of occurrence of an event and estimated magnitude/severity of its impact on the environment.

*Scenario:* A description of a plausible future condition that could influence the environment.

*Scoping:* Determination of the spatial and temporal boundaries and key issues to be addressed in an environmental assessment. Its main purpose is to focus an EA on a manageable number of important questions, and to ensure that only key issues and reasonable alternatives are examined.

*Screening:* A decision-making process to determine whether or not a development proposal requires environmental assessment, and if so, what level of assessment is appropriate. Screening is usually conducted by an environmental authority or financing institution.

*Significance:* Determination of severity of an impact taking into account objective or scientific data as well as societal values.

*Trigger:* A particular characteristic of either the receiving environment or the proposed project, which indicates that there is likely to be an issue and/or potentially significant impact, associated with that proposed development that may require specialist input.

*Uncertainty:* The inherent unpredictability of response of the environment to an impact, the lack of knowledge and/or understanding of cause-effect-impact relationships between the development activity and the environment, and/or gaps in information that do not allow confidence in predictions of impacts.

*Vulnerable communities:* Those communities who rely heavily on those ecosystem goods and/or services likely to be affected or who live in dynamic, sensitive or harsh ecosystems, or under difficult social and economical conditions (, e.g. indigenous peoples, internally displaced communities), which make them particularly vulnerable to additional negative impacts.

*Watercourse:* Surface- and groundwater body, flowing into a common terminus such as the sea, a lake or an aquifer.

# 1. Background

## 1.1 The Orange-Senqu River basin

The Orange-Senqu River basin is one of the largest river basins in southern Africa. It covers large areas of Botswana, Namibia and South Africa and all of Lesotho. The basin supports more than 14 million people – most concentrated in the north-eastern area and economic hub of the basin. The river system plays a vital role in sustaining livelihoods and stimulating economic growth. The skewed distribution and demand for water, in particular the agricultural demand in drier parts of the basin has resulted in the development of infrastructure for storage and transmission of significant amounts of surface water. This has significantly reduced natural flow, to the extent that the current surface flow reaching the river mouth is approximately half of the natural flow, and has altered the patterns of flow. These changes in flow affect the aquatic ecosystems, especially in the lower reaches, and to some degree the near-shore environment of the Benguela Current large marine ecosystem of the Atlantic Ocean.

In the lower parts of the basin, many areas are dependent on groundwater, an important but inadequately understood resource.

Water quality in the basin has deteriorated due to nutrient enrichment primarily linked to increased phosphorous and nitrogen concentrations, increased salinity from acid-mine drainage and irrigation return flows, microbial contamination from inadequate treatment of sewage, and elevated sediment concentrations in runoff from degraded lands.

Changes in land cover and land use have also contributed to the modification of the river system. Land degradation and subsequent erosion greatly affects surface water quality, as well as storage capacity of reservoirs and wetlands, through increased sediment loads.

Climate change, as an evolving scientific phenomenon, presents a broad envelope of possible changes in the basin. While temperature is expected to increase throughout the basin, rainfall and runoff could well be different for different areas.

Future management of this regionally significant river basin, therefore, has to balance these competing water uses, and deal with increasing rates of human-induced change and mounting concerns about the causes and consequences of this change.

## 1.2 Notification and transboundary EA in the international legal context

### *The position in international law*

Recent developments in international water law make it quite clear that there exists a binding duty upon States to notify a co-riparian State(s) of any planned measure or project that is likely to adversely affect that State(s) to a significant extent. Quite apart from any specific bilateral, basin-level or regional conventional requirements, this obligation arises under the rules of customary international law, and so is generally binding upon all States. It derives from the key fundamental principles of international water law, *i.e.* the obligation of States to prevent significant transboundary harm to other basin States or to the ecosystem of the basin itself, as well as the obligation of States to utilise a basin in an equitable and reasonable manner, and requires that such notification must be timely and meaningful, and must not be false, incomplete or otherwise misleading. Though the general obligation of a proposing State to notify of planned measures or projects, and to enter into good faith negotiations with potentially affected States with a view to reconciling any differences arising from such notification, has been recognised by international tribunals since 1957 [*Lac Lanoux Arbitration (U.S. v. Canada)*(1957)], it has more recently been established that, in order to be meaningful, such notification must involve the conduct of an environmental assessment of the measure or project, which includes an assessment of any potential transboundary impacts. Cooperation in the carrying out of such an assessment with the State(s) likely to be affected, and the sharing of its results and findings, is now widely regarded as an essential element of meaningful notification. In the 2010 *Pulp Mills Case (Argentina v. Uruguay)* (2010), the International Court of Justice (ICJ) placed very considerable emphasis on the obligation to notify, both as a legally significant obligation in its own right and in terms of its role in giving practical effect to the key substantive rules of international water law. Not alone did the Court stress the importance of timely prior notification of a planned project, it also highlighted the pivotal role of the closely related requirement of transboundary environmental impact assessment, which it also recognised as a generally applicable obligation of States under customary international law.

In addition, it can be persuasively argued that the single greatest contribution made to the development of a coherent body of global rules in the area of international water law by the 1997 United Nations Watercourses Convention has been its detailed elaboration of a comprehensive set of procedural requirements. Part III of the Convention on ‘Planned Measures’, covers such issues as notification of planned measures, reply to such notification, the notifying State’s interim duty of non-implementation, the conduct of consultations and negotiations arising from notification, and the situation regarding notification in respect of urgent measures. Indeed, by explicitly linking the requirement for States to enter into consultations and, if necessary, negotiations with alleged breach of the key substantive principles of international water law [Article 17(1)], the structure of the United Nations Watercourses Convention supports both of the ICJ’s findings in *Pulp Mills*, *i.e.* that procedural rules are necessary for effective implementation of substantive principles, and that the procedural requirements of international water law *per se*, including the obligations of notifying, consulting and negotiating, ‘constitute an integrated and indivisible whole’. While the UN

Convention does not go so far as to include an explicitly binding requirement for a notifying State to carry out a transboundary EA, it does recognise the key role of EIA processes, providing that '[s]uch notification shall be accompanied by available technical data, *including the results of any environmental impact assessment*, in order to enable the notified States to evaluate the possible effects of the planned measures' [Article 12]. Though the Convention has not yet entered into force, as the product of over 20 years of intensive deliberation by the International Law Commission before its further consideration and adoption by the United Nations General Assembly, it must be considered highly persuasive in identifying and interpreting the relevant and applicable rules of general and customary international law. In fact, shortly after its adoption by the UN General Assembly, the Convention was cited by the ICJ as an authoritative statement of the position in general international law [*Gabčíkovo-Nagymaros Case (Hungary/Slovakia)*(1997)]. Though only Namibia and South Africa among the riparian States of the Orange-Senqu River basin have to date ratified the UN Convention, it has provided the inspiration behind the 2000 SADC Revised Protocol on Shared Watercourses, which entered into force for all SADC member States on 22 September 2003. Therefore, the UN Convention, which is expressly referred to in the Preamble of the Revised SADC Protocol, may guide the interpretation of the Protocol and of specific river basin agreements concluded among the SADC member States. Of course, the Preamble to the 2000 ORASECOM Agreement similarly refers to the UN Convention. Article 3 of the UN Convention provides that the Convention does not affect the rights or obligations of watercourse States arising from agreements in force. Therefore, if and when the UN Convention enters into force, the provisions of the Protocol and applicable bilateral agreements will continue to take precedence over the provisions of the UN Convention.

In addition to such water-related multilateral agreements, the riparian States of the Orange-Senqu River basin are Parties to a number of other relevant international environmental agreements, including:

- Convention on Wetlands of International Importance Especially as Waterfowl Habitat (Ramsar Convention).
- Convention on Biological Diversity.
- UN Framework Convention on Climate Change and Kyoto Protocol.
- UN Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, particularly in Africa.

#### *Revised SADC Protocol on Shared Watercourses*

All the riparian States of the Orange-Senqu River basin are member States of the Southern African Development Community (SADC), for which the 2000 Revised SADC Protocol on Shared Watercourses provides the regional legal framework for the management of shared watercourses. The Protocol very largely corresponds with the provisions of the 1997 UN Watercourses Convention

and contains the fundamental principles of international water law, *i.e.* ‘equitable and reasonable utilisation’ [Article 3(7)], the ‘obligation to prevent significant harm’ [Article 3(10)(a)] and ‘notification of planned measures’ [Article 4(1)(b)]. Similarly, a ‘watercourse’ is defined as ‘a system of surface and ground waters consisting by virtue of their physical relationship a unitary whole normally flowing into a common terminus such as the sea, lake, or aquifer’, thus recognising the interrelationship between all parts of the system of surface and underground waters that form an international watercourse. In line with a number of modern international water resources agreements, the Protocol adopts a so-called ‘ecosystems approach’ to environmental protection of shared watercourses [Article 4 (2)(a)], which enhances legal recognition of the physical unity of river basins and recognises the need to protect the integrity and functioning of related ecosystems in order to safeguard vital ecosystems services.

The SADC Protocol is intended to set out generic rules for the management of shared watercourses within the SADC region, but not necessarily to provide detailed rules applying to specific river basins. It stipulates in Article 6(3) that watercourse States may enter into watercourse-specific agreements that apply the provisions of the Protocol to that watercourse or part thereof. Where a basin-specific agreement does not exist, or does not contain provisions regarding aspects covered in the SADC Protocol, the provisions of the Protocol will apply. The Protocol also establishes an institutional framework at the regional level, including the SADC Water Sector Organs, and mandates these as well as Shared Watercourse Institutions with the implementation of the Protocol.

#### *ORASECOM Agreement*

In 2000, the four Orange-Senqu River basin States concluded the Agreement on the Establishment of the Orange-Senqu River Commission (ORASECOM Agreement), the first basin-wide agreement in the SADC Region. The Agreement establishes ORASECOM as an international organisation with legal personality in international law and in the national law of each member state [Article 1(2)]. Article 7 stipulates the substantive obligations of the Parties with respect to the utilisation of the ‘River System’ and is almost identical to the corresponding provisions in the SADC Protocol and the UN Convention. Therefore, the ORASECOM Agreement may be considered an agreement under Article 6(3) of the SADC Protocol, which applies the provisions of the Protocol ‘to the characteristics and uses of a particular shared watercourse’.

Article 1(3) of the ORASECOM Agreement stipulates that the rights and obligations of the Parties deriving from other agreements in force prior to the date of the Agreement’s entry into force remain unaffected. Thus, the rights and obligations provided for in the existing bilateral agreements outlined below remain effective and any change to the existing status quo, established by such bilateral agreements, can only be achieved by the express agreement of the Parties thereto.

The ORASECOM Council is the highest decision-making body and ‘serves as technical advisor to the Parties on matters relating to the development, utilisation and conservation of the water resources in the River System’ and ‘performs such other functions pertaining to the development and

utilisation of water resources as the Parties may agree to assign to the Commission' [Article 4]. Article 5 of the Agreement lists a number of areas where the Commission is specifically requested to take the required measures necessary for advising the Parties. These issues include, the long-term yield determination, equitable and reasonable utilisation of the basin's water and related resources, studies with regard to the development of the resources, stakeholder involvement, data collection and sharing, pollution prevention, measures for emergency situations, information exchange and consultation between Parties, and measures for the prevention and settlement of potential disputes, as well as any other matters determined by the Parties. Explicit inclusion of the above issues under Article 5 provides a clear, if implicit, mandate for the development of these Transboundary EA Recommendations.

Also, establishing definitively that an environmental impact assessment that is broad in scope is required under the Agreement, Article 7.9 specifically explains that 'information in respect of a planned project, programme or activity, which may have an adverse effect upon any other Party, or which may adversely affect the River System', shall include the findings of an environmental impact assessment addressing the effects on the ecosystems of the watercourse as well as the social, cultural, economic and natural environment.'

#### *Bilateral agreements*

A number of bilateral agreements relating to the Orange-Senqu River basin have been concluded between riparian States. Bilateral agreements specifically dealing with cooperation on the development and use of the water resources of the Orange-Senqu River include:

- Two treaties between Botswana and South Africa that respectively deal with border delineation and the establishment of a Joint Permanent Commission for Cooperation (on several matters, including water).
- The Treaty on the Lesotho Highlands Water Project Between the Government of the Republic of South Africa and the Government of the Kingdom of Lesotho (1986) with Protocols I-VI (concluded between 1988 and 1999).
- The Cooperation Agreement between the Government of the Republic of South Africa and the Transitional Government of National Unity of South West Africa/Namibia regarding the Control, Development and Utilisation of the Water of the Orange River, 1987 (Samewerkingsooreenkoms tussen die Regering van die Republiek van Suid-Afrika en die Oorgangsregering van Nasionale eenheid van Suidwes-Afrika/Namibië Betreffende die Beheer, Ontwikkeling en Benutting van die Water van die Oranjerivier, 1987). In English this translates to 'Cooperation between the Government of the Republic of South Africa and the Transitional Government of National Unity of Southwest Africa/Namibia regarding the Control, Development and Utilisation of Water of the Orange River'.

- The Agreement Between the Government of the Republic of South Africa and the Government of the Republic of Namibia on the Establishment of a Permanent Water Commission (1992).
- The Agreement on the Vioolsdrift and Noordoewer Joint Irrigation Scheme Between the Government of the Republic of Namibia and The Government of the Republic of South Africa (1992).

*The position in national law*

All four riparian States have adopted a comprehensive code of national environmental legislation and each recognises the need for undertaking EAs at both the strategic and project level. Their respective legislative provisions follow a broadly similar process of studies, consultation, analysis, report compilation, submission and approval. Likewise, the need for assessing transboundary impacts is recognised in the legislation of all riparian States. However, the legislative measures or accompanying regulations or guidelines for the assessment of transboundary impacts and the consultation of stakeholders in the potentially affected States, require further detailed elaboration.

*International best practice*

Though the ICJ would not be drawn in the *Pulp Mills Case* on the minimum contents required in order for an environmental assessment process to be considered adequate, preferring instead to leave such details to be determined by the applicable national law, it is quite clear from the wealth of existing national, regional and international practice relating to environmental assessment that certain key elements are generally regarded as essential. These include, *inter alia*:

- A scoping stage for identifying the issues to be studied during the course of the environmental assessment process;
- A scheme for ensuring the meaningful participation of members of the public or of stakeholders likely to be affected; and
- Disclosure of the results of the environmental assessment process.

The report produced as a result of the environmental assessment process would normally be expected to include, as a minimum:

- A description of the planned project, use or measure;
- A description of reasonable alternatives, where appropriate;
- A description of the environmental resources likely to be affected, and of the nature and significance of the likely impact;

- A description of appropriate mitigation measures to minimise adverse environmental impact;
- A consideration of cumulative impacts
- An indication of the methodologies and data used and of gaps and uncertainties in the relevant knowledge;
- A description of appropriate monitoring and management programmes and any plans for post-project analysis; and
- A non-technical summary of the environmental assessment report.

