PRE-FEASIBILITY STUDY INTO MEASURES TO IMPROVE THE MANAGEMENT OF THE LOWER ORANGE RIVER AND TO PROVIDE FOR FUTURE DEVELOPMENTS ALONG THE BORDER BETWEEN NAMIBIA AND SOUTH AFRICA

Report on Task 4.3: Water Sharing, Cost Sharing and Dam Operation

Contribution by Legal Specialists

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1 INTRODUCTION

1.1 The legal specialists have been given the following tasks in terms of the Task Execution Plan:

"(C.1) Provide a summary and/or references to applicable principles from the Helsinki rules, the 1997 Convention of the United Nations and the SADEC (sic) protocol on shared water resources and comment on the potential rights of all Orange River basin countries to the water from the Orange River

(C.2) Provide a summary and/or references to aspects from agreements and legal obligations with respect to existing upstream dams and inter-basin transfer systems in the Orange River that are to be observed

(C.3) Provide references to legal aspects of similar situations elsewhere in the world, where more than one country has a stake in a major dam/river system

(C.4) Use information provided by the Task 2 and Task 3 teams to comment on the legal issues pertaining to "rights-based" criteria, "needs-based" criteria and "efficiency-based" criteria for the sharing of water

(C.5) Provide proposals concerning the principles to be adopted with respect to the sharing of water and responsibilities/liabilities between Namibia and South Africa that are equitable and fair to both parties; and recommend further work that will be required in this regard

(C.6) Comment on the effects that other international legal issues, such as the border between Namibia and the RSA, may have on the implementation of a shared water system development and water management arrangement for the lower Orange River; and recommend further work in this regard."

1.2 The **approach and methodology** to be adopted for the purpose of drafting a report are indicated in the Execution Plan for Task 4.3. It reads as follows:

"The Consultant shall provide proposals concerning the principles to be adopted with respect to the sharing of water between Namibia and South Africa, by considering:

- principles of equitable allocations such as "rights-based" criteria that are based on relative hydrography (including quantity, quality and reliability) and chronology of use;
- the "efficiency-based" criteria such as beneficial use and economics;
- "needs-based" criteria for water allocations such as irrigable land and/or population;
- other upstream dams and inter-basin transfer systems in the Orange River.

The Helsinki rules, the 1997 Convention of the United Nations and the SADEC (sic) protocol will serve as important references in this regard, and case studies on similar situations elsewhere in the world, where more than one country has a stake in a major dam/river system, will be referenced."

1.3 This first report will introduce some of the legal issues mentioned above. This is not an exhaustive discussion yet. The following will be dealt with:

- The applicable legal principles form the Helsinki Rules, the UN Convention of 1997 and the SADC Protocol. (There are actually two SADC Protocols.)
- The potential rights of "all the Orange River Basin Countries" to the water from this river. (The tasks in C.1 will be dealt with in two separate sections.)
- The aspects emanating from the agreements and the legal obligations with respect to existing upstream dams and inter-basin transfer systems in the Orange River that are to be observed.

- Lessons to be learned from similar situations elsewhere in the world; namely where more than one country has a stake in a major dam or river system.
- Other legal issues (such as the border between Namibia and the RSA) that may impact on this water sharing project.

1.4 The remaining task set out in C.4 can only be addressed once the reports of other teams become available. In the case of C.5 we can at this stage not offer new principles in addition to those that will be mentioned under C.1. We conclude this report by making some recommendations but specific proposals "concerning principles to be **adopted** with respect to the [actual] sharing of water" can only be made once certain models or plans are on the table. (See further below the discussion in 1.13.)

1.5 The 1997 UN Convention is, for the present study, the most important international instrument. There is general consensus that the Helsinki Rules of 1966, which were adopted by an international academic body (the International Law Association) do not enjoy the same status as the UN Convention of 1997. The latter is a refinement and subsequent development of notions found in the Helsinki Rules (see below 2.1). There is in fact a specialized area of Public International Law from which the relevant principles will have to be distilled and applied. It can be described as the Law of International Watercourses (Non-Navigational use.) The existence and status of this body of law are confirmed in the Revised SADC Protocol and the draft bilateral agreement between the RSA and Namibia of 2002 on the "Utilization of the Water Resources along the Lower Orange River."

1.6 There is a tendency for national legislation of states also to refer to this area of International Law. The South African National Water Act of 1998 for example does so. Chapter I of the Act contains basic principles

under the heading "Interpretation and Fundamental Principles" that refer, amongst other things, to sharing of "some water resources with other countries." In Section 1 there is a definition of "water management institution" which includes a body "responsible for international water management". Another important indication is found in Section 2, the purpose of the Act, which is to "ensure that the nation's water resources are protected, used, developed, conserved, managed and controlled" by taking several factors (such as the public interest) into account. One such factor is to meet "international obligations".

The trend is clear; national and international water management are not separate matters that can be managed in isolation of each other. And in managing the country's water resources the authorities must take international law into account. This is confirmed by Section 1(3) of the Act. It reads:

> *"When interpreting a provision of this Act any reasonable interpretation which is consistent with the purpose of this Act as stated in Section 2 must be preferred over any alternative interpretation which is inconsistent with that purpose."*

To this should be added Section 233 of the Constitution of the Republic of South Africa, 199. It states:

"When interpreting any legislation, every court must prefer any reasonable interpretation of the legislation that is consistent with international law over any alternative interpretation that is inconsistent with international law."

1.7 Chapter 10 of the South African Act deals with "International Water Management". The Minister of Water Affairs "may establish bodies to implement international agreements in respect of the management and development of water resources shared with neighbouring countries, and on regional co-operation over water resources." These bodies may perform their functions also outside South Africa (Section 103(3), National Water Act). Certain existing bodies predating this Act (including the Vioolsdrift Noordoewer Joint Irrigation Authority established on 14 September 1992 in terms of an agreement concluded with Namibia) have been transformed into international water management bodies under the Water Act. (Sec 108.)

The powers of such bodies are wide and will include, in addition to those mentioned in Section 104 of the Act (creating them as bodies corporate with legal personality) also the powers associated with the particular international agreement. The Act and such an agreement will have to be read together. The powers include regional co-operation, monitoring, protection of water resources, construction and maintenance of waterworks, use and supply of water etc. This is an important set of provisions with direct relevance for the present project; should a joint management structure and institutions eventually be proposed.

1.8 The present Namibian water legislation has no such provisions. We are advised that Namibia is in the process of adopting a new Water Act and that this is expected to happen in the near future. We have been unable to obtain a draft of the proposed legislation and can therefore not comment on the international water aspects of the Namibian legislation.

1.9 National legislation (the relevance of which is recognized on p 24 of the Terms of Reference) may in future reports gain in importance when e.g. the vested rights of private landowners and national regulations may

enter the picture. Both Namibia and the RSA also have supreme and justiciable Constitutions. Their effect should be kept in mind.

1.10 The fact that International Law is the point of departure does not mean that countries cannot accommodate local needs and conditions. International Law allows them to do so but that is to be done within the broader context of those international obligations that are binding upon them. (See Art. 3(3), UN Convention of 1997). The moment two or more countries enter into an interstate transaction, International Law enters the picture. States have to give effect to their international legal obligations through their domestic legislation and executive actions, and their bilateral and international actions.

1.11 The SADC Protocols will be dealt with in lesser detail. The Revised Protocol is to a large degree based on the 1997 UN Convention as far as substantive provisions are concerned. It should, however, be emphasized that SADC, as a regional organization with its own unique orientation, is directly concerned with the socio-economic development and poverty relief of its members and their populations. The use of water resources will be affected by these factors.

1.12 The present study deals primarily with a bilateral international relationship. The interests of other watercourse states are, however, also involved. There are international agreements to this effect and the very nature and definition of an international watercourse requires respect for the rights of all relevant states. The Terms of Reference (see C.1 of 3.1 of the Task Execution Plan) speaks of "the potential rights of **all** Orange River basin countries to the water from the Orange River". (Emphasis added.)

1.13 The terminology used has to be explained briefly. In the light of the fact that the applicable legal principles are to be found in the UN Convention of 1997 (see above 1.5) and the Revised SADC Protocol, we use the terminology of those instruments and the definitions therein. This means that this report employs terms such as "watercourse state" (not basin state) and "international watercourse" and "watercourse" (not drainage basin or basin).

These terms have been developed through a long process of negotiations and codification of International Law on this point and resulted in the adoption of the 1997 UN Convention. This outcome was accepted by the SADC states when they adopted the Revised Protocol of 2000.

1.14 We will study the applicable international legal instruments and will identify the basic principles that have to be taken into account for the purposes of completing the pre-feasibility study. The present document is a first discussion paper.

1.15 The actual application or implementation of basic legal principles is another matter. Exactly how they will find implementation, in what format and through what arrangements will have to be studied and decided subsequently. In this regard International Law does provide guidelines, but the actual arrangements will have to be decided between the countries involved in a particular situation and adopting an agreement. All other reports done in terms of this study then become important and will have to be taken into account when legal principles have to be implemented. Practical considerations and factors identified by other disciplines (also covered in this study) will obviously have an impact on how the needs of the countries involved will be translated into concrete proposals and mechanisms within the context of the law.

1.16 The Execution Plan foresees a certain sequence in these matters. C.4 of the tasks of the "legal specialists" can only be done once the reports by Task Teams 2 and 3 become available. Some joint activity will then be necessary. The function of the law is to provide a mechanism for translating factual positions and needs into predictable and certain binding arrangements that will apply with respect to future activities and procedures. The proposals of the various teams will eventually have to be integrated when the final report is compiled.

1.17 The two legal specialists have met in Pretoria in April and November and in Stellenbosch in December 2002 and have conducted discussions with colleagues from Ninham Shand. G. Erasmus also held discussions in Windhoek in June 2002 and they have consulted officials in Pretoria. They have also corresponded regularly via email and telephone.

1.18 The remainder of this document will follow the sequence mentioned in 1.3 above.

2 C.1: THE APPLICABLE LEGAL PRINCIPLES

2.1 The Helsinki Rules

The Execution Plan mentioned three international instruments to be consulted for the purposes of the present report. They are the Helsinki Rules, the UN Convention of 1997 and the SADC Protocol. We will focus primarily on the latter two. The Helsinki Rules were adopted by the International Law Association (ILA) in Helsinki in 1966. This was the product of the work of a private, academic body and it played an important role in the codification of the rules of International Law on international watercourses, prior to the UN

Convention. (See Tanzi and Acari 35 on the process leading up to the 1997 UN Convention.)