Fortunately, there are a number of international legal instruments which, though not directly applicable to the Orange-Senqu basin States, are widely understood to exemplify best practice as regards the environmental assessment of transboundary impacts. For example, the 1991 UNECE (Espoo) Convention on Environmental Impact Assessment in a Transboundary Context obliges Parties to assess the environmental impact of certain activities at an early stage of planning and sets down the general obligation of States to notify and consult each other on all major projects under consideration that are likely to have a significant adverse environmental impact across boundaries. In addition to a significant body of practice that has developed under the Convention, its appendices provide detailed criteria for the assessment of transboundary impacts, including:

- A list of activities for which a transboundary EIA is required (Appendix I);
- The content of the EIA documentation (Appendix II);
- General criteria for the determination of the environmental significance of activities not listed in Appendix I (Appendix III);
- Detailed inquiry procedures (Appendix IV);
- Objectives for post-project analysis (Appendix V);
- Elements for bilateral and multi-lateral cooperation (Appendix VI); and
- Arbitration procedures (Appendix VII).

The Espoo Convention is complimented by the 2003 Kiev Protocol on Strategic Environmental Assessment, which requires Parties to evaluate the environmental consequences of their draft plans, policies and programmes, and so involves an assessment process undertaken much earlier in the decision-making process. The Protocol places particular emphasis in the integration of health concerns into development planning requiring, for example, that health authorities are always consulted in development planning. As a planning tool, Strategic Environmental Assessment (SEA) is often linked to the 1<sup>st</sup> target of Millennium Development Goal 7, *i.e.* to '[i]ntegrate the principles of

sustainable development into country policies and programmes and reverse the loss of environmental resources'. In spite of being open to all United Nations Member States, no African country is yet Party to the Espoo Convention and/or the Kiev Protocol.

### 1.3 Notification and environmental assessment in the context of ORASECOM

#### *Relationship between notification and environmental assessment*

It is important to understand the distinction between the closely related procedural requirements of inter-State notification and environmental assessment.

'Notification' refers to the long established legal obligation of a riparian State which is planning a new development project, use of the shared water resources, or other measure likely to significantly impact a co-riparian State(s), to inform that co-riparian State(s) of its plans before it implements or permits implementation of those plans. Good faith cooperation requires that such notification should be accompanied by the necessary technical information to enable the notified State(s) to evaluate the possible effects, and that the notifying State should not normally proceed to implement or permit the implementation of the project, use or measure pending receipt of a reply from the notified State(s) or, if requested, during the course of consultations or negotiations with the notified State(s) arising from the notification. Notification is recognised as a legal duty *per se*, and also as a key component of the due diligence required of a State in order to ensure compliance with the duty to prevent significant transboundary harm and/or the obligation to utilise an international watercourse in an equitable and reasonable manner. Where a cooperative institutional structure has been established at the basin level, notification will normally be effected by communicating information on the planned measures to the other riparian States via the relevant institution in accordance with agreed procedures [ORASECOM Agreement Article 7.5].

Notification will ideally occur in two stages: a preliminary notification should occur when a policy, plan, programme or (larger) project is being conceptualised, and full technical notification, which involves subsequent transmission of the findings of an environmental assessment.

'Environmental assessment' refers to a technical process comprising, inter alia, the presentation of the technical details of the planned project, use or measure, the preparation and compilation of a study on its environmental (and social) impacts, implementation of a process for engagement with the public or with affected groups and individuals, the identification of measures to avoid or mitigate the anticipated environmental impacts, etc. It encompasses both the process for assessing the possible impacts of an individual project, commonly referred to as 'environmental impact assessment' (EIA), and for assessing the possible impacts of plans, policies and programmes, commonly referred to as 'strategic environmental assessment' (SEA). The environmental assessment process is now commonly accepted as the appropriate means by which to generate and communicate the necessary technical information to ensure that notification is meaningful, i.e. that it is suitable and

adequate to enable the notified State(s) to evaluate the possible effects of the planned project, use or measure.

As the technical basis for effective notification, the results of an environmental assessment will also provide the starting-point for any inter-State consultations and negotiations arising from such notification. It is in recognition of this pivotal role of environmental assessment in effective notification, that the International Court of Justice (ICJ) has now determined that it is a generally applicable requirement of customary international law [*Pulp Mills (2010)*].

<b>Planning/project stage</b>	<b>Notification</b>	<b>Environmental assessment tools</b>
<b>Policy, plan, programme</b>	Preliminary notification Full technical notification	SEA (scoping and full SEA)
<b>Project concept</b>	None	EIA screening
<b>Project feasibility study</b>	Preliminary notification	EIA Scoping and full EIA
<b>Project design</b>	Full technical notification	Environmental management plan
<b>Project construction and commissioning</b>	None	Environmental management system, compliance monitoring
<b>Project operation</b>	None	Compliance monitoring and audits
<b>Project closure, decommissioning and restoration</b>	Preliminary notification	Closure, rehabilitation and restoration plan, compliance monitoring

*Table 1: The relationship between notification and environmental assessment tools at the different planning stages.*

#### *Legal status of Tb EA Recommendations in the context of ORASECOM*

Consistent with customary international law, the conventional practice of States globally, and the broad objectives of the SADC Protocol and UN Watercourses Convention, the ORASECOM Agreement explicitly requires that the information to be provided by a Party ‘on any planned project, programme or activity which may have a significant adverse effect upon the other Parties ... shall include the findings of an environmental impact assessment addressing the effects on the ecosystems of the watercourse as well as the social, cultural, economic and natural environment’ [Articles 7.8 and 7.9]. The Agreement also requires notification of the ORASECOM Council of such project, programme or activity [Article 7.5], which current judicial thinking suggests cannot be meaningfully achieved without a process of environmental assessment. In addition, Articles 7.2 and 7.3 respectively require the Parties to ‘utilise the resources of the River System in and equitable and reasonable manner’ and to ‘take all appropriate measures to prevent the causing of significant harm to any other Party’, key substantive obligations to which an environmental assessment procedure is

functionally linked. It is now clearly understood internationally that effective notification is linked to the satisfactory discharge of the due diligence obligations inherent to the duty to prevent significant transboundary harm. Such notification is also indispensable to the cooperative obligations central to good faith implementation of the overarching substantive principle of international water resources law, that of equitable and reasonable utilisation. Article 5 tasks the Council with making recommendations on a range of matters, including investigations and studies regarding projects and the development of the river system [Article 5.2.3], collecting, processing and disseminating data and information regarding all aspects of the river system [Article 5.2.5], and the regular exchange of information and consultation on the possible effects of planned measures [Article 5.2.8]. Therefore, there can be no question about the mandate of the Council to adopt these Recommendations.

Whilst these Recommendations are not legally binding, they are intended to provide practical guidance regarding the duty of the Parties to notify in respect of a project, programme or activity and the closely related obligation to conduct transboundary EAs. However, notwithstanding their 'soft law' character, non-compliance with the procedures set out in these Recommendations might give rise to a dispute between Parties to the ORASECOM Agreement, and might be cited as evidence of non-compliance with one or more of the States' obligations arising under Article 7 set out above. Such a dispute should be settled under Article 8 of the Agreement.

## 2. Notification

### 2.1 Stages of notification

In order to achieve meaningful cooperative engagement, notification will ideally occur in two stages:

- Preliminary notification;
- Full technical notification.

Preliminary notification should occur when a policy, plan, programme or project is being developed conceptually and permits the potentially affected State(s) and/or the joint technical institution [ORASECOM] to participate in the process of scoping the SEA or EIA and in the formulation of a plan for the effective engagement and participation of stakeholders in the potentially affected State(s). Preliminary notification will only involve the communication of a broad outline of the proposed policy, plan, programme or project, which is sufficient to permit the participation of the potentially affected State(s), and does not require exchange of detailed technical information, much of which will not yet be available. Preliminary notification and the participation of the potentially affected State(s) is important in helping to avoid subsequent disputes about the quality and coverage of the eventual findings of the environmental assessment process.

Full technical notification occurs where the (preliminary) findings of the full SEA or EIA are transmitted to the potentially affected State(s) and/or the joint technical institution, including, *inter alia*, a full technical description of the policy, plan, programme or project, a full evaluation of the likely environmental, social, cultural and economic impacts, proposals for avoiding or mitigating such impacts, all available technical data and information, and a non-technical summary of these findings. The six month period within which any potentially affected State(s) must communicate its reply to the notifying State [ORASECOM Agreement, Article 7] commences from the date of full technical notification.

### 2.2 Procedure for notification

In accordance with Article 7.5 of the ORASECOM Agreement, notification must take place via the ORASECOM Council. Therefore, all communication must be directed through the Head of Delegation of the notifying State, to the Heads of Delegation of the all the other States Parties. In all cases, copies of official communications must be lodged with the ORASECOM Secretariat, which is the official ‘clearing house’ and archive of documentation (Figure 4). Figure 4 also illustrates that each country has its own ‘Mandated Agency’, typically the agency responsible for EA. One expects

that there would be ongoing in-country communication between the Mandated Agency and the Head of Delegation.

At a practical level, it is essential to ensure co-operation and consultation with other government departments and ministries, both within countries and between neighbouring countries for a number of reasons:

- Co-operation as early as possible in the planning process allows for the sharing of objectives, outcomes and criteria for both the impact assessment and associated decision-making. In many instances, different countries or jurisdictions have different laws, policies and priorities; the early rationalisation of these different formal requirements and value systems is important to ensure an optimum outcome (optimum strategies/policies or optimum outcome of sustainable policy making/sustainable development policies) for sustainable development.
- Because environmental issues are cross-cutting, most (policies, plans, programmes or) project applications will involve at least one other line ministry.
- Large-scale infrastructure projects may cross provincial or state boundaries and therefore more than one environmental authority may be involved, depending on the administrative structure of the country.
- Projects that are planned in and around an urban area may be subject to both national and local authorities.

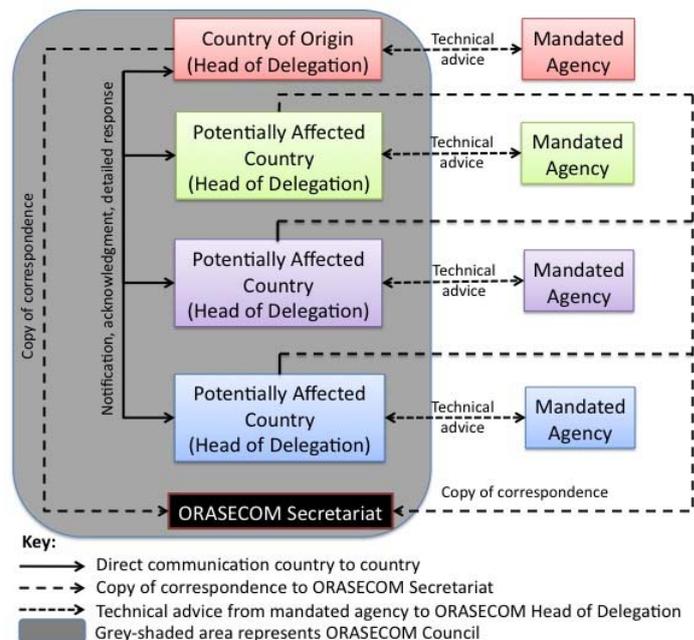


Figure 1: Transboundary consultation process in the context of ORASECOM.

*Procedural content of the notification*

Neither the ORASECOM Agreement, the Revised SADC Protocol nor the UN Convention provides detailed guidance regarding the procedural content of the notification. Therefore, these Recommendations include outline Recommendations for Notification in Chapter 4.

## 3. Environmental assessment

### 3.1 Environmental assessment and management tools

#### *Strategic environmental assessment*

A Strategic Environmental Assessment (SEA) should be carried out for policies, plans and programmes that have the potential to significantly influence the environment. In the event of a major risk of cumulative impacts arising from many different projects, it is appropriate to take a broader view and conduct a SEA. SEAs are therefore conducted much earlier in the decision-making process, than are project-level EIAs. SEA is thus a more proactive tool that assesses impacts at a time when it may still be possible to consider alternatives.

The authorities in the Orange-Senqu basin need to give greater consideration to SEA as a valuable tool for sustainable development.

#### *Environmental impact assessment*

Environmental Impact Assessment (EIA) is the tool used to predict the impacts and benefits of a proposed project on the environment. An EIA is a tool which is used by decision-makers, including the proponent, to determine whether the project should proceed or not and in what form.

To ensure that initiatives meet the objectives of sustainable development, both SEA and EIA are desirable; the broad scope and low level of detail of the SEA being complemented by the narrow scope and relatively high level of detail of the EIA. It is important that the impact assessment of a project is 'nested' within a strategic framework, thus ensuring that it is contextually sound and consistent with broader development objectives.

#### *Public consultation and disclosure plan*

The International Association of Public Participation identifies the following "Core Values for the Practice of Public Participation" (IAPP, 2003):

- The public should have a say in decisions about actions that affect their lives.
- Public participation includes the promise that the public's contribution will influence the decision.
- The public participation process communicates the interests and meets the process needs of all participants.
- The public participation process involves participants defining how they participate.

- The public participation process provides participants with the information they need to participate in a meaningful way.
- The public participation process communicates to participants how their input affected the decision.

The objective of public participation is to develop informed, visible, majority public understanding, acceptance and support for a project. Without good information, citizens and other stakeholders cannot arrive at objective and lasting views on an issue. Their views need to be expressed, or others will claim the support of the silent majority. After an effective participation process, most people should understand the issues and the alternative solutions; while some may disagree with the project, others will accept it, and others will actively support it.

Following the identification of the key stakeholders and the social and natural assets likely to be affected, the EIA Consultants will prepare a Public Participation and Disclosure Plan to constructively engage the stakeholders in the project throughout project planning, implementation, and evaluation.

#### *Environmental management plan*

One of the key outcomes of an EIA is the Environmental Management Plan (EMP), which should provide the construction manager and proponent with a set of practical measures to apply to avoid or minimise the negative impacts and to maximise the possible benefits, both during construction and ongoing operations.

#### *Compliance monitoring and environmental audit*

The main aims of compliance monitoring are to:

- Evaluate the adherence by the proponent to the conditions attached to the authorisation;
- To check compliance with the Environmental Management Plan (EMP) and any other legal requirements referred to in the authorisation;
- To assess the proponent's effectiveness in implementing the conditions of authorisation and the EMP; and
- To recommend how and where improvements could be made to ensure compliance, enhance environmental performance and promote sustainability of the development.

It is good practice to develop an audit outline prior to the audit, asking specific questions regarding compliance which can be answered with a judgment rating, such as "compliant", "partially compliant", "not compliant", "not applicable". The audit can only include conditions contained in the authorisation or it may specifically refer to compliance with an approved EMP. The audit

therefore needs to be direct and exact. A recommended audit outline and table with headings is provided in Appendix G.

### 3.2 Principles for environmental assessment and management

The following principles of international environmental and natural resources law should help to guide the practical application of environmental assessment at either the strategic or project levels:

#### *Precautionary principle*

The precautionary principle, a means of overcoming scientific uncertainty as to the environmental impacts of particular activities, is now widely employed in international instruments which deal with environmental protection. Essentially, it requires that, where there is a risk of serious environmental damage, States must take measures to anticipate and to prevent or minimise such damage, despite a lack of full scientific certainty as to its cause, seriousness or inevitability. Any formulation of the precautionary principle is, therefore, a tool for decision-making in a situation of uncertainty.

Principle 15 of the Rio Declaration provides:

‘In order to protect the environment, the precautionary principle shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.’

The precautionary principle is very closely linked to environmental assessment in two distinct ways. Firstly, environmental assessment procedures are commonly understood to be one of the principal means of giving practical effect to the precautionary principle. In his highly influential Separate Opinion in the 1997 *Gabčíkovo-Nagymaros Case (Hungary/Slovakia) Case*, Judge Weeramantry, widely regarded as the leading environmental law expert then on the ICJ Bench, described environmental impact assessment as ‘a specific application of the larger general principle of caution’. Secondly, the precautionary principle should inform the practical application of environmental assessment techniques. Specifically, a lack of scientific certainty as to the likelihood or the potential seriousness of a particular impact should not be used as grounds for excluding such an impact from the scope of the study required under environmental assessment.

#### *Ecosystems approach*

As the dynamics and functioning of natural ecosystems are extremely complex and, almost by definition, fraught with scientific uncertainty as to their vulnerability and inter-connectedness, the precautionary principle is central to effective environmental protection. Traditionally, international water law, and the environmental protection rules contained therein, have been concerned with protecting different use interests in a particular water resource rather than with the protection of the

ecological systems dependent on the watercourse. However, in recent years many international instruments concerned with international waters have moved beyond the traditional obligations to include 'purely' environmental obligations, including provisions requiring the adoption of a more ecosystems-oriented approach. For example, the 1997 UN Watercourses Convention requires the Parties to act to protect and preserve international watercourse ecosystems and includes related obligations to prevent, reduce and control watercourse pollution, to prevent the introduction of alien species, and the protection and preservation of the marine environment [Articles 20-23]. Also, central to the adoption of an ecosystems approach to the protection of an international watercourse is the maintenance of a regime of 'ecological flows', a concept defined by IUCN as 'the water regime provided within a river, wetland or coastal zone to maintain ecosystems and their benefits where there are competing uses and where flows are regulated'.

In its Partial Award in the *Indus Water Kishenganga Arbitration (Pakistan v. India)*, (18 February 2013), the Permanent Court of Arbitration has recently strongly endorsed the existence of a requirement to ensure ecological flows under generally applicable customary international law. Relying on the principle of sustainable development and the duty to prevent significant transboundary harm, the Court found that 'India's duty to ensure that a minimum flow reaches Pakistan also stems from the [1960 Indus Waters] Treaty's interpretation in the light of customary international law'. In so doing, it declared that '[i]t is established that principles of international environmental law must be taken into account even when ... interpreting treaties concluded before the development of that body of law'.

The ecosystem approach is advocated by the Convention on Biological Diversity (CBD). It recognises that people and biodiversity are part of the broader ecosystems on which they depend, and that they should thus be assessed in an integrated way. Article 7.9 of the ORASECOM Agreement expressly links the conduct of environmental assessment to the protection of riverine ecosystems by specifying that the information to accompany notification of a planned project, programme or activity shall, *inter alia*, 'include the findings of an environmental impact assessment addressing the effects on the ecosystems of the watercourse'.

#### *Inter-State equity*

The principle of equitable and reasonable utilisation, the overarching cardinal principle of international water law, and a key substantive requirement under the ORSAECOM Agreement [Article 7.2], stipulates that each co-basin State is entitled to an equitable and reasonable share of the beneficial uses of the waters flowing through its territory. To permit flexibility, the concept of what might be 'equitable and reasonable' is deliberately vague and can only be determined in each individual case in the light of all relevant factors. Successive codifications of international water law have provided indicative lists of the factors to be considered in this regard, including the UN Watercourses Convention [Article 6(1)], which lists as relevant the following factors:

- Geographic, hydrographic, hydrological, climatic, ecological and other factors of a natural character;
- The social and economic needs of the watercourse States concerned;
- The population dependent on the watercourse in each watercourse State;
- -The effects of the use or uses of the watercourses in one watercourse State on other watercourse States;
- Existing and potential uses of the watercourse;
- Conservation, protection, development and economy of use of the water resources of the watercourse and the costs of measures taken to that effect;
- The availability of alternatives, of comparable value, to a particular planned or existing use.

Therefore, in the interests of ensuring that any planned project, programme or activity is equitable and reasonable in the circumstances, the environmental assessment exercise should be structured so as to address any of the above factors that might arise in the case of that particular project, programme or activity.

#### *Social equity*

In addition to ensuring equity as between riparian States, it is now firmly established in the international discourse on the human right to water that States must ensure that individuals and communities have access to water and water services that are adequate for human dignity, life and health [UN Committee on Economic, Social and Cultural Rights, General Comment No. 15 (2002)]. Such adequacy is to be determined in terms of the availability, quality and accessibility of water. Clear emphasis is placed upon the obligation of States to provide adequate water to ‘individuals and groups who have traditionally faced difficulties in exercising this right’, including women, children, rural and deprived urban areas, indigenous peoples, nomadic and traveller communities, refugees, asylum-seekers, internally displaced persons and returnees, prisoners and detainees, and groups facing difficulties with physical access, such as older persons and persons with disabilities, etc. Therefore, it is important that the environmental assessment exercise to be conducted should address any risks regarding the continuing supply of safe and adequate water to vulnerable individuals and communities which might arise in the case of the particular project, programme or activity in question.

#### *Consideration of alternatives*

Good planning and EA should clearly identify and select those alternatives that offer the greatest overall benefits and avoid undesirable impacts for the good of society, not only in the country envisaging the development but also for people in neighboring countries. Decision making, too,

should strive to achieve this goal. This principle is especially important in the context of transboundary impacts in the Orange-Senqu basin, as countries share many important ecosystems and they have an obligation to their neighbors to avoid negative impacts.

#### *Mitigation strategies*

A hierarchy of possible mitigation strategies exist and the preference is on avoiding or preventing impacts, and/or reducing or minimising them.

<b>Mitigation strategy</b>	<b>Mitigation options</b>	<b>Rating and criteria</b>
<b>Avoidance</b>	Alternative sites and technologies to eliminate impacts	Preferred option; re-design of intervention if significant impacts are to be expected
<b>Minimisation</b>	Actions during design, construction and operation to minimise impacts	Preferred option, better within-project alternatives to be explored
<b>Compensation</b>	Used as last resort to offset impacts	Undesirable, if no alternatives can be found which avoid or at least minimise impacts

*Table 2 Illustration of various levels of mitigation, with avoidance being the first choice (source: adapted from UNEP 2002).*

#### *Polluter pays principle*

In short, the polluter pays principle can be defined as that the financial costs of pollution or environmental damage, or of measures to avoid or mitigate such pollution or damage, should be born by the person responsible for causing such pollution or damage. According to principle 16 of the Rio Declaration, ‘national authorities should endeavour to promote the internalisation of environmental costs ... taking into account the approach that the polluter should, in principle, bear the costs of pollution ...’, while the formulation of the principle adopted in European Union law provides that ‘natural or legal persons ... who are responsible for pollution must pay the costs of such measures as are necessary to eliminate that pollution or to reduce it so as to comply with the standards or equivalent measures laid down ...’. In the specific context of shared water resources, the 1992 UNECE (Helsinki) Transboundary Watercourses Convention provides that the Parties shall be guided by the polluter pays principle, ‘by virtue of which costs of pollution prevention, control and reduction measures shall be borne by the polluter’.

### **3.3 Minimum requirements for transboundary SEA and EIA**

Notwithstanding the minimum requirements for environmental assessment set down under the national laws of the State of Origin, an environmental assessment in a transboundary context must as a minimum address the following aspects:

- An assessment of the potential impacts upon the availability of adequate water resources in other riparian States and the resulting social, environmental, economic and health impacts;
- An assessment of the impacts on ecosystems or habitats protected under the national laws of other riparian States;
- An assessment of the viable alternatives, including the option of not proceeding, and an indication of the main reasons for the policy, plan, programme or project selected, taking into account its environmental, economic, health and social effects; and
- An assessment of the possible cumulative impacts of the policy, plan, programme or project in question in combination with other proposed policies, plans, programmes or projects.

## 4. Recommendations for notification

### 4.1 Roles and responsibilities for notification

#### *Format for notification*

The Notification, either Preliminary Notification or Full Technical Notification, shall include all available and appropriate documents, reports and supporting data.

To facilitate effective notification, the format for the Letter of Notification is provided as Appendix B to these Recommendations.

To facilitate the submission of appropriate and focused responses to notification, the format for the Response Letter from other riparian States to the State of Origin is provided as Appendix B to these Recommendations.

#### *Functions of Council (Leaders) Heads of Delegation*

The Head of Delegation of the Notifying State shall:

- Inform the [Mandated Agencies / relevant line agencies] of the scope, content and format for notification of a proposed plan, policy, programme or project, having regard to Appendix B to these Recommendations.
- Review and check a notification received from [Mandated Agencies / line agencies] concerned to ensure that the data and information provided are complete and consistent with the prescribed content and format for notification, having regard to Appendix B to these Recommendations.
- Take responsibility for assembling, recording and transmitting the notification, along with the appropriate supporting documentation, to the ORASECOM Secretariat for its submission to the ORASECOM Council and transmission to the other Heads of Delegation.

The Head of Delegation of a State receiving a Notification shall:

- Satisfy him/herself that the notification and related data and information received are complete and consistent with the prescribed content and format for notification, having regard to Appendix B to these Recommendations.
- Ensure that the notification and supporting documentation are transmitted without delay to the [Mandated Agencies / line agencies] concerned to ensure that the notification might be evaluated and considered in as expeditious a manner as possible.

- Actively liaise with the [Mandated Agencies / line agencies] concerned to ensure that a considered response is prepared for submission to the notifying State as expeditiously as possible and, at the very latest, within the six-month period provided for under Article 7.6 of the ORASECOM Agreement. Should the [Mandated Agencies / line agencies] concerned require further information or, in exceptional circumstances, further time to consider the notification, such requests shall be communicated to the notifying State via the Head of Delegation (and copied to the ORASECOM Secretariat).
- Review and check the response received from the [Mandated Agencies / line agencies] concerned to ensure that the response is complete and consistent with the content and format prescribed in Appendix C to these Recommendations.
- Submit such response to the Head of Delegation of the notifying State, and a copy of the response to the ORASECOM Secretariat, without unnecessary delay.

The Head of Delegation of a State which has reasonable grounds to believe that another State Party is planning a project, programme or activity which may have a significant adverse effect upon it or upon the River System may, in the absence of notification, formally request that State to comply forthwith with the requirements of Article 7.5 of the ORASECOM Agreement. The requesting State's formal request should be accompanied by a documented explanation setting forth its grounds, and copied to the ORASECOM Secretariat.

#### *Functions of the ORASECOM Secretariat*

The Secretariat shall:

- Receive, check for completeness, record and file notifications, having regard to Appendix B to these Recommendations.
- Submit each notification to the ORASECOM Council, circulating complete copies of the notification and all supporting documentation to all the Heads of Delegation.
- Enter the relevant data and information relating to the notification into the ORASECOM Data and Information System.
- Receive and file any comments on a notification, any responses to a notification and any requests for a notification received under Article 7.10 of the ORASECOM Agreement, and shall submit each to the ORASECOM Council in a timely manner.

Prior consultation: The ORASECOM Agreement does not include any express requirement for prior consultation arising from the response to notification, only a requirement that '[a]ny dispute between the Parties arising out of the interpretation or implementation of this Agreement shall be settled

amicably through consultation and/or negotiation between them' [Article 8.1]. Of course, the parties may rely on Article 4(g) of the SADC Protocol specifically and Article 3(5) more generally.

## 4.2 Consultation and negotiation

If a response to a notification contends that implementation of the planned project, programme or activity would be inconsistent with the provisions of Articles 7.2 or 7.3 of the ORASECOM Agreement, the Heads of Delegation of the notifying State and the responding State shall enter into consultations and, if necessary, negotiations with a view to arriving at an equitable resolution of the situation, pursuant to Article 4(g) of the Revised SADC Protocol.

The consultations and negotiations shall be conducted on the basis that each State must in good faith pay reasonable regard to the rights and legitimate interests of the other States.

During the course of the consultations and negotiations, the notifying State shall, if so requested by the notified State at the time it responds to the notification, refrain from implementing or permitting the implementation of the planned project, programme or activity for a period of six months unless otherwise agreed. Unless otherwise agreed between the Parties concerned, the consultations and negotiations shall be concluded within six months of the receipt of the notified State's response to notification. If necessary, an extended period shall be permitted by agreement between the Parties concerned.

The information and documentation required for notification, including in the case of Full Technical Notification the findings of a SEA or EIA, shall provide the technical basis for such consultations and negotiations.

Before consultations and negotiations commence, the Heads of Delegation of both the notifying and notified States and the ORASECOM Secretariat must agree the basic terms of reference for their scope, content and format. In the case of continuing disagreement among the States, the Secretariat shall make the final determination on the scope, content and format of the consultations and negotiations. Unless otherwise agreed, the Secretariat shall host the necessary meetings between the Heads of Delegation and their supporting technical advisors, but the States concerned shall be responsible for their own costs.

### *Functions of Council (Leaders) Heads of Delegation*

The Heads of Delegations shall:

- Inform the [Mandated Agencies / line agencies] concerned of the scope, content and format agreed for the consultations and negotiations, in order that these agencies may prepare and provide the data and advice required in the course of the consultations and negotiations.

- Receive, review and check submitted documentation during the course of the consultations and negotiations.
- Assemble and transmit documentation helpful to the conduct of the consultations and negotiations, including any proposal for reaching agreement.
- Facilitate the presentation of any further information, the participation of any expert, any site visit, or other such accommodation as might be helpful to the conduct of the consultations and negotiations.
- Record any additional documentation, comments or proposals for agreement submitted during the course of the consultations and negotiations, and transmit copies to the [Mandated Agencies / line agencies] concerned.
- Make every effort, in the spirit of cooperation set down in Article 7.1 of the ORASECOM Agreement, to address any matter that may arise during the process of consultation and negotiation.

*Functions of the ORASECOM Secretariat*

The Secretariat shall:

- Assist the Heads of Delegations in reaching agreement on, and if necessary making a determination on, the scope, content and format of the consultations and negotiations.
- Host and chair the meetings between the Heads of Delegation and their supporting technical advisors required during the course of the consultations and negotiations, unless otherwise agreed between the Parties concerned.
- Record and file any additional documentation, comments or proposals for agreement submitted during the course of the consultations and negotiations.
- Review, analyse and provide any technical advice as may be requested of it to the Heads of Delegation concerned.
- Supply available additional data and information as requested by the Heads of delegation concerned.
- Provide available technical support for any evaluation, upon the joint request of the Heads of Delegation concerned. Such support might include, for example, the establishment of a fact-finding team to visit a project site.
- Enter the relevant data and information into the ORASECOM Water Information System, if appropriate.