The Helsinki Rules are not a formal source for the content of the UN Convention. After a long debate a resolution was adopted in the Sixth Committee of the General Assembly, not to retain a formal reference to the Helsinki Rules in the 1997 Convention (Tanzi and Acari 37). As a result the 1997 Convention simply states "that it is mindful of the valuable contribution of international organizations, to the codification and progressive development of international law in this field". The Revised SADC Protocol on Shared Watercourses confirms this approach to the Helsinki Rules.

The Helsinki Rules played an important part in the codification process but it does not enjoy the status of treaty law (as the Convention does) and could at most be considered as reflecting customary international law where applicable. It is not a source of International Law and cannot "create" legal obligations for states. (See Art 38, ICJ (International Court of Justice) Statute.)

In the light of these considerations the present study will not deal with the Helsinki Rules as a separate source of formal law. It remains relevant as indicative of the development of certain principles of customary International Law.

2.2 The UN Convention of 1997

2.2.1 Basic Features

This is a framework convention. It contains general principles that may be tailored for the purposes of an inter-state agreement on a specific watercourse or part of it (such as the Lower Orange.) Article 3(3) allows specifically for subsequent watercourse agreements "which apply and adjust the provisions of

the present Convention to the characteristics and uses of a particular international watercourse or part thereof".

It codifies international law on non-navigational use of international watercourses (see Preamble). Navigation incidental to the permitted use will be in order. (The Revised SADC Protocol includes navigational use. See Art 3(2).)

The Preamble (which is of interpretational value) contains references to other areas such as environmental protection and the needs of developing countries.

Many of the provisions contained in the Convention reflect Customary International Law. The general value of the Convention has been summarized as "…to perform the function of an authoritative text evidentiary of the customary law in the field, as corroborated by the International Court of Justice in the "Gabčíkovo-Nagymaros case". (Tanzi and Arcari 32.) The Convention, therefore, also contains material provisions suitable for application and use in the absence of a specific watercourse agreement. It is not as if there is a void in law regarding international watercourses. This field is well regulated through International Law of considerable detail.

The relationship between the principles contained in the UN Convention and subsequent (or even prior) agreements by specific countries on a shared watercourse calls for close scrutiny. Theoretically such a specific agreement contains the rules applicable in that situation. In the *Danube Case of 1997* the International Court of Justice interpreted a specific agreement concluded between Hungary and Czechoslovakia in 1977 (providing for a large project on the Danube) in the light of the subsequent UN Convention. The following discussion by McCaffrey (at 193-194) explains the reasoning of the Court.

"Second, as evidence of the modern vitality of the principle of community of interest in the field of non-navigational uses of international watercourses, the Court cites the 1997 UN Convention. This is remarkable in that the Convention had only been concluded four months earlier, and, by the date the judgment was rendered, had been signed by only three states. The Court sheds no further light on exactly why it regards the newly minted treaty as evidence of the principle and 'modern development of international law' in the field. The answer might lie to some extent in the process that produced the Convention – twenty years' work by the ILC, culminating in a diplomatic negotiation which produced an agreement that closely tracks the ILC's draft articles. Whatever the case may be, the Court's invocation of the Convention constitutes a strong endorsement of the treaty as an authoritative instrument in the field, and seems likely to lead states to refer to it in support of their positions concerning internationally shared water resources."

The following quote sheds further light on the status and general significance of the UN Convention:

"The two-pronged normative role of the Convention, namely, that of setting out in written form general principles that may be further specified by special agreements on a particular watercourse, on the one hand, and that of providing rules suitable for material application in the absence of other specific watercourse agreements, on the other, may well be performed aside from the value of the Convention in terms of treaty law proper. To that end, the relation of the Convention to general customary law is all the more important, for, where there is coincidence between a particular provision of the Convention and a customary rule, the normative role of the instrument under review would be fulfilled vis-à-vis

> *States that are not parties to the Convention and irrespective of its entry into force."* (Tanzi and Arcari 89.)

The work on this Convention started in 1970 at the request of the General Assembly (GA) of the United Nations. The International Law Commission (ILC) became involved in the actual preparation. The text of the Convention was first adopted as a resolution of the GA by a vote of 106 in favour, 3 against, and 27 abstentions. Thereafter it became open for ratification, approval, acceptance and accession and formal entry into force, as multilateral agreements of this kind normally are.

This is a multilateral Convention and as such will only enter into force qua agreement on the 90th day following the date of deposit of the 35th instrument of ratification, acceptance, approval or accession with the Secretary-General of the United Nations. (On 15 August 2002 20 such instruments had been deposited. Namibia ratified on 29 August 2001 and South Africa on 26 October 1998.) The customary international law principles contained in the text of the Convention are, of course, binding on the basis of being customary international law.

The fact that this Convention is not yet formally in force as a treaty, does not detract from the fact that there is a body of International Law on international watercourses that came about through the development of customary International Law over a long period of time. Customary International Law is one of the classical sources of Public International Law. (Art. 38, Statute of the International Court of Justice.)

When specific states conclude bilateral or regional agreements amongst themselves they enter into binding agreements for the parties involved. This has been happening in Southern Africa via the SADC Revised Protocols, the Orange Senqu River Commission Agreement and the proposed bilateral

agreement between Namibia and the RSA. These states are adopting the principles of the UN Convention for this purpose. By doing so they confirm the status of that instrument and give effect to one of its important objectives, namely to enter into agreements (called "watercourse agreements") "which apply and adjust the provisions of the present Convention to the characteristics and uses of a particular international watercourse or part thereof." (Art. 3(3).

Article 2 contains a number of important definitions, such as "watercourse", "international watercourse" and "watercourse state". A watercourse, as defined, accords with hydrological reality and emphasizes the interrelationship between all parts of such a system. An effect on one part could be transmitted to other parts. It also means that a watercourse is a natural phenomenon that becomes "international" when "political boundaries are superimposed on it." (McCaffrey 40.)

A watercourse is defined in the UN Convention as "a system of surface waters and ground waters constituting by virtue of their physical relationship a unitary whole and normally flowing into a common terminus." These components are interrelated, as the word "system" indicates. (See further McCaffrey 34-40.) An "international watercourse" is a watercourse "parts of which are situated in different states." (Art 2(b), UN Convention.) Hydrologically a watercourse includes "the main surface water channel and the water contained therein, but also the other components of a watercourse system, in particular, tributaries and groundwater." (McCaffrey 34.)

The Orange River is an international watercourse and Namibia, the RSA, Lesotho and Botswana are watercourse states connected to it. (Terms of Reference p 3.) The Lower Orange is part of this international (and regional) watercourse.

The text of the Convention also contains an Annex on Arbitration and there is a Statement of Understanding concerning the meaning of certain provisions.

2.2.2 Substantive Obligations

Commentaries on the Convention divide its content into "substantive" and "procedural" obligations. (See McCaffrey 397.) Both categories are equally binding. The same approach is adopted here.

It should be emphasized that both categories are obligations under International Law and as such are in principle not different from other international legal obligations binding on States. Their breach results in State responsibility and gives rise to the consequential duty to cease the breach and to make reparations. This responsibility may arise from the violation of treaty obligations, customary international law or obligations owed to the international community as such (*erga omnes* obligations.)

The substantive obligations are:

- To utilize an international watercourse in an equitable and reasonable manner.
- Not to cause significant harm to other states using the same watercourse.
- To protect international watercourses and their ecosystems.

The most controversial issue has been and remains the relationship between equitable and reasonable use and the no harm obligation. (McCaffrey 323.)

Regarding the **equitable and reasonable use** obligation the following is to be noted:

- It is about apportionment. The concept is a well-established one and has received much attention in American federal jurisprudence.
- The obligation is about utilization by a watercourse state, in its own territory.
- When is such utilization equitable? Ideally the states in question will have to negotiate and agree. In the absence of an agreement, a watercourse state must apply the relevant legal principles initially for itself to demonstrate to others that it has respected the law. It is now a norm of customary international law that other such states should not be deprived of their equitable share and benefits of an international watercourse. (See McCaffrey 347 and the Danube case of the ICJ of 1997.) A watercourse state cannot simply increase its own utilization till others cry foul; it must exercise due diligence, prevent harm and act in good faith (McCaffrey 343).
- Article 5 of the 1997 UN Convention confirms the principle of equitable use as the cornerstone of the law on this point.
- Art. 6 provides factors for determining equitable use in a given situation. These factors should be considered together. In the event of a conflict between legitimate uses, special regard is to be given to vital human needs. (Art. 10(2).) Otherwise and in the absence of custom to the contrary, "no use of an international watercourse enjoys inherent priority over other uses." (Art. 10(1).)
- Utilization is not only about optimal use, it is also about sustainable use.
- In order to determine whether use is equitable, benefits, as well as negative consequences of a particular use, should be taken into account. (Statement of Understanding.)
- Prior or historical usage cannot provide a basis for preferential or absolute entitlement. (McCaffrey 337.)

The **obligation not to cause significant harm** is dealt with in Art. 7 of the Convention. It contains the following elements:

- What is to be prevented, is significant harm; due diligence has to be exercised and permissible harm will be limited to what is reasonable under the circumstances.
- The fulfillment of this obligation requires that watercourse states must constantly act in a manner that demonstrates active awareness and respect of their duties, under International Law, *vis-à-vis* other states. This will become more attainable when joint institutions exist with clear guidelines.
- Article 27 is also to be considered in the present context. It plays a complementary role to Art. 7 with respect to the exchange of data. It deals with harm resulting from natural causes, as well as harm from human conduct.
- The obligation not to cause significant harm is also a norm of customary international law. (McCaffrey 379/80.)

The obligation **to protect international watercourses and their ecosystems** is a specific obligation under this Convention, but is also part of a wider set of *sui generis* rules on the protection of the international environment. The following should be noted:

- This duty is dealt with in part IV of the Convention. It finds further elaboration in several other international instruments and Customary International Law. (See further below the discussion in 6.4 to 6.6.)
- The fulfillment of the duty to protect watercourse ecosystems requires precautionary action.
- Comprehensive action is necessary and co-operation among the states concerned will be required.
- Preventive measures should be taken against serious or irreversible harm to watercourse ecosystems "even in the absence of clear scientific evidence"; it may often be too late by the time such evidence becomes available. (McCaffrey 395 and the Danube judgment para 140.)