Generally, the Secretariat shall use its offices to make every effort to assist the Parties concerned in arriving at an agreement on the planned project, programme or activity, and shall issue a communication announcing that agreement and containing any conditions agreed upon. This communication shall become part of the record relating to that planned project, programme or activity.

## 5. Recommendations for transboundary communication in environmental assessment

### 5.1 Recommendations for the mandated agency in the State of Origin

#### *Applicability*

The country that is developing a policy, plan or programme, or is initiating a project that may have the potential for transboundary impacts, and which will require an EA should use these Recommendations.

#### *Identification of activities with potential transboundary impacts*

When a project first comes to the attention of the national mandated agencies, the authorities should ‘screen’ the project to determine if it is likely to have transboundary impacts (see Appendix B for guidance).

#### *Notification and information exchange.*

As noted in section 1.3, there is a distinction between the closely related procedural requirements of inter-State notification and the exchange of technical information within EA. Notification is dealt with in Section 4, above.

Environmental Assessment is a technical process comprising the presentation of the technical details of the planned project, the preparation of a study on its environmental and social impacts, public consultation, the identification of measures to avoid or mitigate the anticipated impacts, etc. The EA process generates technical information, which needs to be shared with stakeholders (including the authorities and the public) in the State of Origin and affected countries.

[Is a deliberate distinction being made between “State of Origin”, for the purposes of Part 5 Communication, and “notifying State”, for the purposes of Part 4 Notification?]

As noted earlier, the State of Origin is responsible for initiating and facilitating the consultation. Consultation must follow official ORASECOM channels (Figure 4), start early (during ‘scoping’) and continue throughout the process (Figure 5).

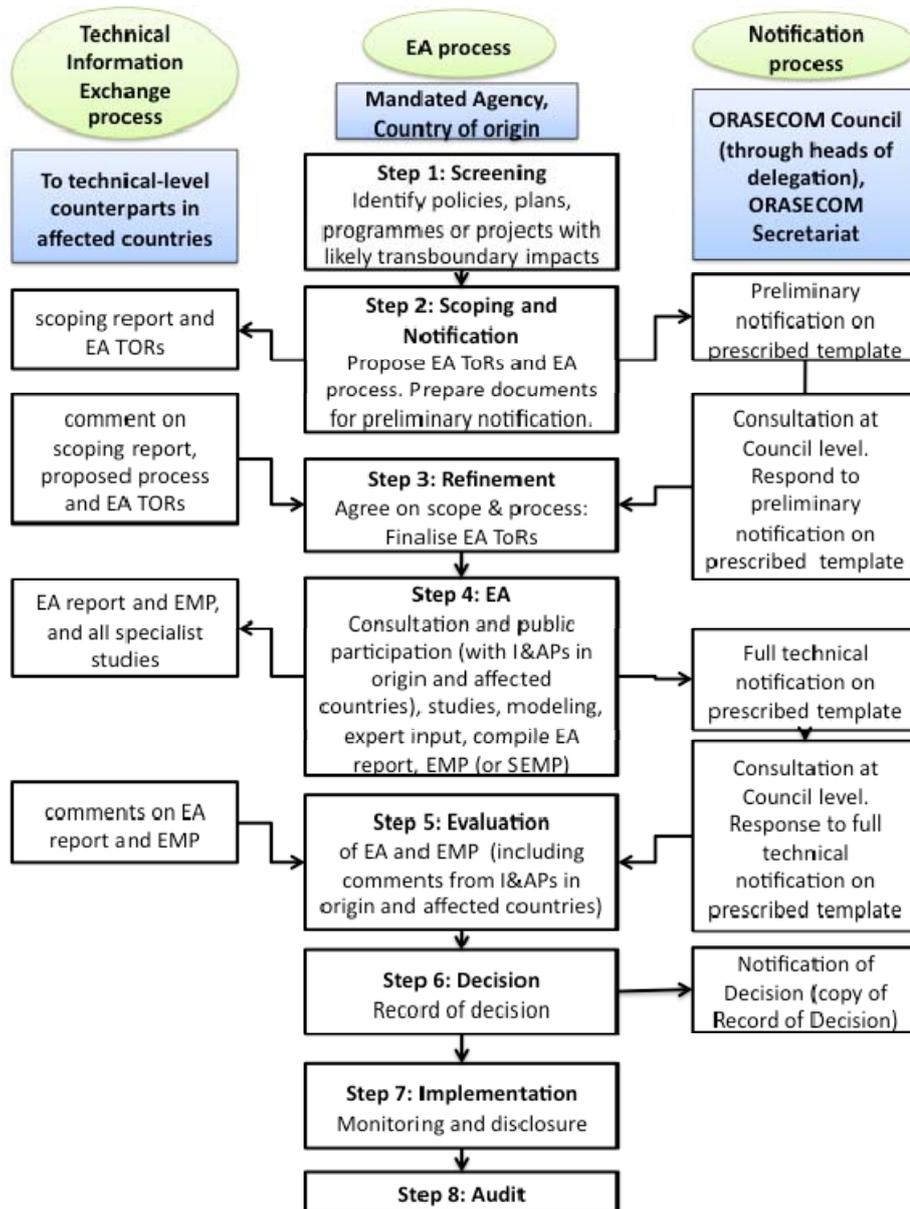


Figure 5: Steps and communication lines to be followed when an EA with transboundary impacts is being conducted. Note separation of notification and technical communication pathways (Modified from Espoo Convention).

*Follow-up and refinement of TOR for EA*

If no acknowledgment of the notification is received from the other riparian State(s) within 7 days, the State of Origin should notify the ORASECOM Secretariat immediately, and make a concerted

effort to contact the non-responding country(ies) by the most direct method possible. If all initial communication efforts fail, then diplomatic channels need to be used. An indicative time limit of 30 days is provided for the Affected State to respond on the ToRs.

With technical and process input from the other riparian State(s), the State of Origin should then refine the TOR for the EA and request the other riparian State(s) to comment on or endorse the TOR. The outcome of this step is that all countries have reached consensus on the way forward for the EA. If consensus cannot be reached, the dispute may be dealt with according to Article 8 of the ORASECOM Agreement.

#### *Contacts between Mandated Agencies and public participation*

The State of Origin shall designate a contact point within the Mandated Agency for a particular policy, plan, programme or project, and this person shall stay in routine contact with the Mandated Agency of other riparian States and the ORASECOM Secretariat regarding the availability of EA documents, the proposed consultation process, and other relevant issues. In particular, it is helpful at this stage to identify appropriate and effective means of communicating with I&APs in the other riparian States. For more guidance on public participation, see volume 2 and the Calabash Resource materials available on <http://www.saiea.com/calabash/Index.html>.

The State of Origin shall agree with the other riparian States and the proponent, the most effective means of collecting and assessing public comments from the other riparian State(s). Comments can be organized in a variety of ways: the comments can be collected by the other riparian State's Mandated Agency, or they can be sent directly to the State of Origin and the proponent. Whatever mechanism is decided on, it should be transparent and posted on the ORASECOM website.

The State of Origin must provide a minimum 60-day time period for public consultation with I&APs in the other riparian States – or a longer period if I&APs request more time (within reason). The timing will be initiated following submittal of draft ToRs for the EA (step 2 in Figure 5), and the process shall follow the ORASECOM channels of communication.

#### *Evaluation of EA report*

Depending on the agreement reached between the State of Origin and the other riparian State(s) at the start of the process, there may be an opportunity for the draft EA report to be circulated by the proponent or other riparian State's Mandated Agency, to I&APs so that they can provide comments. This is also referred to as 'public review', and it is strongly recommended. The best practice is that the Mandated Agency in the Country of Origin considers public comments during the official evaluation of the EA.

The evaluation of the draft EA report (by the notified States) should be completed within 60 days (of its transmission) or other riparian States should make a request for additional time to the State of Origin. In spite of the fact that the evaluation period is usually specified in the country's own legal

requirements, the need for additional transboundary consultations in the context of the evaluation may warrant flexibility. The Tb-EA Recommendations provide templates for evaluating scoping reports, SEA and EIA reports, and Environmental Management Plans (EMPs) – see appendices D, E and F..

It is important to consider whether an external (independent) team should evaluate the EA since this would help improve objectivity (and reduce bias). External evaluation is generally a good option when a project is likely to have transboundary impacts and/or is controversial. The ORASECOM Agreement supports this notion. Clause 6.2 stipulates that...’The Council may appoint technical experts and consultants to provide expert opinion and advice’. In accordance with the Polluter Pays Principle, the costs of External Evaluation should be borne by the proponent.

#### *Final Decision on EA*

When the EA has been completed and evaluated, the Mandated Agency of the State of Origin should inform the other riparian States of the final approval of the project and of how comments from I&APs in all the relevant countries, were taken into account. A copy of the final version of the EA report must be sent by the State of Origin to the other riparian State(s) and ORASECOM, in hard and soft copy, so that it can be archived in their respective systems for future reference.

## **5.2 Recommendations for the other riparian States**

### *Applicability*

The Recommendations can be used by another riparian State, which has received information that a State of Origin is developing a policy or strategy or is initiating a proposed project that may have the potential for a transboundary impact, and which will require an EA.

### *Receiving information and providing a response*

As noted in Section 4, the basic information will be in the form of an official notification, and there is a specified time frame and format for other riparian states to respond. As indicated in Figure 5, additional technical information should also be provided to enable stakeholders to participate meaningfully in the EA process if they wish to do so.

### *Evaluation of draft EA*

The evaluation of the draft EA report (by the notified States) should be completed within 60 days (of its transmission) or a request for additional time should be made to the State of Origin. The other riparian State(s) may request that an external (independent) team evaluate the EA report since this would help improve objectivity (and reduce bias). Ideally, the Mandated Agency in the State of Origin should select the External Reviewer (from within the region or overseas, depending on skills

needed) and cover review costs. (The ORASECOM Secretariat may assist the Parties in identifying and/or agreeing upon an External Reviewer.) The need (or desire) for an External Review should be articulated early in the process (e.g. scoping) so that the State of Origin can make budgetary provision.

*Role of authorities in transmission of comments to the State of Origin and proponent.*

As depicted in Figure 4, ORASECOM's Head(s) of Delegation in the other riparian State(s) will channel the comments from communities, government agencies, NGOs, etc. to his/her counterpart in the State of Origin. The method of collecting comments should be confirmed at an early stage of the discussions with the Head of Delegation in the State of Origin. As always, copies of correspondence shall be provided to the ORASECOM Secretariat.

*Receipt of final approval of project and communication to consulted public*

The other riparian State(s)' Mandated Agency shall ensure that the comments, including details on how comments were taken into account and reflected in the final EA report, are made available to the public.

### **5.3 Implications for the Proponent**

*Applicability*

A proponent, developing a project in the State of Origin, shall understand the objectives and requirements of the Revised SADC Protocol on Shared Watercourses and the ORASECOM Agreement, and assist the State of Origin's Mandated Agency and ORASECOM's country delegation in implementing the requirements. It is essential that the proponent discusses the requirements with the appropriate authorities so that the timing of the various phases of the EA, and the preparation and transmission of documents, and stakeholder consultations, are planned and budgeted for from the start of the process.

*Identification of potential transboundary impact*

The Mandated Agency of the State of Origin will screen the project to determine if it is likely to have transboundary impacts (step 1 in Figure 5).

Consistent with relevant and applicable national legislative requirements, the proponent should assist with this task by providing the Mandated Agency with the following information as early as possible:

- A brief description of the project/activity;
- Its potential impacts in normal operating conditions;

- Its potential impacts in a worst case scenario;
- The type of transboundary impacts possible;
- Potential stakeholders affected; and
- Draft public consultation and disclosure plan (PCDP).

It is advisable that the State of Origin hires a consultant in each potentially affected riparian State(s) to advise on possible transboundary impacts, to assist in identifying the appropriate consultation process, and to identify I&APs.

#### *Proponent's role in public consultation*

Public consultation is an integral part of any EA process, starting during scoping and continuing through to the EMP. Also, relevant I&APs should be involved in appropriate ways in the implementation phase of a project and, if appropriate, in the closure and decommissioning phases.

The State of Origin will designate a contact point within the Mandated Agency for a particular project, policy, plan, programme, and the proponent shall stay in routine contact with the Mandated Agencies of other riparian States and the ORASECOM Secretariat regarding the availability of EA documents, consultation with I&APs, and other relevant issues. The proponent will be responsible for organising meetings with stakeholders and for covering all costs related thereto. The proponent should note that s/he must adhere to appropriate ways of communication with I&APs in the State of Origin and the other riparian States.

Through the official ORASECOM channels, the proponent must develop the most effective means of collecting and assessing public comments. Comments can be organised in a variety of ways: collected by the Mandated Agency, or sent directly to the State of Origin via the proponent. Whatever mechanism is decided, it should be transparent and posted on the ORASECOM website.

The State of Origin shall provide a minimum 60-day time period for public consultation within the other riparian States – or a longer period if the communities request more time. The period will commence following submission of the draft TOR for the (EA) EIA (step 2 in Figure 5), following the ORASECOM channels of communication.

#### *Transmission of draft EA documents to other riparian States and ORASECOM Secretariat*

For projects, policies, plans, programmes with potential transboundary impacts affecting the Orange-Senqu basin, two sets of documents should be provided by the State of Origin to each potentially affected basin State. Both documents should be sent to the ORASECOM Head of Delegation for that country. It is the responsibility of the ORASECOM Head of Delegation to forward the copies to the relevant Mandated Agencies (line ministries) for technical attention. The ORASECOM Secretariat shall be copied on all correspondence, which should be provided with a copy of all the related documentation. Documents should be provided in hard and electronic format.

*Summary of public comments*

In accordance with best practice, the EA report shall include a summary of public comments received from I&APs, preferably in the form of an 'Issues-Response Report', where the consultants who conducted the EA show how they have addressed the issues raised by I&APs during the EA process. An appendix to the EA report that contains actual copies of public input – e.g. emails, faxes and letters, shall also be submitted. The summary shall be sent to the other riparian States that participated in the EA process as an integral part of the EA report. Other riparian States may wish to have information on project implementation and monitoring, and the mandated agency in the State of Origin shall provide this as part of the EMP.

*Finalisation and disclosure of the EA*

Following the finalisation of the EA process and the report, the mandated agency in the State of Origin shall provide copies of the final report to the State of Origin's ORASECOM Head of Delegation, who will keep one copy, and forward the remainder to the other basin States and the ORASECOM Secretariat.

## Bibliography

EAC (2005). Transboundary Environmental Assessment Guidelines for Shared Ecosystems in East Africa. East African Community, Arusha, Tanzania.

Brownlie, S., Walmsley, B. and Tarr, P. (2009). Guidance Document on Biodiversity, Impact Assessment and Decision Making in Southern Africa. CBBIA-IAIA Guidance Series. Capacity Building in Biodiversity and Impact Assessment (CBBIA) Project, International Association for Impact Assessment (IAIA), North Dakota, USA.

CIDA (2004). Strategic Environmental Assessment of Policy, Plan, and Program Proposals: CIDA Handbook

EAC (2005). Transboundary Environmental Assessment Guidelines for Shared Ecosystems in East Africa. East African Community, Arusha, Tanzania.

Kingdom of Lesotho (2008). Environment Act. Maseru, Lesotho.

Kingdom of Lesotho (2009). Guidelines for Environment Impact Assessment. National Environment Secretariat, Maseru, Lesotho.

McCaffrey, S. (2007). The Law of International Watercourses (2nd edition). Oxford University Press, Oxford, UK.

McIntyre, O. (2007), Environmental Protection of International Watercourses under International Law. Ashgate Publishing, Aldershot, UK.

Mekong River Commission (2005). Guidelines on Implementation of the Procedures for Notification, Prior Consultation and Agreement. Vientiane, Lao PDR.

OECD DAC (2006). Applying Strategic Environmental Assessment: Good Practice Guidance for Development Cooperation. DAC Guidelines and Reference Series, Development Cooperation Committee of the Organisation for Economic Cooperation and Development, Paris

OECD DAC (undated). Task Team SEA Review Template.

Pallet, J. & Tarr, P. (2009). Impact Assessment Case Studies from Southern Africa. SAIEA, Windhoek, Namibia.

Republic of Botswana (2005). Environmental Impact Assessment Act (No 6 of 2005). Gaborone, Botswana.

Republic of Botswana (2011). General Guidelines for Conducting EIA and SEA Studies under the EIA Act 2005. Gaborone, Botswana.

Republic of Namibia (2007). Environmental Management Act (No 7 of 2007). Windhoek, Namibia.

Republic of Namibia (2008). Draft Regulations for Strategic Environmental Assessment (SEA) and Environmental Impact Assessment (EIA). Windhoek, Namibia.

Republic of South Africa (1998). National Environmental Management Act (No 107 of 1998). Pretoria, South Africa.

Republic of South Africa (2010). Environmental Impact Assessment Regulations of South Africa. Pretoria, South Africa.

Republic of Botswana, Kingdom of Lesotho, Republic of Namibia and Republic of South Africa (2000). Agreement Between The Governments Of The Republic Of Botswana, The Kingdom Of Lesotho, The Republic of Namibia And The Republic Of South Africa On The Establishment Of The Orange-Senqu River Commission.

Rio Declaration on Environment and Development (1992). A/CONF.151/26 (Vol.I), Principle 15

SADC (2000). Protocol on Shared Watercourses in the Southern African Development Community (SADC). Gaborone: Southern African Development Community.

Sekhesa, A. (2003). In Chonguica, E. & Brett, R. (eds.) 2003. Assessing the need for a Regional Approach to Environmental Impact Assessment in Southern Africa. IUCN-The World Conservation Union.

United Nations (1997). Convention of the law of non-navigational uses of international watercourses. New York: United Nations, General Assembly.

UNECE (1991). Convention on Environmental Impact Assessment in a Transboundary Context. United Nations Economic Commission for Europe, Espoo, Finland.

UNEP/Nairobi Convention Secretariat and SAIEA (2007). Guidelines for Impact Assessment in the Western Indian Ocean Region. United Nations Environment Programme and Southern African Institute for Impact Assessment.

UNDP (2008). Preliminary Transboundary Diagnostic Analysis for the Orange-Senqu River basin.

UNEP (undated). Guidelines. Environmental Impact Assessment in a Transboundary context in the Caspian Sea. Azerbaijan by United Nations Environment Programme and Caspian Environment Programme.

## **Appendix A: List of policies, plans, programmes or projects likely to have transboundary impacts in the context of the ORASECOM Agreement**

Whereas the legal instruments requiring environmental assessment under the national legal systems of the ORASECOM member States will stipulate those categories of policies, plans, programmes or projects requiring environmental assessment, and any minimum thresholds applying to each, the requirement for supplemental transboundary environmental assessment will depend on the likelihood of any appreciable transboundary impact upon the water resources of the Orange-Senqu basin or its water-related ecosystems. In identifying the requirement for transboundary environmental assessment, it is not necessary to establish the possibility of transboundary harm of the significance required for a breach of the duty of prevention contained in Article 7.3 of the ORASECOM Agreement. Of course, transboundary impacts which might reasonably be considered negligible or minimal would not require transboundary environmental assessment. In determining which policies, plans, programmes or projects might have an appreciable transboundary impact, consider the following factors, amongst others:

- The potential for appreciable impacts upon the availability of adequate water resources in other riparian States and the social impacts of any such impacts;
- The potential for impacts on ecosystems or habitats protected under the national laws of other riparian States; or
- International best practice and the standards set down in international legal and technical instruments, (such as the Espoo Convention, the International Hydropower Association's Sustainability Assessment Protocol, etc.)

The indicative list below provides further guidance on the categories of policies, plans, programmes or projects likely to have an appreciable transboundary impact, thereby necessitating an element of transboundary environmental assessment supplemental to the assessment required under the national law of the State of Origin:

Relevant thematic areas (indicative, not exhaustive)

1. Crude oil refineries and installations for the gasification and liquefaction of coal, bituminous shale or gas.
2. Power stations.
3. Installations designed for the production or enrichment of nuclear fuels, for the reprocessing of irradiated nuclear fuels or for the storage, disposal and processing of radioactive waste.

4. Installations for the initial smelting of cast-iron and steel and for the production of non-ferrous metals.
5. Installations for the extraction of asbestos and for the processing and transformation of asbestos and products containing asbestos.
6. Chemical manufacturing plants.
7. Treatment or waste-disposal facilities for the incineration, chemical treatment, landfill or other disposal of toxic and dangerous wastes.
8. Dams and reservoirs.
9. Groundwater abstraction from aquifers linked to shared water resources.
10. Surface water abstraction from shared water resources.
11. Pulp and paper manufacturing.
12. Mining and/or on-site extraction and processing of mineral resources.
13. Major storage facilities for petroleum, petrochemical and chemical products.
14. Deforestation.
15. Policies, plans, programmes or projects that result in land-use change.
16. Policies, plans, programmes or projects that result in damage to wetlands.
17. Policies, plans, programmes or projects for the use of uncultivated land or semi-natural areas for intensive agricultural and/or forestry purposes.
18. Water management policies, plans, programmes or projects for agriculture, including irrigation and land drainage.
19. Fish farming.
20. Projects involving introductions of exotics
21. Tanneries.
22. Textile manufacturing or dyeing.

## Appendix B: Template for letter of notification

Official letterhead, your address, date, contact person, contact person's telephone, fax and email address

Recipients name and address

Copy: The ORASECOM Secretariat, Block A, 66 Corporate Park, Cnr Von Willich & Lenchen Streets, Centurion, Gauteng, South Africa

Tel: +27126636826, Email: Lenka.Thamae@orasecom.org and secretariat@orasecom.org

Dear .....

RE: NOTIFICATION OF INTENDED PROJECT AND IMPACT ASSESSMENT PROCESS

In accordance with the ORASECOM Agreement, Revised SADC Protocol on Shared Watercourses, and the Recommendations on Environmental Assessment in a Transboundary Context, I/we hereby wish to notify you about our intended [NAME OF POLICY, PLAN, PROGRAMME OR PROJECT], and the envisaged EA process. The details are as follows:

1. Contact details of the proponent and the Competent Authority

TYPE IN NAME, ADDRESS, TEL/FAX AND EMAIL ADDRESSES OF THE PROPONENT AND COMPETENT/MANDATED AUTHORITY.

2. Name of the policy, plan, programme or project and its location (provide map if applicable)

TYPE IN OFFICIAL NAME OF THE POLICY, PLAN, PROGRAMME OR PROJECT, WHERE IT IS TO BE LOCATED (IF APPLICABLE) AND INSERT A MAP IF AVAILABLE/APPLICABLE.

3. Rationale for proposed activity/initiative (why it is envisaged/needed)

PROVIDE SHORT NARRATIVE, < 50 WORDS, DESCRIBING THE MOTIVATION BEHIND THE INITIATIVE – i.e. WHY IT IS ENVISAGED.

4. Why it is chosen above other alternatives that could achieve the same purpose;

PROVIDE SHORT NARRATIVE, < 50 WORDS, EXPLAINING WHY THE PROPOSED INITIATIVE IS BETTER THAN ANY OTHER ALTERNATIVE THAT WAS CONSIDERED

AND THAT MIGHT HAVE ACHIEVED SIMILAR OUTCOMES TO THAT NOW CHOSEN AS THE PREFERRED ALTERNATIVED.

5. The type, nature and scope of the proposed activity (e.g. main activity and any/all peripheral activities)

NO NEED FOR EXTRA INFORMATION FOR A POLICY, PLAN/PROGRAMME HERE – SHOULD BE COVERED UNDER POINT 3.

PROVIDE FOLLOWING FOR A PROJECT:

- WHAT LAND/AREA WILL BE CLEARED – HOW MANY HECTARES?
- WHAT WILL BE CONSTRUCTED – SIZE?
- WHAT ANCILIARY ACTIVITIES ARE LIKELY – E.G. ROADS, POWERLINES, RAIL, PORT, ETC?
- INPUTS NEEDED – WATER, CHEMICALS, POWER, LABOUR, ETC?
- WHAT OUTPUTS WILL BE GENERATED – PRODUCTS?
- WHAT WASTE IS LIKELY TO BE EMITTED, AND WHERE? ]

6. Time-frame for proposed activity

- START OF PROCESS
- CONSTRUCTION TIME-FRAME (IF APPLICABLE)
- IMPLEMENTATION TIME-FRAME
- CLOSURE AND DECOMMISSIONING (IF APPLICABLE)

7. Expected environmental impacts (to the extent that this is known at this early stage);

- TYPES OF IMPACTS
- LOCATIONS OF IMPACTS – AND DISTANCE AWAY FROM SOURCE)
- DURATION OF IMPACTS – SHORT/MEDIUM/LONG TERM
- MAGNITUDE,SIGNIFICANCE OF IMPACTS – HOW BIG AND SERIOUS
- CUMULATIVE IMPACTS?

- TRANSBOUNDARY IMPACTS?
8. Proposed mitigation measures (to the extent that this is known at this early stage);
- WHAT MITIGATION IS ENVISAGED?
  - HOW SUCCESSFUL IS MITIGATION LIKELY TO BE?
9. Scope of assessment envisaged (if this is known at this early stage);
- BRIEF NARRATIVE OF TYPE OF EA LIKELY TO BE UNDERTAKEN – E.G. – SEA OR EIA, CONSIDERATION OF CUMULATIVE AND TRANSBOUNDARY IMPACTS, INCLUSION OF BIODIVERSITY, SOCIAL AND HEALTH CONSIDERATIONS
  - INCLUDE DRAFT TERMS OF REFERENCE FOR THE ENVISAGED EA
10. Summary and timing of proposed consultation (if known at this early stage);
- PROPOSED CONSULTATION/STAKEHOLDER ENGAGEMENT PROCESS IN STATE OF ORIGIN AND OTHER COUNTRIES
  - FLOW-CHART OF PROCESS, HIGHLIGHTING INFORMATION EXCHANGE AND DECISION-MAKING POINTS
  - EXPLANATION OF COMPLAINT/GREVIENCE AND APPEAL PROCESSES.
11. Contact details of the consultants engaged to conduct the EIA (if appointed already).

NAME OF FIRM, CONTACT DETAILS OF TEAM LEADER AND COMPOSITION OF TEAM.

## **Appendix C: Template for response letter (from other riparian State to State of Origin)**

### **Positive sign-off**

Official letterhead, your address, date, contact person, contact person's telephone, fax and email address

Recipients name and address

Copy: The ORASECOM Secretariat, Block A, 66 Corporate Park, Cnr Von Willich & Lenchen Streets, Centurion, Gauteng, South Africa

Tel: +27126636826, Email: Lenka.Thamae@orasecom.org and secretariat@orasecom.org

Dear .....

RE: SIGN-OFF FOR INTENDED PROJECT AND IMPACT ASSESSMENT PROCESS

In accordance with the ORASECOM Agreement, Revised SADC Protocol on Shared Watercourses and the Recommendations on Transboundary Environmental Assessment, I/we hereby wish to provide you with our 'sign-off' response about your intended [NAME OF POLICY, PLAN, PROGRAMME OR PROJECT], and the completed EA process.

In response to the EA findings and our own deliberations, we hereby accept the project and ask that the following conditions be incorporated in your project authorisation letter to the proponent:

Suggested conditions:

LIST ALL THE CONDITIONS THAT YOU REGARD AS BEING IMPORTANT TO YOUR COUNTRY

Monitoring, reporting and communication:

LIST HOW, HOW OFTEN, IN WHAT FORMAT AND TO WHOM, REPORTS MUST BE SUBMITTED. BE VERY SPECIFIC ABOUT WHAT YOU NEED AS THE AUTHORITY IN THE OTHER RIPARIAN STATE, INCLUDING THE KIND OF MONITORING THAT YOU THINK NEEDS TO BE DONE, THE FORMAT OF DATA THAT IS COLLECTED AND SUBMITTED, AND HOW YOU WISH TO BE KEPT INFORMED ABOUT THE DEVELOPMENT FROM NOW ONWARDS AND INTO THE FUTURE.

Authorised signature and title

**Negative sign-off**

Official letterhead, your address, date, contact person, contact person's telephone, fax and email address

Recipients name and address

Copy: The ORASECOM Secretariat, Block A, 66 Corporate Park, Cnr Von Willich & Lenchen Streets, Centurion, Gauteng, South Africa

Tel: +27126636826, Email: Lenka.Thamae@orasecom.org and secretariat@orasecom.org

Dear .....

RE: SIGN-OFF FOR INTENDED PROJECT AND IMPACT ASSESSMENT PROCESS

In accordance with the ORASECOM Agreement, Revised SADC Protocol on Shared Watercourses and the Recommendations on Environmental Assessment in a Transboundary Context, I/we hereby wish to provide you with our 'sign-off' response about your intended [NAME OF POLICY, PLAN, PROGRAMME OR PROJECT], and the completed EA process.

In response to the EA findings and our own deliberations, we hereby do not accept the project for the following reasons:

Reasons:

LIST ALL THE REASONS THAT RESULTED IN YOU NOT AGREEING TO THE PROJECT/EA

Authorised signature and title

## Appendix D: Indicative check list for evaluating a Scoping Report

Name of the project	
Country where the project is to be located	
Name of company which compiled the Scoping Report	
Date that the Scoping Report was completed	
Name of evaluator(s)	
Address of evaluator	
Date of evaluation	

Notwithstanding requirements under the national legislation of the State of Origin and the minimum requirements for notification the Mandated Agency may wish to use this indicative check list. It allows the evaluator to assess the Scoping Report in a systematic and structured way both in terms of process and content. An explanation of the grading system used in the evaluation is provided in section 2 below and a summary of the findings of the evaluation is presented in section 3. This is followed by the detailed evaluation form, which is divided into the following sections:

1. Methodology utilised in compiling the Scoping report
2. Legal, Policy and Administrative Requirements
3. Description of the project
4. Assessment of alternatives to the project
5. Description of the environment
6. Description of impacts
7. Consideration of measures to mitigate impacts
8. Non-technical summary
9. General approach

### EXPLANATION OF EVALUATION NOTATION

For each question posed in the Evaluation Form, the evaluator considers whether the information is relevant to the project and it is marked Y (yes) or N (no).