- Holistic programmes for the protection of such ecosystems should be adopted. They should be pro-active and anticipatory rather than reactive and remedial.
- The concept of ecosystems should be understood broadly for this obligation to be effective. "An external impact affecting one component of an ecosystem causes reactions among other components and may disturb the equilibrium of the entire ecosystem." (The ECE's Ecosystems Approach, cited by McCaffrey, 393.) Grazing, logging, recreational use and fishing can have such effects.
- Other international agreements such as the Ramsar Convention on Wetlands and the UN Convention on Biological Diversity (both mentioned below in 6.4) and their more detailed provisions should be taken into account for the purposes of determining the scope and meaning of the obligation to protect the ecosystems of watercourses. The UN Convention on International Watercourses should, in this regard, be read together with these other agreements.
- In ecosystems "everything depends on everything else" and therefore they have to be protected even if failure to do so would have no readily apparent transboundary effect. (McCaffrey 394.)
- Protective measures should include protection of associated land areas, biological diversity, minimum stream flows and the "ecological, chemical and physical integrity" of these river systems.
- The Lower Orange is probably in need of such protective measures in any case. (Recreational use of the river is unregulated.) The uncertain position regarding the border adds to the problems associated with the absence of effective co-operation between the RSA and Namibia in this field.
- A detailed discussion of International Environmental Law is beyond the scope of the present report but the growing importance and specialized nature of this discipline should be emphasized. The traditional international principles of state responsibility provide an inadequate framework for the enforcement of environmental standards where the emphasis is an

prevention, avoidance of harm to the environment and protection. Traditional state responsibility sets in after a wrongful act has been committed. That explains why International Environmental Law emphasizes supervision, standards, guidelines and inter-state co-operation to prevent environmental harm. (Dugard 320.) The same considerations underpin the Convention's provisions on the protection of the ecosystems of international watercourses.

2.2.3 Procedural Obligations

The very nature of the substantive obligations requires co-operation between watercourse states in order to give effect to their obligations to each other and to the protection of ecosystems. The UN Convention as well as the SADC Revised Protocol and other regional agreements such as the Orange-Senqu River Commission Agreement of 2000 contain a number of provisions elaborating on these procedural obligations. Compliance with a substantive duty often entails a process in itself. The obligation not to cause significant harm or to protect watercourse ecosystems e.g. requires prior co-operation and consultation. Conflicts can then be avoided.

The procedural obligations are:

A General Duty to Co-operate

- This general obligation is stated in Art. 8, UN Convention. It is a logical and necessary pre-requisite for fulfilling obligations on utilisation, preventing harm and environmental protection.
- The establishment of joint bodies and commissions should be considered for several functional reasons; one of them being that it will facilitate the implementation of this obligation. (Art. 8(2).)

- Co-operation between watercourse states is the inevitable result of the fact that an international watercourse is a shared natural resource. The same reasoning applies to the other procedural obligations on notification and consultation. The International Court of Justice recently confirmed this obligation when it stated, in the Danube Case, that "only by international cooperation could action be taken to alleviate…problems of navigation, flood control, and environmental protection." (Quoted in McCaffrey 400.) One commentator has concluded that "*cooperation between states in relation to international watercourses is not only necessary, but probably required by general international law. The fact that it takes a variety of forms should not lead one to conclude that it is therefore not a genuine, independent obligation, binding on riparian states. This conclusion is reinforced by the very nature of the fundamental obligation of equitable utilization, the achievement and maintenance of which itself requires cooperation between the states concerned.*" (McCaffrey 404.)

The Obligation to Exchange Data

Without data and information it becomes impossible to give effect to several obligations under the UN Convention. Utilization, flood control and protection of the environment will not be possible without data and information; often about the whole system. The scope of this duty is explained in Art. 9 of the UN Convention.

Prior Notification

- This is a specific manifestation of the duty to cooperate.
- Part III of the Convention deals with this matter in considerable detail. This part of the Convention deals with the important concept of **planned measures**, which is any measure by a watercourse state or which it will

permit that "may have a significant adverse effect upon other watercourse states."

- Notification concerning "planned measures" triggers a whole process of consultation, reply, negotiation, information exchange and the manner of notification.
- A notified state has 6 months to study and evaluate the possible effects of any planned measure and to communicate its findings. This period may be extended for a further 6 months. In the case of disagreement, consultations, and if necessary, negotiations should follow. During such periods planned measures may not be implemented. Dispute resolution procedures may eventually follow under Art. 33 or the Annex on Arbitration.

The Obligation to Consult

- This obligation applies to various of the specific obligations in order to ensure a fair balance between different uses. It should happen prior to certain action and in the normal course of implementing the Convention.
- Under Art. 3(5) of the UN Convention the duty to consult applies when "adjustments" to the Convention are considered necessary. This may happen when a specific watercourse is involved.
- It is also required in Art. 6(2) for the purpose of determining equitable and reasonable utilization.
- According to Article 17(1) where a notified State finds that implementation of planned measures would be inconsistent with the provisions of Article 5 (equitable and reasonable utilization) or Article 7 (significant harm) the two states shall first enter into consultations and, if necessary, negotiations to solve the dispute.
- Consultations regarding "unforeseen eventualities" can also happen. (For state examples, see McCaffrey 410.)
- The establishment of joint bodies provides a logical means for the need to consult regularly.

2.2.4 Groundwater

- The Terms of Reference do not include ground waters expressly, but they are covered by the definition of "watercourse" in Art. 2 of the UN Convention. It also forms part of the "hydrological cycle." (McCaffrey 27 et seq.)
- The definition of the UN Convention will cover all groundwater related to surface water that does cross or flow along a border. The underground water (aquifer) itself need not be intersected by a border. "Confined groundwater" will be excluded. (McCaffrey 429.)
- Although their application in practice will differ, the same legal principles applicable to international watercourses, will apply to groundwater. Some rules may require more stringent application such as the obligation to protect it and prevent significant harm. (McCaffrey 430.)
- A comprehensive study resulting in an agreement among all (Lower) Orange River watercourse states, will have to determine the presence and regulation of groundwater in the region. It has been observed that the exclusion of groundwater from the regulatory scope of international watercourses, would "subvert the entire regime." (McCaffrey 417.)
- The Revised SADC Protocol defines "watercourse" as "a system of surface and ground waters consisting by virtue of their physical relationship [of] a unitary whole normally flowing into a common terminus such as the sea, lake or aquifer."

2.3 The SADC Protocol

- SADC is a regional organization (14 members) that aims at promoting regional integration and socio-economic development. It is based on a founding treaty and several subsequent protocols (including two on watercourses) have been adopted.

- The first SADC Protocol on Shared Watercourse System goes back to 1995. It has been ratified by Botswana, Lesotho, Malawi, Mauritius, Namibia, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe. It entered into force on 29 September 1998. This instrument has been based on the Helsinki Rules.
- The Revised Protocol is based on the UN Convention and seeks to promote and facilitate the establishment of shared watercourse agreements and shared watercourse institutions for the management of shared watercourses. (Art. 2(a).) The principles to apply are basically those found in the UN Convention of 1997.
- The most important formal difference with the UN Convention is the detailed institutional framework and SADC organs established under Art. 5 of this Protocol.
- The prospects for entry into force of this Protocol seem very good. At the time of writing (December 2002) 8 SADC States (including Namibia and the RSA) have ratified it (according to information supplied by a RSA DWAF official.) Entry into force occurs 30 days after the deposit of instruments of ratification by two-thirds of the 14 member states. (Art. 10, Revised Protocol.)
- In practice the Revised Protocol is already being implemented and ad hoc agreements involving "planned measures" under Article 4 have been concluded by some SADC states. (Interview, RSA official.)
- Article 4 of the Revised Protocol contains detailed provisions on "Planned Measures", "Environmental Protection and Preservation", "Management of Shared Watercourses", "Prevention and Mitigation of Harmful Conditions" and "Emergency Situations". This provides a basis for action and implementation over a broad spectrum. Cooperation and joint institutions are foreseen.
- The dispute resolution mechanism involves the SADC Tribunal, a forum not yet in existence.

- The precise working of the SADC Protocol needs further study. There are some unclear issues and a visit to the SADC Secretariat is probably called for. This instrument may turn out to be of considerable importance for the implementation of proposals emanating from the present project. Compared to the UN Convention the Revised SADC Protocol emphasizes the unique features of the region and the needs regarding "regional integration and poverty relief." (Art. 2.) One area where this will result in a different emphasis will become clear when "planned measures" involving specific regional watercourses are adopted or when regional "shared watercourse agreements" are concluded and "Shared Watercourse Institutions" are established. (Art. 2.) The different regional approach will also necessitate compromises between "development for a higher standard of living for their people and conservation and enhancement of the environment to promote sustainable development." (Art. 3(4) Revised Protocol.) It is too early yet to point to sufficient concrete manifestations of this approach (the Revised Protocol is not yet in force) but the "SADC agenda" will have to be carefully monitored for the purposes of the present project. It has for example been noted that the proposed bilateral RSA/Namibia Agreement on the Lower Orange (see below 5.3) speaks of "regional water law" and that it emphasizes SADC needs.
- The first Protocol remains in force until the Revised Protocol enters into force. The original Protocol shall then be repealed and be replaced by the Revised Protocol. (See Art. 16, Revised Protocol.) Those States not party to the Revised Protocol will continue to enjoy, for 12 months, all the rights and obligation provided for under the original Protocol.

3 C.1: THE RIGHTS OF ALL ORANGE RIVER BASIN STATES

3.1 In terms of the terminology adopted here the term "watercourse states" is used. Both rights and obligations should be discussed.

3.2 The Orange River is an international watercourse and some SADC countries are watercourse states to it. They are Namibia, the RSA, Lesotho and also Botswana. The Orange-Senqu River Agreement of November 2000 includes Botswana, Lesotho, Namibia and the RSA as parties. Article 7.5 requires that the Council (the highest body) be informed about any project or activity "which may have a significant adverse effect" on other parties or the River System.

3.3 The applicable rights and obligations of the watercourse states of the Orange River are found in customary International Law, the UN Convention and SADC Protocols. Bilateral agreements are also relevant.

3.4 The present study should take note of these notification obligations under the Orange-Senqu River Commission Agreement. This agreement also allows implementation of certain planned measures (mainly urgent or emergency measures) even during the notification period (See Article 7.7).

3.5 For states that are party to the 1997 UN Convention and qualify as watercourse states to the Orange River, all those rights and obligations ex the UN Convention and applicable to the Orange River watercourse, will continue to apply *vis-à-vis* other watercourse states that may conclude a separate agreement (such as a bilateral Namibian/RSA one). The basis for the continuation is the Convention itself. (See Art. 36).) For those states that are not formal parties, the position will be basically the same because of the customary law nature of many of the obligations involved. The Revised SADC Protocol confirms the principle in Art. 3(3).