If the information is relevant, the evaluator reads the relevant sections of the EIA report and specialist studies and establishes whether the information provided is:

- Complete or comprehensive (C): all information required for decision-making is available. No additional information is required even though more information might exist.
- Acceptable or adequate (A): the information presented is incomplete, but the omissions do not

- prevent the decision-making process from proceeding.
- Inadequate (I): the information presented contains major omissions. Additional information is necessary before the decision-making process can proceed.

### SUMMARY APPRAISAL OF THE SCOPING REPORT

	Judgement (C/A/I)	Comments
1. Scoping Process		
2. Public consultation process		
3. Description of the project		
4. Assessment of alternatives		
5. Description of the environment		
6. Identification of key issues of concern		
7. Terms of Reference for EIA and scope of specialist studies		
8. Non-technical summary		
9. General approach and presentation		

### CONCLUSION

The overall grading of the Scoping Report is as follows:

Excellent: The Scoping Report contains everything required for decision-making on the project. There are no gaps.

Good: The Scoping Report contains most of the information required as far as it is relevant in the particular circumstances of the project; any gaps are relatively minor.

Satisfactory: The information presented is not complete; there are significant omissions but in the context of the proposed project, these are not so great as to prevent a decision being made on whether the project should be allowed to proceed.

Inadequate: Some of the information has been provided, but there are major omissions; in the context of the proposed project these must be addressed before a decision on whether the project should be allowed to proceed can be taken.



Poor: The information required has not been provided or is far from complete and, in the context of the proposed project, the omissions must be addressed before a decision on whether the project should be allowed to proceed can be taken.

Key questions	Yes	No	Partially	Don't know
Does the Scoping Report comply with the Terms of Reference <sup>1</sup> ?				
Does the Scoping Report comply with the legal requirements for EIA in the country?				
Did the scoping process include genuine public participation?				
Did the Scoping Report highlight the most important issues?				
Is the Scoping Report of acceptable quality?				
Has the scope of the project changed as a result of the scoping process?				
Will the Scoping Report help to make a more informed decision about the project?				

## DETAILED EVALUATION

	Relevant Yes/No	Judgement (C/A/I)	Comments
<b>1 SCOPING PROCESS</b>			
1.1 Has the screening, scoping and EIA process been described?			
1.2 Is the scoping process compliant with the minimum legal requirements for scoping, if such legal requirements exist, or where none exist, does the scoping process conform with relevant national policies or guidelines etc, or where none exist, other accepted guidelines for scoping e.g. World Bank, IFC, EU?			
1.3 Have all the relevant communications with the			

<sup>1</sup> In some countries or cases, there are no TORs prior to Scoping, as the Scoping process contributes to the setting of TORs for the EIA

	Relevant Yes/No	Judgement (C/A/I)	Comments
Authorities regarding the screening and scoping process been included in the appendices (including for example the approval of the consulting team, notification of the authorities and their acknowledgement, any conditions for the study received from the authorities etc.)?			
1.4 Is the level of appraisal (scoping) in sync with the project development phase i.e. scoping should occur at the project pre-feasibility stage?			
<b>2 SCOPING METHODOLOGY</b>			
2.1 Does the report set out the assumptions, limitations and constraints of the study?			
2.2 Does the report clearly explain the methodology used in the scoping process e.g. literature reviews, baseline monitoring, initial field work and data collection?			
2.3 Has the project scope been clearly defined in terms of the geographic extent, sphere of influence, all associated project components, trans-boundary impacts and time frame?			
2.4 Does the Scoping Report identify the key issues relevant to the project?			
2.5 Does the Scoping Report identify major gaps and data deficiencies and are specialist recommended for addressing these gaps or data deficiencies?			
2.6 Does the Scoping Report include the Terms of Reference (ToR) for the EIA including detailed scopes of work for the specialist studies?			
2.7 Has the Scoping Report been submitted for independent peer review and will the review report be attached as an appendix to the final document?			
<b>3 PUBLIC CONSULTATION AND DISCLOSURE</b>			
<b>Legal compliance</b>			
3.1 Did the public consultation and disclosure (PCD) process follow the legally required process, or where no such process is prescribed in legislation, does the PCD process conform with relevant national policies or guidelines etc., or where none exist, other accepted guidelines for PCD e.g. World Bank, IFC, EU?			
3.2 Were the I&APs informed of the relevant legislation, their environmental rights and the modalities of their engagement?			

	Relevant Yes/No	Judgement (C/A/I)	Comments
<b>Identification of Interested and Affected Parties</b>			
3.3	Is there a register for I&APs?		
3.4	Were/are I&APs allowed to register throughout the process?		
3.5	Are the procedures for registering as an I&AP open, transparent and appropriate for the affected communities?		
3.6	Have all relevant government authorities at national, regional and local level been identified?		
3.7	Have representatives from all relevant NGOs, CBOs, rate payers associations, Chambers of Commerce, agricultural cooperatives, faith groups and other representatives of civil society been identified?		
3.8	Have all the parties whose lives and livelihoods may be directly affected by the project been identified?		
3.9	Have the representatives of relevant labour unions been identified?		
3.10	Have members of the media been identified?		
3.11	In the case where trans-boundary impacts may occur, have representatives from government, media, land owners, communities and relevant representatives of civil society in the neighbouring country been identified?		
<b>Notification process</b>			
3.12	Have all the project notices pertaining to registration as an I&AP, public meetings, open houses etc. been advertised in local and national newspapers?		
3.13	Has the project been advertised on radio?		
3.14	Have special provisions been made to inform those without the necessary electronic equipment (TV, radio, computer), connectivity (phone, internet, cellular) and literacy or language skills, about the project and all relevant meetings?		
3.15	Have notices been posted on site and in several public places?		
3.16	Have all the notices been posted or announced in the locally understood languages?		
3.17	Was a Background Information Document (BID) or other form of information pamphlet or poster		

	Relevant Yes/No	Judgement (C/A/I)	Comments
disseminated or made easily available to all I&APs?			
3.18 Did the BID (or other notification method) include basic information about the project, its location (on a map), motivation for the project, the proponent, project timing and the scoping process?			
3.19 Did the BID provide I&APs with a means to submit comments and concerns to the scoping team?			
3.20 Were any other forms of communication used such as via the web, letters, questionnaires etc.?			
3.21 Was the notification period for public meetings, open houses or other PCD meetings adequate?			
<b>Consultation</b>			
3.22 Were public meetings held in the main centres as well as on or near the site?			
3.23 Were focus group meetings held?			
3.24 Were any open house displays or exhibitions held?			
3.25 Did the project team make themselves available for one-on-one meetings with I&APs?			
3.26 Was special provision made to consult with marginalised groups, women, youth, unemployed, etc.?			
3.27 Were capacity building programmes required to enable informed stakeholder involvement and are they described in the Scoping Report?			
3.28 Did the I&APs receive sufficient information about the project and its potential impacts to enable them to make an informed and objective decision about the project?			
3.29 Were the I&APs informed as to when and how they would have further opportunities to comment on the project?			
3.30 Was the period allowed for I&APs to comment on the Scoping report adequate?			
3.31 Did the comment period avoid main holidays?			
3.32 Was there any intimidation by the Client and/or his representatives at any of the public meetings?			
<b>Reporting</b>			
3.33 Does the report clearly explain the methodology used in the PCD process?			

	Relevant Yes/No	Judgement (C/A/I)	Comments
3.34 Does the main Scoping Report provide a summary of all the issues and concerns raised?			
3.35 Are the minutes or records of the meetings included in the Scoping Report together with the attendance registers?			
3.36 Are the original written submissions of the I&APs included in the report?			
3.37 Are copies of all the notices and BID included in the report?			
3.38 Were the I&APs given an opportunity to comment on the Scoping Report?			
3.39 Is there an issues and response table indicating where issues raised by the I&APs have been addressed, and if not addressed, providing a reason why not?			
<b>4 LEGAL, POLICY AND PLANNING REQUIREMENTS</b>			
4.1 Have the relevant international treaties, conventions and agreements been listed with reference to where and how these obligations have been met on this project?			
4.2 Have the relevant policies of the country been listed with reference to where and how the obligations have been met on this project?			
4.3 Have the relevant laws and regulations of the country been listed, with reference to project compliance?			
4.4 Have other relevant permits, licenses, authorisations etc. which may be required for project approval been listed?			
4.5 Have the relevant standards and guidelines for compliance been listed?			
4.6 Have local, regional and national plans e.g. SEAs, structure plans, integrated development plans, environmental management frameworks, zoning plans, biodiversity plans etc. been reviewed in order to place the project into context?			
<b>5 DESCRIPTION OF THE PROJECT</b>			
<b>Land requirements</b>			
5.1 Has the land ownership status been described?			
5.2 Has the land required for all phases of the project and any associated services, been described and clearly shown on an appropriately scaled map?			

		Relevant Yes/No	Judgement (C/A/I)	Comments
5.3	For a linear project, has the land corridor and need for earthworks been described and shown on an appropriately scaled map?			
5.4	Have the areas which will only be temporarily affected during construction been described and shown on a map?			
<b>Project description</b>				
5.5	Has the project been described (location, size, layout, design, main components etc) at a pre-feasibility level of detail, with the aid of appropriate maps, photos and images?			
5.6	Have any additional project components, which are not included in this scoping study but which will require authorisation from the relevant authority, been identified and a justification provided as to why they have been excluded (e.g. access roads, power lines, borrow pits etc.?)			
5.7	Has the need and desirability of the project been well motivated?			
5.8	Have the main processes of the project been described, together with a motivation as to how they comply with BATNEEC and BEO principles?			
5.9	Have the construction phase activities and methods been described?			
5.10	Has the relationship of this project to other planned or existing projects nearby been described in terms of potential cumulative, antagonistic and synergistic effects?			
5.11	Have other activities or developments which may be required as a consequence of this project been identified e.g. upgrading of sewage plants, additional houses, schools, clinics, additional water supplies and/or power generation capacity etc.?			
5.12	Has the project timetable been clearly set out for each project phase: construction, operation, decommissioning and closure?			
5.13	Have the social issues related to the project been described e.g. estimated number of employees, percent from local community, transportation, accommodation, support services, recreation facilities, employment structures, skills breakdown, training, skills transfer etc.			

	Relevant Yes/No	Judgement (C/A/I)	Comments
for each project phase?			
<b>Waste and emissions</b>			
5.14	Have the sources and types of waste likely to be generated during different scenarios for construction and operation been identified e.g. air emissions, process effluent, runoff, noise and vibrations, odour, liquid and solid waste?		
5.15	Does the report discuss ways in which the wastes can be reduced, recycled or re-used?		
5.16	Have the ways in which wastes will be stored, handled or treated prior to disposal been explained?		
5.17	Has the receiving environment where such waste will be disposed, been identified and described?		
<b>Project inputs</b>			
5.18	Have the resources and materials needed for construction and operation, been identified e.g. water, power, lubricants, raw materials, ore, structural components, fill, etc?		
5.19	Have the means of transporting materials, products, workers and visitors to and from the site during construction and operation, been explained?		
<b>6 ALTERNATIVES</b>			
6.1	Were strategic alternatives to the entire project considered in the Scoping Report (e.g. demand management instead of a new power station; renewable power supplies rather than fossil fuels)?		
6.2	If strategic alternatives were considered, are evaluation criteria listed and the reasons provided for selecting the proposed alternative?		
6.3	If alternatives are described, have their main environmental impacts been compared clearly and objectively with those of the proposed project?		
6.4	Has a prediction of the likely future environmental conditions in the absence of the project been developed (no go option)?		
6.5	Does the Scoping Report identify and assess various 'within-project' alternatives (e.g. site, route, design, technology, etc.)?		
6.6	Does the Scoping Report list the evaluation criteria used to compare the alternatives identified and have		

	Relevant Yes/No	Judgement (C/A/I)	Comments
the reasons for selecting one or more alternative to study further in the EIA been provided?			
6.7 Does the Scoping Report indicate whether inputs from the I&APs were instrumental in identifying new alternatives or selecting existing alternatives?			
<b>7 DESCRIPTION OF THE ENVIRONMENT</b>			
7.1 Have the areas expected to be significantly affected by the various aspects of the project been indicated with the aid of suitable maps?			
7.2 Have the land uses on the project site(s) and in the surrounding areas been described together with an indication of their sensitivity to the proposed project? Photos, maps and images should be used to show the various land uses in relation to the project.			
7.3 Have the <i>biophysical</i> components of the environment likely to be affected by the project been identified and described in sufficient detail for a Scoping Report?			
7.3.1 Climate (wind, precipitation, temperature, evaporation etc)			
7.3.2 Geology (rock type, structure, geochemistry etc)			
7.3.3 Soils (agricultural and rehabilitation potential)			
7.3.4 Topography (slopes, erosion, screening)			
7.3.5 Surface hydrology (flood lines, runoff, flows, supply, users, wetlands, dams, lakes)			
7.3.6 Groundwater (aquifers, yields, permeability, users, gradients etc)			
7.3.7 Hydrochemistry (organic, inorganic, physical)			
7.3.8 Air quality (ambient and seasonal, dust, gas and odour)			
7.3.9 Flora (vegetation types, diversity, endemic, endangered, alien and invasive spp)			
7.3.10 Terrestrial fauna (populations, diversity, endemic, endangered, alien and invasive spp)			
7.3.11 Freshwater and/or marine aquatic ecology (populations, diversity, endemic, endangered, alien and invasive spp)			
7.4 Have the <i>social</i> components of the environment likely to be affected by the project been identified and described in sufficient detail for a Scoping Report			

	Relevant Yes/No	Judgement (C/A/I)	Comments
7.4.1 Social structure of local community			
7.4.2 Demographics			
7.4.3 Skills			
7.4.4 Employment			
7.4.5 Community facilities and services			
7.4.6 Amenities			
7.4.7 Settlement patterns			
7.4.8 Aesthetics (visual, noise, odour, sense of place, air quality, quality of life etc)			
7.4.9 Health			
7.4.10 Other (please specify)			
7.5 Have the <i>cultural</i> components of the environment likely to be affected by the project been identified and described sufficiently for the prediction of impacts?			
7.5.1 Sites of spiritual and/or religious significance			
7.5.2 Sites of cultural significance			
7.5.3 Sites of historical significance			
7.5.4 Archaeological sites			
7.6 Have the <i>economic</i> components of the environment likely to be affected by the project been identified and described in sufficient detail for a Scoping Report?			
7.6.1 Local, regional and national economic indicators			
7.6.2 Multiplier effect			
7.6.3 Forward and backward linkages			
7.6.4 Local spending			
7.6.5 Sectoral strengthening			
7.6.6 Import and export potential			
7.6.7 Tax base and revenue generation			
7.6.8 Resource economics			
7.6.9 Cost-benefit analysis			
7.7 Have the authors of the Scoping Report adequately consulted the latest literature and/or unpublished reports and/or data relevant to the study and cited their sources?			