3.6 Article 3 of the Convention deals with the position where subsequent "watercourse agreements" are concluded for a specific watercourse such as the Orange River. The Revised SADC Protocol also foresees a subsequent "watercourse agreement." The position under the Convention is then as follows:

- In the absence of an agreement to the contrary, rights and obligations under pre-existing agreements are not affected. (Art. 3(1).)
- Pre-existing agreements may be harmonized with the provisions of the Convention. (Art. 3(2).)
- Watercourse states may enter into subsequent "watercourse agreements" which apply and adjust the Convention to that particular watercourse. (Art. 3(3).) This will apply to a bilateral Namibian/RSA agreement on the Lower Orange.
- When such a "watercourse agreement" is concluded, it must define the waters so dealt with. It may cover any part of project "except insofar as the agreement adversely affects, to a significant extent, the use by one or more other watercourse states of the waters of the watercourse, without their express consent." (Art. 3(4).) This provision has direct relevance for future RSA/Namibian plans regarding the Lower Orange. For this purpose all other watercourse states should be informed and possible effects of a bilateral agreement should be investigated; if relevant for the waters of the Lower Orange.
- Where one watercourse state to an international watercourse considers application and adjustment of the Convention to be required because of the uses and characteristics involved, all watercourse states shall consult to negotiate, in good faith, an agreement.

4 C.2: SUMMARY FROM AGREEMENTS WITH RESPECT TO EXISTING UPSTREAM DAMS AND INTER-BASIN TRANSFER SYSTEMS

4.1 Relevant Existing Agreements

Between South Africa and Namibia

(1) Agreement on the Establishment of the Permanent Water Commission, signed on 14 September 1992;

(2) Agreement on the Vioolsdrift and Noordoewer Joint Irrigation Scheme, signed on 14 September 1992;

Other Agreements concerning the Orange River

(3) Treaty on the Lesotho Highlands Water Project (LHWP), signed on 24 October 1986 between South Africa and Lesotho;

(4) Agreement on the Establishment of the Orange-Senqu River Commission, signed on 3 November 2000 between South Africa, Namibia, Lesotho and Botswana.

In addition to the above 4 agreements reference will be made to:

(5) a draft agreement between Namibia and South Africa on the Utilisation of the Water Resources along the Lower Orange River (latest draft 12).

4.2 Summary of relevant provisions

4.2.1 Existing Dams

South Africa has already constructed ± 25 dams larger than 12 million m^3 in the Orange River Basin (Terms of Reference, Part A page 3). In addition, three dams have been built in Lesotho as part of Phase I of the LHWP from which water is transferred to South Africa.

4.2.2 LHWP

As regards the LHWP, at the insistence of the IBRD (World Bank), Lesotho and South Africa obtained Namibia's consent to the implementation of Phase I which is now almost complete. The LHWP Treaty envisages a project which will eventually deliver 70 m^3/s to South Africa by means of a system of dams and tunnels which is to be built in 5 or more phases. However, in terms of Article 6(1) of the Treaty the parties have only committed themselves to building Phase I and any further phase will be subject to prior consent of both parties. South Africa and Lesotho have already opened negotiations regarding a further phase and have agreed to execute a Joint Precommitment Study to advise the parties. However, recent studies undertaken by South Africa indicate that a further phase of the LHWP is unlikely to be required before about 2030.

Article 17(2) of the LHWP Treaty states that the provisions of that Treaty are without prejudice to the rights under public international law of riparians of the Orange River other than Lesotho and South Africa. The purpose of the Treaty is not to regulate the entire Orange River, but only a subsystem. Article 6 of the Revised SADC Protocol stipulates that in the absence of any agreement to the contrary, nothing in the Protocol shall affect the rights and obligations of a Watercourse State arising from agreements in force on the date on which it became a party to the Protocol. At the time when the LHWP Treaty was

signed, there were no agreements between South Africa and Namibia, nor had the SADC Protocols and the UN Convention been signed.

In the Preamble to the Permanent Water Commission Agreement, Namibia and South Africa committed themselves to promote regional water resource development on the basis of the Helsinki Rules.

Both Lesotho and South Africa have already acknowledged that Namibia and Botswana will be consulted regarding further phases. This is in accordance with the quoted provisions of the Treaty and the other agreements. Article 4 of the ORASCOM agreement states that the Council of the Commission shall serve as technical advisor to the parties on matters relating to the development of the water resources of the Orange River System. Articles 7.5 and 7.6 provide that a party planning any project with regard to the Orange River System which may have a significant adverse effect upon any one or more of the parties shall forthwith notify the Council and provide all necessary information (see also 3.2 above). Any affected party must then reply within six months. It is submitted that these provisions will apply to further phases of the LHWP, even though further phases were always part of the Treaty and the Project.

It would in any case appear likely that a development on the Lower Orange will be implemented before any further phase of the LHWP.

4.2.3 The Orange-Senqu River Commission Agreement of 2000

- It establishes this Commission as an “international organization “with the power to conclude international agreements. (Art. 1.2.)
- The parties are Botswana, Lesotho, Namibia and the RSA.

- The highest body of the Commission is the Council, to serve as "technical advisor" relating to the "development, utilization and conservation of the water resources of the River System." (Art. 4)
- The purpose of this agreement is to co-ordinate all uses and development of the Orange River and to ensure compliance with principles such as equitable and reasonable use and preventing significant harm to any party, pollution control and exchange of data. These concepts have to be interpreted in line with the Revised SADC Protocol. (Art. 7)
- Any party "planning" any project, programme or activity on the Orange River "shall forthwith notify the Council and provide all available data and information with regard thereto." (Art. 7.5)

4.3 Existing Upstream Developments

The Helsinki Rules in Article VIII(1) provide that "an existing reasonable use may continue in operation unless factors justifying its continuance are outweighed by other factors leading to the conclusion that it be modified or terminated so as to accommodate a competing incompatible use."

To the extent that Art. 3 of the UN Convention applies with respect to "existing rights", see above part 3 of this report. The SADC Revised Protocol refers to "existing and potential uses" of a particular watercourse as one of several factors to be taken into account for the purposes of utilising a shared watercourse in an equitable and reasonable manner. (Art. 3(8)(a)(v).) The weight to be given to each factor "is to be determined by its importance in comparison with that of other relevant factors." All relevant factors are to be considered together and a conclusion must be reached on the basis of the whole. (Art. 3(8)(b).) This formulation is based on Art. 6(3) of the UN Convention.)

This Article applies not only to existing dams but to all existing upstream uses.

The draft Agreement on the Utilisation of the Lower Orange River (see below 6.3) provides in Article 3.1 for a permanent Namibian entitlement of 50 million m^3 per annum from the Orange River System and in Article 4.1 for a temporary allocation of 60 million to be provided from the "Scheme", which is defined as the existing regulating dams of the Orange River Project in South Africa. In terms of Article 5.1 Namibia shall inform South Africa by 31 March of each year of the quantity of water required from the Scheme and the monthly distribution of that water. Namibia is to pay the operating costs of all water released from the Scheme plus a capital element of the temporary allocation. From these arrangements it would appear that the existing upstream dams in South Africa are not seen as a problem but that they are in fact beneficial for the assurance of supply from the Lower Orange to Namibia.

It is acknowledged that this draft agreement is not in force yet and may still be amended. It is nevertheless an important indication of the extent to which the two parties are in agreement on the basic principles. The draft agreement also appears to be in harmony with the other existing agreements, but the Vioolsdrift/Noordoewer Agreement (4.4 below) should be noted.

4.4 Other Existing Rights

Article 11(1)(a) of the Vioolsdrift and Noordoewer Agreement of 1992 stipulates that nothing contained in that agreement shall be construed as precluding the abstraction of water from the Orange River or its tributaries and the utilisation of such water for any purpose within the territories of the parties outside that irrigation district.

Article 11(1)(b) furthermore stipulates that nothing contained in that agreement shall be construed as precluding the parties from entering into negotiations for

the purpose of defining their respective entitlements to the use of water from the Orange River: provided that for the purpose of such negotiations and a resulting agreement, it shall be accepted by the parties that –

(i) 9 million cubic metres of the entitlement of Namibia in terms of such an agreement have been committed by Namibia for use within the Vioolsdrift and Noordoewer Irrigation District; and

(ii) 11 million cubic metres of the entitlement of South Africa in terms of such an agreement have similarly been committed by South Africa to the irrigation district.

5 C.3: REFERENCES TO SIMILAR SITUATIONS ELSEWHERE IN THE WORLD

5.1 The request contained in C.3 is not entirely clear. The "similarity" with respect to other situations as formulated, seems to require comments on an anticipated outcome of the present project; a dam (or river system) where more than one country has a major stake. What exactly is a "similar situation?" There is a important difference between similarity of principle and of fact. International Watercourse Law provides for basic principles; to be applied in specific situations. Case-studies are useful because they normally involve several examples and then distill basic principles. The study of a single example may have rather limited value because of the uniqueness of the particular situation.

5.2 As we understand the present study the needs of Namibia and the RSA (in the context of the region) should first be determined. The means for accommodating them follows thereafter. What exact form this accommodation will take on, will be indicated by the research of other teams. This involves a particular sequence and procedure which will

result in the application of relevant legal principles and, in particular, joint institutions by the states involved. Legal advice should ensure that eventual agreements reflect adequately the accommodation of the applicable legal principles, as mentioned in C.1 of the "legal tasks." During the process of negotiation all these elements, including respect for legal obligations and rights of all affected states, should be kept in mind and adhered to. The "law" cannot be slapped onto something which is the outcome of negotiations based on faulty assumptions. At the same time it must be recognised that terms such as "reasonable", "equitable" and "significant" are inherently vague and not easy to formulate in exact terms in advance. The ex post facto test is often applied and involves the manner (negotiations and participation) through which agreement has been reached and the availability of institutions to decide jointly on allocations in particular situations. Outcomes are what count.

5.3 There are important practical advantages associated with respect for this function of the law. The World Bank, which must respect International Law when funding a project, will not fund projects based on an agreement that does not, for example, recognise equitable use. Neither will it finance a project which causes harm without the approval of all affected states. (Beach et al 13.)

5.4 It is a major feature of the international agreements under discussion to emphasize the duty to cooperate and also to give effect to this duty via joint institutions. (See above 2.2.3.)

5.5 Both the UN Convention and the Revised SADC Protocol are premised an another reality; that specific subsequent watercourse agreements will be concluded between watercourse states sharing an international watercourse. This is where the present project fits in; it should result in

the eventual conclusion of an ad hoc "Lower Orange Watercourse Agreement", recognising the regional dimension.

5.6 Such an agreement should contain principles, implementation machinery and joint management structures for subsequent operation and maintenance.

5.7 There should be sufficient flexibility, as recognized in Art. 3(3) of the UN Convention. Watercourse states can "apply and adjust the provisions of the present Convention to the characteristics and uses of a particular watercourse or part thereof."

5.8 The UN Convention and Revised SADC Protocol are recent and up to date instruments. They emphasize the latest developments and insights, inter alia with respect to ecosystems and environmental protection. Former agreements and examples from elsewhere are often silent on such matters. Their usefulness as guidelines may be limited. To follow them may even result in contemporary international and constitutional obligations not being adequately met.

5.9 We include a brief discussion of one Southern African example, that of the Komati River Agreement.

In 1992 South Africa and Swaziland signed a Treaty on the Development and Utilisation of the Water Resources of the Komati River Basin. The Komati River has its source in South Africa, runs through Swaziland and then again through South Africa before it enters Mozambique. The parties recognized the Komati River and its tributaries as an international river system. They allocated between themselves the water which would become available after construction of two dams, Driekoppies Dam on the Lomati in South Africa and

Maguga on the Komati in Swaziland. This also solved a longstanding dispute on the minimum quantity of water which Swaziland was obliged to release on the lower border.

To implement the construction and operation of the dams, a joint organisation was established, namely the Komati Basin Water Authority (KOBWA). The dams have been completed and KOBWA is functioning satisfactorily.

In Article 3(5) of the Treaty the Parties recognize the right of Mozambique to a reasonable and equitable share in the use of the waters of the Inkomati River Basin (which is larger then the Komati Basin). The Parties agreed to enter into negotiations with each other when such share is claimed by Mozambique in order to deal with Mozambiques claims and to subsequently enter into joint negotiations with Mozambique.

Of particular interest is that in the allocation of water in Article 12, the parties received an entitlement both for a quantity at high assurance (defined as a 2% risk in any one year of only partial availability) and a quantity at low risk (defined as a total unavailability for up to 20% of the time on average in respect of 30% and a 2% risk in any one year of only partial availability in respect of the remaining 70%). There is also provision for the conversion of water at low assurance to water at high assurance at an agreed multiplication factor.

This agreement predates the UN Convention and SADC Protocols.

5.10 Another, often cited, international example is that of the Danube River and the judgment of the International Court of Justice of 1997. It is of importance because of the detailed judgment given by the International

Court of Justice and the guidance as to the effect of International Law on the sharing of International Watercourses. This case is important for several clarifications on the state of contemporary Internal Watercourse Law. (See e.g. the discussion above at 2.2.1 and below at 6.5.) In this instance a bilateral agreement was concluded involving a large joint project to improve navigation, provide flood protection and produce electricity. It provided for the construction of locks, a bypass canal and a dam. Part of it was on Slovak territory and parts on that of Hungary. The Danube forms the border between the two countries for much of its length. Hungary stopped work on its portions, citing ex post facto damage to the environment. The judgment deals with various aspects of International Law, such as the law of treaties, state responsibility, the law of International Watercourses, state succession (Slovakia became a separate state in 1993 after secession from Czechoslovakia, the original other party to the 1977 bilateral treaty) and international environmental law.

The Court found breaches on both sides. Hungary stopped work on part of the project and Slovakia put another part unilaterally in operation.

The lessons to be learned concern the importance of co-operation and environmental protection. This case could provide guidance on how to conclude a comprehensive agreement with appropriate institutions and their powers in order to avoid disputes. The Court strongly endorses "the stability of treaty regimes and the need to work within them to address perceived problems resulting from their implementation." (McCaffrey 191.) The "community of interest" regarding shared watercourses, forfeit their "basic right to an equitable and reasonable sharing of the resources of an international watercourse" (Par 78), proportionality and equitable and reasonable sharing are legal principles that have to be accommodated.

5.11 The 1996 Ganges River Treaty between Bangladesh and India and the 1996 Mahakali River Treaty between Nepal and India both predate the UN Convention of 1997. They are also unique in having to deal with local complications and peculiar histories. The Ganges River Treaty (text in *International Legal Materials* 1997 (3) 523) has as its main objective the determination of the amount of water to be released by India to Bangladesh from the Forraka Barrage, which is on Indian territory; and trying to solve a long-running dispute. The agreement runs for a period of 30 years (Art. XII) and contains a formula (Art. II and Annex I) and an indicative schedule (Annex II) for allocating water to Bangladesh. The latter is based on a period of 40 years (1949-1988) ten-day period average availability of water at the Barrage. If the flow here drops below a certain level, the two governments have to enter into immediate consultations to make adjustments on an emergency basis "in accordance with the principles of equity, fair play and no harm to either party." (Art. II(iii).) A Joint Committee is established to observe and record the daily flows at the Barrage and certain other crucial parts. (Art. III.) It has to submit a yearly report to the two governments. The Joint Committee resolves differences and disputes. If it fails to do so, the matter is first referred to a Joint Rivers Commission, or thereafter, to the two governments. (Art. VII.) The two states "recognise the need to cooperate…in finding a solution to the long-terms problem of augmenting the flows of the Ganga/Ganges during the dry season." (Art.. VIII.) The sharing arrangement are to be reviewed every five years, based on equity, fairness and no harm to either party. (Art. X.) In the absence of an agreement on adjustment India must release at least 90% of the share of Bangladesh as provided for by the formula. (Art. XI.)

5.12 The Mahakali River Treaty is more complicated. This river has formed the border between India and Nepal since 1816 and has been the subject of tension since India's occupation of some 50 square kilometres of land after the India-China conflict of 1961. The agreement replaces an earlier one and apportions waters; authorizes (subject to territorial issues) the construction of a prior barrage; creates a framework of rules on the construction of large projects which include electricity supply; and the supply of irrigation water to Nepal. Dispute resolution is dealt with in more detail than in the Bangladesh-India Treaty. A tribunal of three arbitrators is created. Its decisions are final.

5.13 The value of case studies lies in the fact that they identify general principles. Such studies can be based on single cases or can be comparative case studies. Lessons can be learned on what approaches to adopt with respect to water management, the nature of institutions (do not make them too elaborate), the needs of developing countries and the issue of power asymmetry. (See further Beach et al 21-25.)

5.14 We would want to stress the importance of appropriate institutions for managing joint schemes. This should be the outcome of adequate preparation and negotiation. Their value with respect to effective implementation, cooperation and dispute avoidance can be considerable. (See Beach et al.)

5.15 Other aspects concerning the regional approach to institutions should be mentioned:

- SADC has established several structures on water management. How they function and how effective they are, still has to be determined

- Sections 102 and 108 of the SA National Water Act provide for legal entities (bodies corporate) to implement international agreements and present examples are the Trans-Caledon Tunnel Authority, the Komati Basin Water Authority and the Vioolsdrift Noordoewer Joint Irrigation Authority. They operate as separate legal entities with their own powers and international competence.
- The regional objective of integration provides an incentive to devise a model or type of watercourse institution for wider use.
- This could add to the development of regional expertise and capacity building.

6 C.6: THE EFFECTS OF OTHER LEGAL ISSUES

6.1 Introduction

The request of the Task Team Plan in C.6 to comment on the effects that other legal issues "…may have on the implementation of the shared watercourse system…and to recommend further work", is a rather general one. Only one such issue (the border between Namibia and the RSA along the Orange River) has been mentioned, but without guidance as to the precise matters to be investigated. We have endeavoured to point out to what extent the border issue could be relevant for the bigger context.

As the research for our part of this study continues, we will list issues that may need further consideration. They cannot be studied now (at least not in any great detail) and the work by other teams will bring more clarity. Some of these issues are indicated in the 1997 UN Convention and the SADC Protocol. At this stage the following may be mentioned:

- The border issue
- The draft bilateral agreement between the RSA and Namibia of 2002

- International environmental protection
- The Rio Declaration of 1992
- Sustainable development
- Agenda 21
- The needs of Developing Countries
- International human rights
- Regional integration
- Trans-boundary Parks

6.2 The Border Issue

The Orange River west of 20° longitude forms the international border between Namibia and the RSA. For historical reasons and because of the membership of both states of SACU (the Southern African Customs Union) this is not an inter-state boundary associated with very tight control. There is, however, uncertainty as to the exact location of the borderline. That is apparently being attended to on inter-governmental level.

The relevance of the border issue for the present study needs some further discussion, although the sharing of water only from this international watercourse (as the Orange is) is not for the time being directly dependent on demarcation of the boundary. The complete and comprehensive application of the UN Convention and the Revised SADC Protocol to the Orange may, however, require more detailed forms of technical co-operation on e.g. environmental matters and private use of the river. Certainty regarding the border then becomes a more pertinent issue.

The terms of reference of this study do not clarify the relevance of the border question, although its very title invokes a geographical dimension and the position of the border. This is a pre-feasibility study "into Measures to improve the Management of the Lower Orange River **and** to provide for Future

Developments along the Border between Namibia and South Africa." (Emphasis added.) That part of the river which constitutes the joint border is west of 20° longitude. The Lower Orange presumably extends from the Vanderkloof Dam in South Africa (Art. 1(1) Draft Agreement on the Utilisation of the Water Resources Along the Lower Orange River, draft 12 of 22 November 2002) to its estuary at the Atlantic Ocean.

The basic border problem relates to the fact that the former colonial powers (Britain and Germany) concluded a somewhat vague agreement in 1890 on the border between their two colonies; the Cape and German South West Africa. This is the inherited position. That agreement provided that the boundary should be:

> *"To the south by a line commencing at the mouth of the Orange River, and ascending the north bank of that river to the point of its intersection by the 20th degree east longitude."* (See Brownlie **African Boundaries: A Legal and Diplomatic Encyclopaedia**, p 1276, Hurst and Company, London.)

Boundaries traditionally involve both elements of "delimitation" and "demarcation". The following quote from Brownlie, p 4, illustrates the difference:

> *"It is common practice to distinguish delimitation and demarcation of a boundary. The former denotes description of the alignment in a treaty or other written source, or by means of a line marked on a map or chart. Demarcation denotes the means by which the described alignment is marked, or evidenced, on the ground, by means of cairns of stones, concrete pillars, beacons of various kinds, cleaned roads in scrub, and soon."* (See also Erasmus "How to Farm on the South African/Namibian Border: Problems in

> Demarcating a River Boundary" **South African Yearbook of International Law** 1984 p 121.)

Namibia became an independent state in 1990 and did not accept some of the inherited colonial boundaries. This is clearly reflected in its Constitution, Art. 1(4). It reads:

> *"The national territory of Namibia shall consist of the whole of the territory recognised by the international community through the organs of the United Nations as Namibia, including the enclave, harbour and part of Walvis Bay, as well as the off-shore islands of Namibia, and its southern boundary shall extend to the middle of the Orange River."*

The Namibian interpretation was vindicated with respect to Walvis Bay and the off-shore islands which have been "returned" by South Africa come time ago. On the Orange River a joint commission was established but no new arrangement has been worked out yet.