		Relevant Yes/No	Judgement (C/A/I)	Comments
<b>8</b>	<b>DESCRIPTION OF IMPACTS</b>			
8.1	Have the direct and indirect/ secondary effects of constructing, operating and, where relevant, after use or decommissioning of the project been clearly explained (including both positive and negative effects)?			
8.2	Does the Scoping Report provide a brief description of how the project activities may affect the environment, including a qualitative assessment of the nature, duration, magnitude, extent and significance of the impacts on:			
8.2.1	Air quality (dust, gas, odour)			
8.2.2	Climate change scenarios			
8.2.3	Topography			
8.2.4	Surface water resources			
8.2.5	Ground water resources			
8.2.6	Water quality (surface and ground water)			
8.2.7	Soils			
8.2.8	Noise			
8.2.9	Landscape			
8.2.10	Vegetation			
8.2.11	Terrestrial fauna			
8.2.12	Aquatic ecology (freshwater and marine)			
8.2.13	Historic and cultural heritage			
8.2.14	Land use			
8.2.15	People and communities			
8.2.16	Health			
8.2.17	Sense of place (visual impact, project suitability and compatibility)			
8.2.18	Transportation and traffic			
8.2.19	Local, regional and national economic indicators			
8.3	Have trans-boundary impacts been identified?			
8.4	Are cumulative impacts considered?			
8.5	Have the constraints of the environment on the construction and operation of the project been considered i.e. are there any environmental constraints			

	Relevant Yes/No	Judgement (C/A/I)	Comments
to development?			
<b>9 MITIGATION</b>			
9.1	Does the Scoping Report provide any information about possible mitigation measures that might be considered to mitigate negative impacts and enhance project benefits?		
<b>10 NON-TECHNICAL SUMMARY</b>			
10.1	Is there a non-technical summary that will easily be understood by a lay-person?		
10.2	Does the summary include a brief explanation of the overall approach to the assessment and the way forward for the EIA?		
10.3	Does the summary contain a brief but concise description of the project and the environment?		
10.4	Does the summary clearly identify the main potential positive and negative impacts?		
10.5	Does the summary provide an overview of the recommendations of the Scoping Report, including further specialist studies, baseline monitoring etc. which may be required?		
10.6	Does the summary provide a list of the key issues and concerns raised by the I&APs?		
<b>11 GENERAL APPROACH</b>			
<b>Organisation of the information</b>			
11.1	Is the information logically arranged in sections?		
11.2	Is the location of the information identified in an index or table of contents?		
11.3	When information from external sources has been introduced, has a full reference to the source been included?		
11.4	Does the report or appendices contain the Terms of Reference for the scoping study?		
11.5	Are the credentials (including professional certification status if appropriate) of the scoping team presented, with a clear indication of their respective contributions?		
<b>Presentation of the information</b>			
11.6	Has information and analysis been presented so as to be comprehensible to the non-specialist, using maps,		

	Relevant Yes/No	Judgement (C/A/I)	Comments
tables and graphical material as appropriate?			
11.7 Are the maps at an appropriate scale, show co-ordinates, north sign, contours, drainage, settlement, landmarks, administrative boundaries etc in relation to the proposed project site?			
11.8 Has superfluous information (i.e. information not needed for the decision) been avoided?			
11.9 Have prominence and emphasis been given to severe adverse impacts, to substantial environmental benefits, and to controversial issues?			
11.10 Is the information objective?			
11.11 Are all the supporting studies and appendices present?			

## Appendix E: Indicative check list for evaluating a SEA report

Source: Modified from OECD DAC Task Team on SEA, by Barry Sadler and Barry Dalal-Clayton – April 2010

Notwithstanding requirements under the national legislation of the State of Origin and the minimum requirements for notification the Mandated Agency may wish to use this indicative check list. It comprises a set of key evaluative criteria that can be used to undertake a generic review of SEA quality. The scope and structure of the methodology focuses on three key attributes of quality, namely that the SEA process is:

- ‘Fully compliant with requirements’;
- ‘Fit for purpose and relevant’ to the needs of policy- or plan-making and decision-making; and
- ‘Is effective in ‘achieving positive environmental benefits and good outcomes’ in development cooperation.

From the standpoint of SEA review, these three attributes represent increasingly difficult ‘clearance bars’ and, correspondingly, more subjective, qualified interpretations. Moreover, most reviewers or interested parties will tend to focus attention on the performance of the end product because this is the easiest thing to measure - in this case, the SEA report or the SEA ‘process’. However, it would be wrong to assess any SEA in a vacuum, without reviewing the background and context within which the work has been performed.

The character, and hence ‘quality’ of each SEA is likely to be affected by many overlapping external factors over which the promoters or authors of the SEA may have little or no influence. The following small selection of examples illustrates the point.

- SEAs are often carried out in circumstances where there are no approved guidelines. In their absence, authors of an SEA may have difficulty justifying the inclusion of alternatives other than by reference to good practice. Similarly, there is a lack of openness and transparency in decision-making processes in many developing and developed countries. In such circumstances, it can be very difficult to know what alternatives to specific policies or plans may have been considered and thus not possible to carry out an assessment of such alternatives. This is not necessarily a criticism of the SEA process but rather reflects the reality of the political framework within which the SEA has been conducted.

- Even where national SEA guidelines or regulations exist, some powerful ministries may oppose its use – regarding the process as giving excessive influence to other agencies. Institution-centred SEAs are designed to address such issues, but even they can be seriously constrained in scope and content.

The content and coverage of an SEA will also be affected by the size of budget, timescale and team structure. It is not uncommon for commissioning agents to set fixed time limits or budgets, regardless of the scope or complexities of the task to be undertaken. These conditions inevitably constrain the ‘quality’ of the product. There are also fundamental differences between the level of detail that is appropriate to an SEA undertaken in difficult circumstances (eg one produced in a conflict zone or as a response to a sudden disaster) compared an SEA in other situations (eg one produced as part of a routine review of policy or planning processes).

All of these external influences need to be carefully considered by the reviewer before embarking on any SEA appraisal, and it is desirable that an introductory statement should be drafted to preface the report and put the SEA findings in proper context.

A generic framework and methodology for SEA quality review is outlined below.

### **Generic Methodology for SEA Quality Review -- Checklist and Report Card**

The following categories may be helpful to systematically review and compare relative performance on dimensions of quality:

- |              |  |
|--------------|--|
| A            | No fundamental flaws or inadequacies.  |
| B            | Fundamental gaps and inadequacies.   |
| C            | Insufficient basis to judge.   |
| D (Overall): | The SEA contains elements that are excellent and therefore provide a template/inspiration for future SEAs. |

---

<i>Module 1: Compliance review in accordance with OECD DAC guidance</i>	<i>Yes/No</i>	<i>Rating/Comments</i>
<b><u>a) Preliminary assessment</u></b>		
i) Was there an explicit determination of whether to apply an impact or institution centred process?		
ii) Did the SEA process undertake the following activities:		
a) Apply screening to determine the need for SEA and to begin preparatory tasks?		
b) Identify interested and affected stakeholders and plan their involvement?		
<b><u>b) Detailed analysis</u></b>		
i) Did the SEA process undertake the following activities:		
a) Scoping to identify key issues and impacts to be analysed?		
b) Collecting baseline information?		
c) Analyse potential effects of the proposal and alternatives?		
d) Identify measures to enhance opportunities and mitigate adverse impacts?		
e) Preparation of SEA report?		
ii) Did SEA report preparation involve the following:		
a) Draft report on findings of the SEA?		
b) Engage the public on the draft report?		
g) Prepare a final SEA report incorporating public comment?		
iii) Was the SEA subject to an independent review (quality control check)?		
<b><u>c) Decision-making and implementation process</u></b>		
i) Did the SEA make recommendations to decision-makers?		
ii) Was provision made to monitor decisions taken on the proposal and the results of their implementation?		

---

---

*Module 2: Technical quality review in accordance with OECD DAC guidance* *Yes/No* *Rating/Comments*

**a) Presentation, usefulness and quality of information**

- i) Has the purpose/aim of the SEA been described, with a mention of the regulations which underpin the document?
- ii) Is the scope of the SEA discussed?
- iii) Was the information provided by the SEA process adequate (i.e. comprehensive, rigorous and understandable) for those responsible for developing the PPP? What was missing?
- iv) Was the information provided by the SEA process adequate (see above) from the point of view of the key stakeholders? What was missing?
- v) Did the SEA identify the issues most important to sustainable outcomes, rather than all significant environmental issues?
- vi) Did the SEA reflect questions and concerns not initially included in the PPP? What was appreciated most/what was irrelevant, etc.?

**b) Co-operation and stakeholder participation**

- i) Was there working co-operation between the SEA team and those responsible for developing the PPP? Was this effective? How could this be improved?
- ii) Were opportunities provided for stakeholder and/or public involvement? Was this effective? How could this be improved?
- iii) Was there an effort to involve less powerful stakeholders in the consultation?

**c) Assessment of environmental impacts**

- i) Are likely significant environmental affects, constraints and opportunities clearly described?
  - ii) Is an effort made to prioritise those effects that most affect sustainability?
  - iii) Are the methodologies for assessing environmental impacts described?
  - iv) Are both positive and adverse impacts addressed?
  - v) Are uncertainties in assessing the impacts and assumptions described or justified (e.g. use of worst-case scenario)?
  - vi) Are mitigation measures clearly described and recommended to prevent, reduce or remedy any significant adverse effects on the environment in implementing the proposal?
  - vii) Does the SEA address the linkages and trade-offs between environmental, social and economic considerations?
- 

---

*Module 2: Technical quality review in accordance with OECD DAC guidance*

*Yes/No* *Rating/Comments*

**d) Consideration of alternatives**

- i) Are the potential alternatives for the PPP described and considered in terms of the SEA objectives? Have these included the 'no change'?
-

---

alternative?

ii) If any alternatives have been eliminated, have the reasons been provided?

**e) Planned follow up activities and implementation**

i) Are the indicators for monitoring implementation of the PPP clearly defined? And, are they based upon the original baseline information and on the objectives of the PPP and the SEA?

ii) Are the links to other potential follow-up procedures specified, e.g. project EIA, design guidance etc.?

iii) Are recommendations for the implementation process clearly formulated?

iv) Are outcome indicators defined? And is there an evaluation plan (with adequate budget and clearly assigned responsibilities) so that the sustainability focus of the SEA can continue beyond the planning phase?

---

## Appendix F: Indicative check list for evaluating an EIA report

Name of the project	
Country where the project is to be located	
Name of proponent	
Name of company which compiled the EIA report	
Date that the EIA report was completed	
Name of evaluator(s)	
Date of evaluation	

### PREAMBLE AND GUIDE TO THE EVALUATION DOCUMENT

#### STRUCTURE OF EVALUATION FORM

Notwithstanding requirements under the national legislation of the State of Origin and the minimum requirements for notification the Mandated Agency may wish to use this indicative template. It allows the evaluator to assess the report in a systematic and structured way both in terms of process and content. An explanation of the grading system used in the evaluation is provided in section 2 below and a summary of the findings of the evaluation is presented in section 3. This is followed by the detailed evaluation form, which is divided into the following sections:

1. Methodology used in compiling EIA report
2. Legal, Policy & Administrative Requirements
3. Description of the project
4. Assessment of alternatives to the project
5. Description of the environment
6. Description of impacts
7. Consideration of measures to mitigate impacts
8. Non-technical summary
9. General approach

#### EXPLANATION OF EVALUATION NOTATION

For each question posed in the Evaluation Form, the evaluator considers whether the information is relevant to the project and it is marked Y (yes) or N (no).

If the information is relevant, the evaluator reads the relevant sections of the EIA report and specialist studies and establishes whether the information provided is:

- Complete or comprehensive (C): all information required for decision-making is available. No additional information is required even though more information might exist.
- Acceptable or adequate (A): the information presented is incomplete, but the omissions do not prevent the decision-making process from proceeding.
- Inadequate (I): the information presented contains major omissions. Additional information is necessary before the decision-making process can proceed.

## **NARRATIVE REPORT**

Introduction

Methodology for the evaluation

As stated above, one of the main purposes of an evaluation is to determine whether the information provided in the EIA reports is adequate to make an informed decision. With this goal in mind, the modus operandi of the evaluator is to concentrate on the information provided in the report, as this is the sole basis on which the I&APs and the competent authority can make their decisions. Thus, as a matter of principle the evaluator does not engage with the proponent, the EIA consultants, the I&APs or the competent authority during the review process. The comments made below therefore are confined to what is written in the EIR.

It should be noted that the evaluation focuses on the content of the main report as this is the document which will be read by most of the stakeholders and decision-makers. However, the specialist reports are also examined to ensure that their findings are sound and their conclusions have been accurately reflected in the main report.

Summary opinion

	<i>Judgement (C/A/I)</i>	<i>Comments</i>
EIA Process		
Description of the project		
Assessment of alternatives to the project		
Description of the environment		
Description of impacts		
Consideration of measures to mitigate impacts		
Non-technical summary		
General approach and presentation		

Conclusion

The overall grading of the EIA report for decision-making is as follows:

- Excellent: The EIA report contains everything required for decision-making on the project. There are no gaps.
- Good: The EIA report contains most of the information required as far as it is relevant in the particular circumstances of the project; any gaps are relatively minor and an informed decision can be made.
- Satisfactory: The information presented is not complete; there are significant omissions but in the context of the proposed project, these do not prevent a decision being made on whether the project should be allowed to proceed or not (i.e. in the case of the latter decision, there is enough information for decision-makers to reject a project).
- Inadequate: Some of the information has been provided, but there are major omissions; in the context of the proposed project these must be addressed before a decision on whether the project should be allowed to proceed can be taken (i.e. the Precautionary Principle must be applied).
- Poor: The information required has not been provided or is far from complete and the EIR should be rejected.

<i>Key questions</i>	<i>Yes</i>	<i>No</i>	<i>Partially</i>	<i>Don't know</i>
Does the EIA report comply with the Terms of Reference?				
Does the EIA report comply with the legal requirements for EIA in the country?				
Did the EIA process include genuine public participation?				
Were the consultants unduly influenced by the proponent or the Authorities?				
Did the EIA report focus on the most important issues?				
Is the EIA report of acceptable quality?				
Will the EIA report help to make a more informed decision about the project?				

Recommendations

Add your text

## DETAILED EVALUATION FORM

		Relevant Yes/No	Judgement (C/A/I)	Comments
<b>1 METHODOLOGY</b>				
1.1	Does the report set out the assumptions and limitations of the study?			
1.2	Does the report clearly explain the methodology used in the EIA, public participation process and in each specialist study?			
1.3	Does the report indicate what data are inadequate or absent?			
1.4	Did the EIA process include genuine stakeholder consultation?			
1.5	If so, were the general public and/or affected communities included in the consultation?			
1.6	Were capacity building programmes required to enable informed stakeholder involvement and are they described?			
1.7	Have the views of stakeholders been meaningfully incorporated into the findings of the EIA?			
1.8	Does the report include lists of interested and affected parties consulted, as well as their original submissions and comments?			
<b>2 LEGAL, POLICY AND ADMINISTRATIVE REQUIREMENTS</b>				
2.1	Have the relevant international treaties, conventions and agreements been listed with reference to where and how these obligations have been met on this project?			
2.2	Have the relevant policies of the country been listed with reference to where and how the obligations have been met on this project?			
2.3	Have the relevant laws and regulations of the country been listed, with reference to project compliance?			
2.4	Have the relevant standards and guidelines for compliance been listed?			
2.5	Has the EIA administrative process been described together with project compliance?			
<b>3 PROJECT DESCRIPTION</b>				
<b>Land requirements</b>				
3.1	Has the land ownership status been described?			
3.2	Has the land required for the project and any associated services, been described and clearly shown on an appropriately scaled map?			
3.3	For a linear project, has the land corridor and need for			

	Relevant Yes/No	Judgement (C/A/I)	Comments
earthworks been described and shown on an appropriately scaled map?			
3.4 Has the re-instatement after use of temporary landtake been described?			
3.5 Have local, regional and national plans e.g. SEAs, structure plans, integrated development plans, environmental action plans, zoning plans been reviewed in order to place the project into context?			
<b>Project description</b>			
3.6 Have all the project components been described, including e.g. a process flow sheet, water balance, suitable diagrams and layout plans?			
3.7 Is there a life cycle analysis?			
3.8 Have the technologies to be used been described, with a motivation as to how they comply with BATNEEC and BEO principles?			
3.9 Have the social issues related to the project been described e.g. number of employees, percent from local community, transportation, accommodation, support services, recreation facilities, employment structures, skills breakdown, training, skills transfer etc?			
<b>Waste and emissions</b>			
3.10 Have the sources, types and quantities of waste generated during different scenarios for construction and operation been estimated e.g. air emissions, process effluent, runoff, noise and vibrations, odour, liquid and solid waste?			
3.11 Have the predictions in the report been scientifically calculated, with the results clearly presented for different scenarios?			
3.12 Has a risk assessment been performed, including the identification of exposure pathways, probability and consequences?			
3.13 Does the report discuss ways in which the wastes can be reduced, recycled or re-used?			
3.14 Have the ways in which wastes will be stored, handled or treated prior to disposal been explained?			
3.15 Has the receiving environment where such waste will be disposed, been identified and described?			
<b>Project inputs</b>			
3.16 Are the nature and quantities of materials needed during construction and operation, clearly indicated e.g. water, power, lubricants, raw materials, ore, structural components, fill, etc?			

	Relevant Yes/No	Judgement (C/A/I)	Comments
3.17 Have the sites from where these materials will be sourced, been identified and assessed in terms of impacts, in the EIA report?			
3.18 Have the impacts of transportation of all materials, personnel and visitors to the project site during construction and operation been assessed?			
3.19 Have the means of transporting materials, products, workers and visitors to and from the site during construction and operation, been explained?			
3.20 Has the project timetable been clearly set out for each project phase: construction, operation, decommissioning and closure?			
<b>4 ALTERNATIVES</b>			
4.1 Were in project alternatives considered in the EA?			
4.2 If alternatives were considered, are the reasons for selecting the proposed alternative adequately described?			
4.3 If alternatives are described, have their main environmental impacts been compared clearly and objectively with those of the proposed project?			
4.4 Has a prediction of the likely future environmental conditions in the absence of the project been developed (no go option)?			
<b>5 DESCRIPTION OF THE BASELINE ENVIRONMENT</b>			
5.1 Have the areas expected to be significantly affected by the various aspects of the project been indicated with the aid of suitable maps?			
5.2 Have the land uses on the project site(s) and in the surrounding areas been described and their use and non-use values adequately assessed?			
5.3 Have the <i>biophysical</i> components of the environment likely to be affected by the project been identified and described sufficiently for the prediction of impacts?			
5.3.1 Climate (wind, precipitation, temperature, evaporation etc)			
5.3.2 Geology (rock type, structure, geochemistry etc) and geomorphology			
5.3.3 Soils (agricultural and rehabilitation potential)			
5.3.4 Topography (slopes, screening effects)			
5.3.5 Surface hydrology (flood lines, runoff, flows, supply, users, wetlands, dams, lakes)			
5.3.6 Groundwater (aquifers, yields, permeability, users, gradients etc)			
5.3.7 Hydrochemistry (organic, inorganic, physical)			

	Relevant Yes/No	Judgement (C/A/I)	Comments
5.3.8 Air quality (ambient and seasonal)			
5.3.9 Terrestrial and aquatic ecology (vegetation and animal types, diversity, endemism, rarity value, alien and invasive spp)			
5.3.10 Other (specify)			
5.4 Have the <i>social</i> components of the environment likely to be affected by the project been identified and described sufficiently for the prediction of impacts?			
5.4.1 Social structure of local community			
5.4.2 Demographics			
5.4.3 Skills			
5.4.4 Employment			
5.4.5 Community facilities and services			
5.4.6 Amenities			
5.4.7 Settlement patterns			
5.4.8 Aesthetics (visual, noise, odour, sense of place, air quality, quality of life etc)			
5.4.9 Health (including HIV/AIDS)			
5.4.10 Crime and community safety			
5.5 Have the <i>cultural</i> components of the environment likely to be affected by the project been identified and described sufficiently for the prediction of impacts?			
5.5.1 Sites of spiritual and/or religious significance			
5.5.2 Sites of cultural significance			
5.5.3 Sites of historical significance			
5.5.4 Archaeological sites			
5.5.5 Other (specify)			
5.6 Have the economic components of the environment likely to be affected by the project been identified and described sufficiently for the prediction of impacts?			
5.6.1 Local, regional and national economic indicators			
5.6.2 Multiplier effect			
5.6.3 Forward and backward linkages			
5.6.4 Local spending			
5.6.5 Import and export potential			
5.6.6 Tax base and revenue generation			

	Relevant Yes/No	Judgement (C/A/I)	Comments
5.6.7 Resource economics			
5.6.8 Cost-benefit analysis			
5.6.9 Opportunity costs			
5.7 Have the authors of the EIA Report adequately consulted the latest literature and/or unpublished reports and/or data relevant to the study and cited their sources?			
5.8 Have the specialist studies been peer reviewed?			
<b>6 DESCRIPTION OF IMPACTS</b>			
<b>Impact identification</b>			
6.1 Have direct and indirect/ secondary effects of constructing, operating and, where relevant, after use or decommissioning of the project been clearly explained (including both positive and negative effects)?			
6.2 Have the above types of impacts been investigated in so far as they affect the following:			
6.2.1 Air quality			
6.2.2 Surface Water Resources (flow and quality)			
6.2.3 Ground water			
6.2.4 Soils			
6.2.5 Noise and vibration			
6.2.6 Topography and geomorphology			
6.2.7 Vegetation			
6.2.8 Terrestrial Ecology and biodiversity			
6.2.9 Aquatic ecology			
6.2.10 Historic and cultural heritage			
6.2.11 Land use			
6.2.12 People and communities			
6.2.13 Health			
6.2.14 Sense of place			
6.2.15 Transportation and traffic			
6.2.16 A neighbouring country (transboundary impacts)			
6.2.17 Local, regional and national economic indicators			
6.2.18 Crime and community safety			
6.3 Is the investigation of each type of impact appropriate to its			

	Relevant Yes/No	Judgement (C/A/I)	Comments
importance for the decision, avoiding unnecessary information and concentrating mainly on the 5 key issues?			
6.4 Are cumulative impacts considered?			
6.5 Has consideration been given to impacts which might arise from non-standard operating conditions, (i.e. equipment failure or unusual environmental conditions such as flooding), accidents and emergencies? (i.e. risk assessment)			
<b>Magnitude of impact</b>			
6.6 Are impacts described in terms of the nature and magnitude of the change occurring and the nature (location, number, value, sensitivity) of the affected receptors?			
6.7 Has the timescale over which the effects will occur been predicted such that it is clear whether impacts are short, medium or long term, temporary or permanent, reversible or irreversible?			
6.8 Where possible, have predictions of impacts been expressed in quantitative terms? Otherwise, have qualitative descriptions been defined?			
6.9 Where quantitative predictions have been provided is the level of uncertainty attached to the results described?			
<b>Data and methods</b>			
6.10 Have the methods to predict the nature, size and scale of impacts been described and are they appropriate to the importance of each projected impact?			
6.11 Have the impacts of the environment on the construction and operation of the project been considered?			
<b>Evaluation of impact significance</b>			
6.12 Does the information include a clear indication of which impacts may be significant and which may not?			
6.13 Has the significance of effects been discussed taking account of appropriate national and international standards or norms, where these are available?			
6.14 Where there are no generally accepted standards or criteria for the evaluation of significance, is a clear distinction made between fact, assumption and professional judgement?			
6.15 Have the magnitude, location and duration of the impacts been discussed in the context of the value, sensitivity and rarity of the resource or environment?			
<b>7 MITIGATION</b>			
<b>Description of mitigation measures</b>			
7.1 Has the mitigation of negative impacts been considered and, where feasible, have specific measures been proposed to			

	Relevant Yes/No	Judgement (C/A/I)	Comments
address each impact?			
7.2 Where mitigating measures are proposed, has the significance of any impact remaining after mitigation been described?			
7.3 Where appropriate, do mitigation methods considered include modification of project design, construction and operation, the replacement of facilities/ resources, and the creation of new resources?			
7.4 Is it clear to what extent the mitigation methods are likely to be effective?			
7.5 Has the EIA report clearly explained what the costs of mitigation are likely to be, and compared these to the benefits (including the costs of non-mitigation)?			
<b>Commitment to mitigation</b>			
7.6 Have details of how the mitigation will be implemented and function over the time span for which they are necessary, been presented i.e. in an Environmental Management Plan?			
<b>Monitoring proposal</b>			
7.7 Has the EIA proposed practical monitoring arrangements to check the environmental impacts resulting from the implementation of the project and their conformity with the predictions made?			
7.8 Has the EIA proposed Limits of Acceptable Change that the developer can use to track impacts and trigger management intervention?			
7.9 Does the scale of any proposed monitoring arrangements correspond to the potential scale and significance of deviations from expected impacts?			
<b>Environmental effects of mitigation measures</b>			
7.10 Have any adverse environmental effects of mitigation measures been investigated and described?			
7.11 Has the potential for conflict between the benefits of mitigating measures and their adverse impacts been considered?			
<b>8 NON-TECHNICAL SUMMARY</b>			
8.1 Is there a non-technical summary that will easily be understood by a lay-person?			
8.2 Does the summary contain a brief but concise description of the project and the environment, an account of the main issues and mitigation measures to be undertaken, and a description of any remaining or residual impacts?			
8.3 Does the summary include a brief explanation of the overall approach to the assessment?			

	Relevant Yes/No	Judgement (C/A/I)	Comments
8.4 Does the summary provide an indication of the confidence which can be placed in the results?			
8.5 Does the summary indicate whether the project is or is not environmentally acceptable.			
<b>9 GENERAL APPROACH</b>			
<b>Organisation of information</b>			
9.1 Is the information logically arranged in sections?			
9.2 Is the location of the information identified in an index or table of contents?			
9.3 When information from external sources has been introduced, has a full reference to the source been included?			
9.4 Does the report or appendices contain the Terms of Reference for the EA?			
9.5 Are the credentials of the report authors and specialists presented, with a clear indication of their respective contributions?			
<b>Presentation of information</b>			
9.6 Has information and analysis been offered to support all conclusions drawn?			
9.7 Has information and analysis been presented so as to be comprehensible to the non-specialist, using maps, tables and graphical material as appropriate?			
9.8 Are the maps at an appropriate scale, show co-ordinates, north sign, contours, drainage, settlement, landmarks, administrative boundaries etc in relation to the proposed project site?			
9.9 Has superfluous information (i.e. information not needed for the decision) been avoided?			
9.10 Have prominence and emphasis been given to severe adverse impacts, to substantial environmental benefits, and to controversial issues?			
9.11 Is the information objective?			
9.12 Are all the specialist studies and appendices present?			

## Appendix G: Guidance for conducting an audit

The audit should commence with an opening meeting with the proponent and/or contractors to outline the audit programme and to establish the audit scope (geographical, legal and administrative). The audit team should then commence the audit covering work areas, documentation, roles and responsibilities. The principal audit methods include:

- Observation;
- Document checks;
- Interviews;
- Photographs (but not digital photo's that have been manipulated);
- Verification and cross-checking; and
- Measurement and sampling, if serious doubts arise.

The audit should end with a close-out meeting with site management to present the key findings and to highlight any serious liabilities which may need urgent attention.

The audit protocol should be arranged by work area, so that the foreman and/or Safety, Health and Environment (SHE) Officer in each area can be held directly responsible for the findings, e.g. each contractor's work area, workshops, waste disposal site, etc.

Each finding should be substantiated with:

- An actual result or reading, and/or
- Monitoring trends, and/or
- Attributed statements, and/or
- Direct observation by the auditor, and/or
- Photographs, and/or
- Documentary evidence (receipts, agreements, permits etc).

In some cases it may be necessary to take spot samples, (e.g. pH readings) to verify data provided, if there is some doubt as to the authenticity of the data, or to take measurements on the ground or on plans, e.g. to verify areas that have been rehabilitated.

Suggested elements of an audit protocol (source: adapted from Brownlie et.al. 2006)

- Item reference number (cross-reference to the conditions contained in the authorisation and/or EMP).
- Environmental conditions as listed in the authorisation, and/or the EMP requirement, presented as an auditable statement or question e.g. “Are drip trays being used where necessary in the [name] workshop?”
- Audit judgment e.g. “Partial compliance”.
- Audit finding e.g. “Drip trays are present under all drum outlets, but from direct inspection of the ground (ref photo) and work practices observed by (name of) Person during the audit, it would appear that drip trays are not being used during vehicle servicing. This finding is corroborated by the presence of [BTEX, light petroleum products etc] in the last [number] groundwater monitoring results in Borehole X.”
- Corrective action required e.g. “While the concentrations of [state determinants] are not yet over the stated standards, the trend is rising and corrective measures need to be taken as a matter of priority. These include: training of personnel in the workshop; excavation and removal of contaminated soil to [state place]; purchase of additional drip trays; etc.”
- Priority ranking (very high, high, medium, low) e.g. High.
- Responsible person e.g. Safety Health and Environment Manager; Workshop Foreman, Contractor.
- Date for completion e.g. within one month from [date].

The final audit report should be submitted no more than 2 weeks after the audit has been completed. The report should clearly explain:

- The composition of the audit team;
- The scope of the audit;
- Any constraints or limitations placed on the auditors;
- The aims of the audit;
- The methods used;
- A list of persons interviewed; and

- A list of all the work areas visited.

The completed checklists (framework) should form the body of the audit report and a quantitative analysis of the findings must be provided. If the same procedure is followed for each audit, it is then possible to monitor progress towards full compliance. The report should conclude with a clear set of recommendations for corrective action, ranked according to priority. Each action should have a responsible person assigned to it and a date by which it should be started/completed.

*Audit frequency*

This will be determined by the nature of the development, the length of the construction programme, its location, the degree of confidence that can be placed in the implementation of the EMP being carried out and the degree of compliance. Sites with good environmental management may not need to be audited as frequently as those with a more suspect track record.