For the purposes of the present report there is a basis in the law of international watercourses to deal with the question of water sharing *stricto sensu*. That basis consists of the fact that this river is an international watercourse and that South African and Namibia are watercourse states. The UN Convention, Revised SADC Protocol and Customary International Law are sources for identifying the applicable norms.

Both these countries also recognise their common border to be the Orange River. The draft agreement on the "Utilization of the Water Resources along the Lower Orange River" (Draft 10 of October 2002) referred to the Lower Orange River as "being the border between Namibia and South Africa." (Art. 2(1) October draft. See further below 6.3.) In the 12th Draft of November

2002 only the Preamble refers to the border. The relevant paragraph reads: "Conscious of the inception of the Pre-feasibility Study into Measures to improve the Management of the Lower Orange River **and** to provide for future Developments along the Border between Namibia and South Africa, as well as the advantage of joint agreements between the Parties…" Read together with the definition clause of the draft in article 1, the reach of the Lower Orange starts at the Vanderkloof Dam in South Africa. The border starts at the 20° longitude intersection on the Lower Orange River.

The demarcation of the Orange River boundary will involve practical and legal consequences, such as territorial jurisdiction. This will in turn trigger other typical aspects of statehood such as criminal, civil and administrative jurisdiction. Demarcation need not be a complicated matter (technical experts and modern technology will no doubt provide guidance) but it all depends on the necessary political decisions and bilateral co-operation between the two Governments.

Demarcation will bring certainty about other related issues such as environmental protection, regulation of recreational activities on the Orange River, mining and maritime boundaries on which these states have to co-operate in any case. The extension of the land-based boundary into the sea also needs to be undertaken in order to bring clarity regarding the maritime zones of the two states. A starting point for such process involves the identification of the inter-state border at the river mouth at Oranjemund. (See Erasmus and Hamman "Where is the Orange River Mouth? The Demarcation of the South African/Namibian Maritime Boundary" *South African Yearbook of International Law* Vol 13, 1987-88,49.) The exploitation of marine resources will require certainty with respect to the demarcation of the continental shelf and Exclusive Economic Zone under the UN Convention on the Law of the Sea (UNCLOS).

Namibia and South Africa are direct neighbours and have historical, economic, and legal interests in common. Certainty about the boundary makes good sense and will facilitate co-operation with respect to matters that require joint action. Environmental protection is an example and may require rather urgent attention. (See further below 6.4 – 6.6.)

Future proposals (on e.g. measures and projects on how to share water and protect the environment) may require the border issue to be resolved. It may then become an additional factor for establishing finality and clarity.

Finality about the border will add quite directly to the ability of the states involved to fulfill their obligations regarding their duty not to cause significant harm and prevent environmental degradation. If this present project proceeds into a next phase and the interests and views of local populations have to be canvassed, border issues will figure with respect to farming and mining activities.

6.3 The Draft Bilateral Agreement between Namibia and the RSA on the Utilization of the Waters Resources along the Lower Orange River

It has come to our attention that Namibia and the RSA are in the process of negotiating another bilateral agreement on the "Utilization of the Water Resources along the Lower Orange River." We were able to study draft 12 of November 2002 (See also above 4.3). The present drafts are obviously still subject to amendment and our comments should be seen in that context.

It is potentially an important agreement and although the terms of reference for this study do not expressly refer to it, a brief discussion is merited as it adds to the overall picture of the developing relationship between the two countries. In the Preamble the following is stated:

> *"Conscious of the inception of the Pre-feasibility Study into Measures to improve the Management of the Lower Orange River and to provide for Future Developments along the Border between Namibia and South Africa, as well as the advantage of joint agreements between the Parties, and having regard for the interests of all the Watercourse States party to the November 2000 agreement on the Orange-Senqu River Commission, and their obligation to further the interests of said Commission…the two states conclude this agreement.*

The objective and purpose are to provide for an interim arrangement on water sharing between the two states, pending the outcome of the present study.

Article 2.1 states that the proposed agreement addresses the "reasonable and equitable sharing of water supplied by the scheme along the Lower Orange River."

Article 3.1 provides that Namibia shall be entitled to abstract, on a permanent basis, a quantity of 50 million cubic metres of water per annum from the Orange River System. South Africa shall also supply a maximum of 60 million cubic metres annually till 31 December 2007 as temporary additional water to Namibia. (Art. 4.)

Article 12 stipulates that the existing agreements between Namibia and South Africa on water-related matters will remain in force as far as they are not in conflict with this agreement.

The draft agreement also deals with the position during droughts (Art. 6) and provides for costs and payment. (Art. 9.) A detailed dispute resolution mechanism is foreseen in Art. 11.

It identifies two sources of law to be applied for the purpose of water sharing. They are "international" and "regional water law"; respectively embodied in the Convention on the Law of the Non-Navigational Uses of International Watercourses adopted by the United Nations General Assembly and the Revised Protocol on Shared Watercourses in the SADC Region. (Preamble.)

If this proposed agreement enters into force it can be considered a specific "watercourse agreement" under the definitions of the UN Convention and the Revised SADC Protocol. It defines "the waters to which it applies" (Art. 3(4) UN Convention) as the Lower Orange River which is the "reach of the Orange River from the Vanderkloof Dam in South Africa to its estuary at the Atlantic Ocean." (Art. 1(1) Draft Agreement.) This definition includes, and extends beyond, the part of the river constituting the boundary

The "Scheme" means "the existing regulating dams of the Orange River Project in South Africa." The latter (the project) is not defined; neither is the "Orange River System."

The draft recognised the interests of "all the watercourse States Party to the November 2000 Agreement on the Orange-Senqu River Commission and their obligation to further the interests of said Commission. (Preamble.)" How exactly these obligations are complied with, is not clear. This admission does, however, demonstrate awareness of the network of international obligations and institutions being created along the Orange River. It confirms the need for proper co-ordination among all the states involved.

The latest draft refers to the border only indirectly in the Preamble. The objectives behind the Pre-feasibility Study "to improve the Management of the Lower Orange River **and** to provide for Future Developments along the Border between Namibia and South Africa…" (emphasis added) are recognised. Read

together with the definitional clause, the proposed agreement recognises the Orange River also to be the border for the relevant section of the Lower Orange, without addressing the technical issue of demarcation.

The draft Agreement contains the following principles that may be considered for future reference:

- It sheds light on what these two states consider to be the applicable law on the sharing of the water of the Lower Orange River.
- It confirms "reasonable and equitable sharing supplied by the scheme along the Lower Orange River" expressly.
- Joint arrangement such as the PWC are important.

6.4 The Ramsar Convention on Wetlands

- This Convention was adopted in 1971. The original emphasis was on the conservation and use of wetlands to provide habitat for water birds. Over time it has broadened to cover all aspects of wetlands conservation. Wetlands are ecosystems of considerable importance for biodiversity conservation.
- This Convention is in force. Namibia and South Africa are parties to it.
- The Orange River mouth is a Ramsar transborder site. (Term of Reference, p 3.)
- The precise mechanisms in terms of which the two states co-operate on the joint wetland has not been studied. It will presumably confirm the need for effective co-operation on various aspects linked to the Lower Orange River.
- What is the effect of the border issue on the effective "partnership" between these two states regarding this habitat? Other experts to be consulted.
- How will withdrawal of water effect this habitat and the obligations of Namibia and the RSA? Needs further investigation.

- The Ramsar Convention is one example of a set of obligations shedding light on the scope of Part IV of the 1997 UN Convention; on the preservation of ecosystems and the control of pollution. It contains several detailed principles and other international agreements, such as the UN Convention on Biological Diversity of 1992, will also have to be studied in order to obtain a comprehensive picture of the responsibilities involved.
- The next sections of this report (parts 6.5 to 6.6) expand further on aspects associated with environmental matters. This topic calls for further study.

6.5 International Environmental Protection

- Both UN Convention and Revised SADC Protocol emphasize the importance of environmental protection. (It has been pointed out, above 2.3, that the SADC emphasis may turn out to be somewhat unique.) This has grown into a comprehensive field, with many specialized areas and ad hoc international organizations and agreements.
- The full impact of environmental protection on the present project is beyond the scope of the present inquiry. The inclusion hereof, linking this topic to other projects involving these two states (whether individually or jointly) as well as the requirements of other international agreements merit further study. However, the general significance of environmental concerns as legal requirements should be emphasized. In the *Danube Case* the International Court dealt with this aspect in the context of a bilateral treaty concluded in 1977. One of the parties (Hungary) later argued that its performance was precluded by subsequent environmental law developments. The judgment did not suspend this treaty, but stated that environmental law influences the implementation and interpretation of the prior treaty. In other words, the treaty regime was preserved, but environmental norms and standards had to be considered in deciding how subsequent problems had to be solved. The Court then explained the consequences:

"140. It is clear that the Project's impact upon, and its implications for, the environment are of necessity a key issue. The numerous scientific reports which have been presented to the Court by the Parties – even if their conclusions are often contradictory – provide abundant evidence that this impact and these implications are considerable.

In order to evaluate the environmental risks, current standards must be taken into consideration. This it not only allowed by the wording of Articles 15 and 19, but even prescribed, to the extent that these articles impose a continuing – and thus necessarily evolving – obligation on the parties to maintain the quality of the water of the Danube and to protect nature.

Throughout the ages, mankind has, for economic and other reasons, constantly interfered with nature. In the past, this was often done without consideration of the effects upon the environment. Owing to scientific insights and to a growing awareness of the risks for mankind – for present and future generations – of pursuit of such interventions at an unconsidered and unabated pace, new norms and standards have been developed, set forth in a great number of instruments during the last two decades. Such new norms have to be taken into consideration, and such new standards given proper weight, not only when States contemplate new activities but also when continuing with activities begun in the past. This need to reconcile economic development with protection of the environment is aptly expressed in the concept of sustainable development.

For the purposes of the present case, this means that the Parties together should look afresh at the effects on the environment of the

operation of the Gabčíkovo power plant. In particular they must find a satisfactory solution for the volume of water to be released into the old bed of the Danube and into the side-arms on both sides of the river."

- There is an increasing recognition of the links between environmental concerns and conflict between states. In this regard the concept of "environmental security" has gained in importance. (See further Beach et al 57-63.)
- Part IV of the 1997 Convention is in its totality devoted to the protection and preservation of ecosystems, prevention of pollution, the protection of the marine environment, and the duty to prevent the introduction of alien species. Further study is required if a balanced plan that will integrate all the environmental issues into proposals dealing with more practical issues, is to be submitted.
- It seems that the present study's Terms of Reference (at pp 16 and 24 of Part A) invokes environmental concerns only to the extent that national legislation has to be studied. That would be too restricted. The subject will have to deal with the various international agreements on this topic. An expansion of the Terms of Reference to expressly include international norms and standards is strongly recommended.

6.6 The Rio Declaration, Sustainable Development and Agenda 21

- After the 1992 UN Convention on Environment and Development (UNCED) the protection of the global environment became an integral part of legal discourse on sustainable development. The debate also impacted on the use of freshwater resources. (Tanzi and Acari 111.)
- Sustainable development requires that development "meets the needs of the present, without compromising the ability of future generations, to meet their own needs." (Principles 3 and 4 of the Rio Declaration.)

- Agenda 21 is the action plan adopted at the 1992 Earth Summit, devoted to, inter alia, the protection and quality of freshwater resources. Given the importance of fresh water, all watercourse systems should be protected against degradation through human use. (See further McCaffrey 381-82.)
- During the drafting of the 1997 UN Convention a new debate regarding the impact of environmental concerns on the utilization of water resources developed. Equitable and reasonable utilization in Art. 5 of the Convention is now qualified by the requirement of "sustainable utilization."
- Part IV of the Convention deals with environmental issues such as ecosystems, pollution, alien species, estuaries, the marine environment and the planning for sustainable development.
- The Convention reflects a compromise between economic utilization and sustainability. The final wording incorporates environmental concerns to such an extent that other principles, such as intergenerational equity and the precautionary principle also apply. (Tanzi and Arcari 115.) Some commentaries refer to an "emerging substantive obligation to protect international watercourses and their ecosystems against unreasonable degradation." (McCaffrey 300.)
- The present project will have to include a proper assessment of the applicable environmental standards for its future reports. It is possible that states may incur international liability for lack of due diligence; for failing to take appropriate measures to prevent pollution and harm. (Tanzi and Arcari 154.) Groundwater should be included. (See above 2.2.4.)
- The Terms of Reference of this project refer to the establishment of a "Reserve" for basic human needs and for ecological purposes. (At p 16.) The implications of such a "Reserve", including its legal basis, geographical boundaries and accommodation into the present project, deserve urgent attention.
- Clarity about the exact location of the border on the Lower Orange River will add to the ability to meet these obligations and to take proper joint measures.

- The availability of water along the Lower Orange River is not only a matter of quantity, but also of quality. One of the classical examples of the problems resulting from upper stream agricultural and industrial use for the lower stream use is provided by the United States and Mexico. (McCaffrey 17-18.)
- The question about a duty of notification and on environmental impact assessment also arises. Article 12 of the 1997 UN Convention contains such an obligation. It speaks of the duty of the specific watercourse state planning or implementing measures "which may have a significant adverse effect upon other watercourse States." This has to be distinguished from and compared with a case where two such states do it jointly.
- This obligation can form part of the substantive obligation on equitable and reasonable use (McCaffrey 343), and due diligence (Tanzi and Arcari 205.)
- The extent of a duty of notification involves more than formal government notice.

> *"Regardless of whether EIAs [environmental impact assessments] may be said to be required by general international law, however, it seems inescapable that if states have an obligation to provide prior notification concerning planned activities that could have adverse transboundary effects, they must first determine whether there is a possibility that the activities will have such effects. Except where the possibility is obvious, this determination is best made through an impact assessment process, as discussed above. Even where the possibility of adverse transboundary effects is obvious, however, an impact assessment would usually be necessary, both to ascertain relevant information concerning the nature of the possible impacts for communication to potentially affected states, and to allow to potentially affected states, and to allow interested members of the public and other stakeholders to participate in the decision-making process."* (McCaffrey 408-409.)

- Environmental impact assessment may also involve the rights and interests of individuals, as the quote above shows. Both the Constitutions of Namibia (Art. 95(l)) and South Africa (Sec 24) have provisions on the environment; as well as on administrative justice.

6.7 The Needs of Developing Countries

- The Preamble of the UN Convention of 1997 lists an awareness "of the special situation and needs of developing countries."
- Namibia is a developing country; as are other SADC members. Lesotho is a "least-developed country."
- Certain areas and population groups of South Africa also need access to fresh water as a priority, even as a human right in terms of e.g. concerns raised at the recent World Summit on Sustainable Development of 2002. This applies equally to Namibia.
- The concept of economic development is increasingly linked to sustainable development. In the case of shared water resources, it confirms the need for proper joint action.
- The Revised SADC Protocol lists (in Art. 2) "poverty alleviation" as one of its objectives; to be pursued through inter alia the utilization of shared watercourses.
- Different social and economic needs of watercourse states to a shared watercourse require proper joint management and prioritization. Unilateralism is not possible. This has a bearing on the choice of legal tools and arrangements for addressing special problems through bilateral arrangements.

6.8 Human Rights

- Article 5 of the 1997 UN Convention deals with one of the most important substantive obligations in the Law of International Watercourses; that of equitable, reasonable utilization and participation. Articles 6(1)(b) and (c) refer to humanitarian factors to be taken into account when such an utilization is to be determined. They are "social and economic needs" and the "population dependent on the watercourse in each watercourse State."
- In the case of a conflict between uses of an international watercourse "it shall be resolved with…special regard being given to the requirements of vital human needs." (Art. 10(2), 1997 UN Convention.)
- The 2002 Johannesburg World Summit confirmed the priority to be given to fresh drinking water, and its importance as "a human right."
- These provisions have implications for water sharing projects that involve positive and negative obligations. The former may not result in an internationally enforceable right for individuals, but "sufficient water to sustain human life including both drinking water and water required for the production of food in order to prevent starvation" deserves special attention. (ILC Commentary, quoted in McCaffrey.)
- The negative duty refers to the obligation of "watercourse States not to frustrate" the right of all people of access to safe and sufficient water supplies." (Tanzi and Arcari 81.)
- A basic human rights obligation, appearing in all national and international human rights instruments, is that of non-discrimination. Article 3(2) of the UN Convention of 1997 and Art. 3(10)(c) of the Revised SADC Protocol confirm this right, but only with regard to access to justice and determining compensation or relief in cases of transboundary harm. There shall not be discrimination on the basis of nationality, residence or place of injury in granting victims access to justice. This is potentially an important provision for a different purpose, namely to grant individuals recourse to domestic courts and tribunals in different states to claim compensation for harm resulting from transboundary activities on a shared watercourse. It will require national legislation in most countries.

- Both the Namibian and the South African Constitutions contain references to the same type of human rights.

6.9 Regional Integration

- Regional integration occurs when states adopt an international agreement establishing a regional organization with the objective, powers and organs to pursue regional integration in specific areas.
- SADC is such an organization and it aims to achieve integration and co-operation in many areas. Trade is an obvious example; the utilization of shared watercourses is another. (Art. 2, Revised Protocol.)
- Article 2 of the Revised Protocol reads:

> *"The overall objective of this Protocol is to foster closer cooperation for judicious, sustainable and co-ordinated management, protection and utilization of shared watercourses and advance the SADC Agenda of regional integration and poverty relief."*

- The 1997 UN Convention provides a framework for regional and specific watercourse agreements. The Revised SADC Protocol accepts and elaborates on this premise.
- The UN Convention allows regional organizations to become parties to this Convention. (Art. 2(c).) Such an organization will then qualify as a "watercourse state." SADC would be able to notify the UN Convention if it enjoys such powers under its own founding Treaty. There is no indication that it has or is planning to do so. (Further study.)
- A bilateral Namibian/RSA watercourse agreement on the Lower Orange River will in principle be compatible with both the UN Convention as well as the Revised SADC Protocol. It will require some fine-tuning.

- The precise policy and practice of SADC on watercourses in the region and the function of the various bodies established under the Revised Protocol need further study.
- The relationship between the two SADC Protocols is not clear. The Revised Protocol changes the basic terminology to be in line with that of the 1997 UN Protocol. The former Protocol still speaks of "River Basin Management Institutions."
- Care should be taken to ensure that a future RSA/Namibia watercourse agreement complies with both the UN Convention and SADC Law.

6.10 Trans-Boundary Parks

- A number of such parks have been established between South African and its neighbours. They aim at joint nature conservation and wildlife management across international borders. They are based on specific international agreements.
- There have been press reports on a similar arrangement between Namibia and the RSA across the Lower Orange River. It will presumably cover the river and its wildlife resources too.
- If this is indeed the objective of the two states, proper coordination regarding the issues raised in the Convention and Protocol will be required.
- Other regional agreements and concerns should be studied and taken into account.
- The separate status of wetland management is to be considered.

6.11 Competition in the Water Industry

A study of the South African water industry was done for the Competition Commission in 2001 and it investigated "options open to policy makers in South Africa, looking at deregulation, price cops and price structure" in the light of issues such as performance indicators, efficiency, the structure and

performance of the industry. The report deals with issues such as affordability of water, socio-economic externalities and technical matters. It points out certain policy and indicator conflicts and suggests the development of multi-criteria decision-making models. It has not resulted in official policy yet. The implications of reforms in the South African water industry for the countries international water policies and obligations have not been considered.

7 SUMMARY AND RECOMMENDATIONS

7.1 This report discusses some of the legal issues listed in the Task Execution Plan. Its treatment of these issues cannot be exhaustive yet. Further study is required and other project reports will have to be consulted. A number of additional matters have been raised.

7.2 What is clear is that the matter under discussion calls for comprehensive treatment and an integrated approach. The sharing of water resources along an international watercourse involves much more than only the apportionment of quantities. Important other issues such as environmental protection, regional integration, sustainability, prevention of harm and equity should be considered and planned for.

7.3 The 1997 UN Convention is an up to date set of rules. The SADC Protocols have to be adhered to within this framework. However, the precise functioning of the SADC institutions on watercourses needs further study.

7.4 Clarity as to the precise rights and nature of involvement of Lesotho, Botswana and SADC itself is still outstanding. The exact rights and interests of each have to be ascertained.

7.5 There are three basic sets of international legal obligations involved; the multilateral (UN Convention), the regional (SADC) and the individual and bilateral. There is often an overlap of obligations and rights.

7.6 The important international obligations are divided into substantive and procedural ones. The substantive obligations are:

- Equitable and reasonable use.
- Not to cause significant harm.
- Protection of watercourses and their ecosystems.

7.7 The procedural obligations are:

- The general duty to co-operate.
- Prior notification.
- Obligation to consult.
- Obligation to exchange data.

7.8 These obligations are equally binding, belong together and are inter-dependent.

7.9 These obligations are both treaty obligations and in most instances also of a customary international legal nature. It means that states not party to the UN Convention are also bound and protected.

7.10 Joint institutions between governments concluding a watercourse agreement is the trend and obvious logical means of implementation. This makes it possible to involve expertise, fulfil obligations, co-operate on all duties and new developments, and it provides for dispute avoidance.

7.11 An agreement on watersharing on the Lower Orange River needs a definition of the water to which it will apply. The rights of other watercourse states may not be adversely affected, unless they give their express consent. (Art. 3(4) UN Convention.) Namibia, Lesotho, the RSA and Botswana are all watercourse states to the Orange River. (The Orange-Senqu River Commission Agreement of 2000 includes Botswana as a party and the factual position on groundwater may confirm its *de facto* watercourse status.)

7.12 Even if only Namibia and the RSA qualify as the directly involved countries to the Lower Orange River, the upstream position, the effect of the SADC Protocols, the Orange-Senqu River Commission Agreement and other international legal obligations on e.g. the environment mean that these two governments should not act on their own. The draft agreement of November 2002 in any case indicates their acceptance of the wider context.

7.13 Consultations via SADC may be an obligation in any case. (To be studied.) It will make good sense and could prevent future problems. There is also a notification duty under the Orange-Senqu Commission Agreement.

7.14 Clarity on the border issue will facilitate cooperation regarding the protection of the ecosystem of the Orange River quite directly. There may already be serious neglect of existing obligations in this regard.

7.15 When this project is taken further national legislation of the states involved their Constitutions and the involvement of national stakeholders should be taken into account.

7.16 A proper environmental impact agreement of whatever is proposed, is required. This may even be the case with respect to agreements such as the Draft Agreement between Namibia and the RSA of November 2002.

7.17 The terms of reference regarding the environment should be extended to include international environmental obligations. The present reference to national legislation (see pp 16 and 24 of the Terms of Reference) is too restricted. It speaks only of national laws and policies of Namibia and the RSA.

7.18 The priorities and needs of Namibia and the RSA have to be identified and assessed. This can, however, not be unilateral exercise on matters such as e.g. their water needs for agriculture. Equitable and reasonable use must demonstrate the accommodation of sustainable utilization. Article 6 of the UN Convention lists a number of factors relevant to equitable and reasonable utilization. These factors must all be given due weight and a conclusion must be reached on the basis of the whole. Consultations with other watercourse states should take place.

7.19 Alternative ways of accommodating needs, if possible, may be considered.

7.20 The existence of dams and structures upstream in the Orange River creates several facts to be considered. The river has been "internationalized" already. Article 3 of the UN Convention protects existing rights and obligations. Existing agreements can be "harmonized" with new watercourse agreements. It could make sense to consider following this route and accommodate interests more comprehensively.

7.21 Decisions on new institutional developments should only be taken once a proper study, involving suitable procedures, of all relevant factors and obligations has been undertaken.

7.22 Irrespective of the outcome of such a process, the importance and vulnerability of the Orange River justify the conclusion of a focussed agreement and the establishment of effective joint mechanisms to manage and protect this river and its future utilization.

7.23 The next phase of this project should be carefully planned as far as the task teams are concerned. Integration of the various tasks and cooperation among those involved, are necessary in order to save time, prevent unnecessary duplication and to ensure the accommodation of all relevant discussions.

7.24 The Draft Bilateral Agreement between Namibia and the RSA is being negotiated elsewhere. It does, however, put itself in the context of the UN Convention, the Revised SADC Protocol and the present study. (Preamble.) It also refers to the "interests" of Lesotho and Botswana under the Orange-Senqu River Commission Agreement of 2000. The next phase of this study should be able to comment on this bilateral agreement, its impact on long-term arrangements, and the need to ensure consistency and compatibility. The international and regional dimensions qualifying the present study, apply equally to the draft agreement. Both foresee bilateral instruments on an international watercourse with a regional context. Both are about the utilization of the water of the Lower Orange River, although the time spans and foreseen duration differ. But a long-term agreement has to be built on the preceding realities; including those under negotiation. An example is provided by the definitions in the Draft Agreement. It defines the "Lower Orange River" to start at the Vanderkloof Dam in South Africa.

The present Pre-feasibility study is also about the Lower Orange River. Is it based on the same definition? The Terms of Reference provides, at p 20 reads as follows:

"While the focus of the study will be on the reach of the Orange River which forms the border between Namibia and South Africa, a dam upstream of the 20° longitude may hold certain advantages. It is therefore required that the options be considered of a dam in the vicinity of Vioolsdrift/Noordoewer or near Boegoeberg, or a possible combination of the options.

7.25 In part 4 of this study we also mention 4 additional agreements involving the Orange River. Together they create a set of conditions, rights and obligations. If the outcome of the present study is ultimately a comprehensive agreement (which is logical from a legal point of view), the existing agreements have to be married to such a new one. This will require further study and an inter-disciplinary approach. Who should be the parties to such an agreement? How should Botswana and Lesotho be involved?

7.26 The position of groundwater is not expressly covered by the Terms of Reference. It is, however, by implication included by both the UN Convention and the Revised SADC Protocol.

7.27 Private participation in the further phases of this project is required. This should involve more than meetings informing the public about government plans and will probably require a designated task and responsible body. Note the content of Art. 5(2)(4) of the Orange-Senqu Commission Agreement. The Council shall advise the 4 governments on "the extent to which inhabitants shall participate in respect of the planning, development, utilisation, protection and conservation of the

River System, as well as the harmonisation of policies in that regard and the possible impact on the social, cultural, economic and natural environment."

7.28 A final observation concerns the "approach and methodology" to be adopted for the purpose of drafting this report. The Execution Plan for Task 4.3 requires proposals on principles to be adopted by considering:

- principles of equitable allocations such as "rights-based" criteria based on relative hydrography (including quantity, quality and reliability) and chronology of use;
- efficiency-based criteria such as beneficial use and economics;
- needs-based criteria for water allocations such as irrigable land and/or population;
- other upstream dams and inter-basin transfer systems in the Orange River.

7.29 "Rights-based" criteria must primarily involve contemporary legal instruments (agreements between states and customary International Law) as discussed here. It is important to understand the approach underpinning this area of law. The Orange River has the status of an international watercourse and in terms of that fact certain states have rights and obligations as watercourse states. In this sense they are equals.

7.30 These states enjoy the substantive right to share the water on the basis of equitable and reasonable utilization. The factors that will determine what is equitable and reasonable "requires taking into account all relevant factors and circumstances," including the ones listed in Art. 6 of the Convention.

7.31 No use enjoys inherent priority.

7.32 The other side to the coin, in addition to equitable and reasonable use, is the substantive obligation not to cause significant harm. Reconciling these two notions requires the implementation of procedural obligations such as the duty to cooperate.

7.33 The substantive obligation to protect and preserve the ecosystem of an international watercourse is lacking from the factors mentioned in the Task Execution Plan as quoted in 7.28 and deserves attention. This obligation applies *vis-à-vis* other watercourse states and *erga omnes*.

7.34 Traditional claims by riparian states used to be based on "extreme principles" such as **hydrography** (from where a rive or aquifer originates and how much falls within the territory of that state) or on **chronology** (who has been using the water longest.) (Beach et al 11.)

7.35 This is not the modern position. The doctrinal basis of the law on International Watercourses now limits state sovereignty to equitable and reasonable use and the obligation not to cause significant harm. The theory of "limited territorial sovereignty" is the dominant one today. (McCaffrey 149; Beach et al 12.) There are also many indications of preference for a theory of "community of interest." (McCaffrey 164 et seq.)

7.36 The SADC Revised Protocol is also based on a general principle of the "unity and coherence "of watercourses. Article 3(1) reads:

"The State Parties recognise the principle of the unity and coherence of each shared watercourse and in accordance with this principle, undertake to harmonise the water uses in the shared

watercourses and to ensure that all necessary interventions are consistent with the sustainable development of all Watercourse States and observe the objectives of regional integration and harmonisation of their socio-economic policies and plans."

7.37 The contemporary theoretical basis and approach is aptly summarized by the following quote from McCaffrey 165-166.

"A state's 'interests' in an international watercourse system would generally be defined by its present and prospective uses of the watercourse as well as its concern for the health of the watercourse ecosystem. Its interests would be influenced by a wide variety of factors, including those of a cultural, economic, geographical, meteorological, and hydrologic nature. They will often have built up over time through the development of different uses of the watercourse, and may extend to a concern for its protection for the benefit of future generations. They may differ widely from state to state. Riparian states may place more or less emphasis on domestic, agricultural, industrial, navigational or other uses, and they may rely more or less heavily upon the watercourse. For example, experience shows that, historically, a watercourse may have been utilized very little by a state at its headwaters while it was essential to the existence of a state downstream. Depending on the nature of the use and the position of the state on the watercourse, a use may have effects upon, or be affected by, uses in other states. The use could also affect the ecosystem of the watercourse, which could have impacts upon all riparian states. Thus, on the one hand, each riparian state has a unique interest, or bundle of interests, in the watercourse – interests that may or may not affect or be affected by uses of other states. But on the other hand, the interests of all riparian states

are in one and the same watercourse system; they may in this sense be said to be bound together by that system. And while it is only a part of the hydrologic cycle, the watercourse system is a unity unto itself."

8 SOURCES

8.1 Introduction

The following sources have been collected so far.

8.2 Books

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8.3 Articles

- G Erasmus "How to Farm on the South African/Namibian Border: Problems in Demarcating a River Boundary" *SA Yearbook of International Law* 1984.
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- Erasmus and Hamman "Where is the Orange River mouth? The Demarcation of the South African/Namibian Maritime Boundary" *SA Yearbook of International Law* 1988.

8.4 Treaties and International Agreements

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- SADC Protocol on Shared Watercourses 1995.
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- Draft Agreement between the Governments of the Republic of Namibia and the Republic of South Africa on the Utilization of the Water Resources along the Lower Orange River, November 2002.
- 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 of 3 November 2000.
- Agreement on the Vioolsdrift and Noordoewer Joint Irrigation Scheme between the Government of the Republic of South Africa and the Government of the Republic of Namibia of 14 September 1992.
- 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 of 14 September 1992.
- The Statute of the International Court of Justice.

8.5 National Legislation and Constitutions

- The Constitution of the Republic of Namibia 1990.
- The Constitution of the Republic of South Africa 1996.
- The South African Water Act 1998.

8.6 Court Cases

- Case concerning the Gabčìkovo-Nagymaros Project (Hungary/Slovakia) *International Court of Justice* 1997. (Referred to as the *Danube* case.)