

# **Natural Resources Journal**

38 Nat Resources J. 3 (Summer 1998)

Summer 1998

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Fred O. Boadu

# Recommended Citation

Fred O. Boadu, Relational Characteristics of Transboundary Water Treaties: Lesotho's Water Transfer Treaty with the Republic of South Africa, 38 NAT. RESOURCES J. 381 (1998).

Available at: http://digitalrepository.unm.edu/nrj/vol38/iss3/1

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# FRED O. BOADU

# Relational Characteristics of Transboundary Water Treaties: Lesotho's Water Transfer Treaty with the Republic of South Africa

#### **ABSTRACT**

Concepts drawn from the transaction costs literature are used to analyze the governance structure of the transboundary water treaty between the Kingdom of Lesotho and the Republic of South Africa. The analysis shows that the two countries intended a 'relational' governance structure that supports the development of ongoing sustainable relationships at minimum cost. The parties gained economies of scale by using flexible language to resolve controversial issues, establishing various neutral institutions to police the treaty, and integrating benefits under the treaty with existing economic arrangements between them.

#### I. INTRODUCTION

Scholarly discussion and public debate on the legal aspects of shared natural resources have intensified in recent years. Even though the 'Helsinki Rules', worked out many years ago by the International Law Association (ILA), have provided a useful background for a number of declarations and treaties on transboundary water resources, the progressive development of the law of transboundary water resources is still hampered by difficulties in formulating uniform rules applicable to all nations.<sup>1</sup>

<sup>\*</sup> The author is an Associate Professor of Agricultural Economics, Texas A&M University. I would like to thank the following scholars for valuable comments on an earlier draft: Professor Charles Marvin of Georgia State University, College of Law; Professor Ludwik Teclaff of Fordham University School of Law; E. Wes F. Peterson, Professor, Department of Agricultural Economics, University of Nebraska-Lincoln; Patrick McDaniel, Lead Articles Editor of the Natural Resources Journal. Editorial assistance by Linda S. Crenwelge, Texas A&M University, is also appreciated. All errors are mine.

<sup>1.</sup> The July, 1985 issue of the NAT. RESOURCES J., No. 3 (1985), was devoted to a discussion of the laws and economics of transboundary natural resources. The symposium was organized by Ludwik Teclaff of Fordham University, a leading scholar on this subject. The various articles in the volume provide detailed references on this subject. See also, TRANSBOUNDARY RESOURCE LAW (Albert Utton & Ludwik Teclaff eds., 1987). On the Helsinki Rules, see International law Association Report of the 52nd Conference 484; Dante Caponera, Patterns of Cooperation in International Water Law: Principles and Institutions, 25 NAT. RESOURCES J. 563 (1985). The United Nations has been working hard to develop the laws on

The reason, as one scholar points out, is that, "each river basin or system has its own peculiarities and general rules of international law cannot cope with such a differentiated reality." Despite the obstacles, there are good reasons for the community of nations to strive to develop common rules and guidelines for equitable and efficient sharing of water resources. Transboundary natural resources are a major source of conflict and the willingness of nations to abide by common rules may be an important indicator of their willingness to work towards peaceful coexistence. Also, as resources become increasingly scarce, increased pressure for sharing could, in the absence of guidelines, lead to conflict. For developing countries, arrangements and agreements to share natural resources may one day become the rule rather than the exception, given the rather uneven distribution of natural resources.

This paper presents a general theoretical framework that may be used to structure transboundary water treaties or other agreements. Specifically, the paper uses a transaction costs theoretical framework to discuss the content and implications of the bilateral treaty in force between the Kingdom of Lesotho (KOL) and the Republic of South Africa (RSA).

transboundary resources. For example, see the two General Assembly Resolutions 34/186 of 18 December 1979, on "Cooperation in the field of the environment concerning natural resources shared by two or more states, and on progress in the use made of the conclusion of the study of the legal aspects concerning the environment related to offshore mining and drilling within the limits of natural jurisdiction," and 37/217 of 20 December 1982 on "[i]nternational cooperation in the field of the environment," requesting the Council to report on the progress made in implementing the 1979 resolution. See Shared Natural Resources and Legal Aspects of offshore Mining and Drilling: Report of the Executive Director, United Nations Environment Program, U.N. GAOR, 13th Sess., Agenda Item 8, U.N. Doc. UNEP/G.C.13/9/Add.1(1984) [hereinafter UNEP]. Also, since 1971, the International Law Commission has been working on guidelines for "The Non-Navigational Uses of International Water Courses," in response to the recommendation made by the General Assembly in its Resolution 2669(XXV) of December 8, 1970. See [1985] Y.B. Int'l L. Comm'n 68, U.N. Doc. A/CN.4/Ser.A/1985/Add.1 (Part 2).

- 2. Caponera, supra note 1, at 587.
- 3. See Dominique Alheritiere, Settlement of Public International Disputes on Shared Resources: Elements of a Comparative Study of International Instruments 25 NAT. RESOURCES J. 701 (1985). See also Asit K. Biswas, Shared Natural Resources: Source of Conflict or Springs of Peace? Dev. Forum, Sept.—Oct. 1982, at 13; BEN CROW ET AL., SHARING THE GANGES: THE POLITICS AND TECHNOLOGY OF RIVER DEVELOPMENT (1995) (also provides insights on sharing transboundary water resources).
- 4. "There are few places in the world where mankind has a more favorable opportunity to adopt a constructive approach towards the problem of the common man, removing the basic causes of conflict and war by the creation of abundance for all, than the field of such shared water resources." BONAYA GODANA, AFRICA'S SHARED WATER RESOURCES 5 (1985). For further insights on transboundary resource issues, see various editions of TRANSBOUNDARY RESOURCES REPORT, published quarterly by the International Transboundary Resource Center, University of New Mexico School of Law, Albuquerque, New Mexico.

The treaty, the Lesotho Highlands Water Project (LHWP), deals with a project to transfer water from the highlands of Lesotho to the Republic of South Africa.<sup>5</sup> The purpose of the present exercise is to highlight the application of general concepts from the transaction costs literature that may contribute to the progressive development of the international law of transboundary natural resources.<sup>6</sup>

The structure of the water transfer treaty between KOL and the RSA should be of special interest to scholars and policymakers interested in advancing the frontiers of law regarding shared resources for two main reasons. First, the two countries are markedly unequal in resource endowment and stage of economic growth. Some writers sometimes refer to KOL as a mere appendage of the RSA. Given this characterization of KOL, it is important to ask whether a fair and equitable treaty to share resources with a hegemonic RSA is possible. Second, the treaty was negotiated and signed during the apartheid period in the RSA. This was a period of turmoil in the southern cone of Africa, with the RSA coming under intense political pressure to dismantle apartheid. The minority regime carried out treaty negotiations under considerable uncertainty and hard bargaining. However, the treaty has held up very well under the

<sup>5.</sup> This paper discusses the Treaty on the Lesotho Highlands Water Project, Oct. 24, 1986, Lesotho-S. Afr. [hereinafter Treaty], and a companion document entitled KINGDOM OF LESOTHO MINISTRY OF WATER, ENERGY AND MINING, LESOTHO HIGHLANDS WATER PROJECT FEASIBILITY STUDY MAIN REPORT (1985) (draft) [hereinafter Feasibility Study]. Because the Treaty has not yet been registered with the United Nations Treaty Office, a reference to an official treaty series or publication is not possible. A copy of the document was made available to the author by His Excellency, William T. Van Tonder, the Ambassador from the Kingdom of Lesotho to the United States, Washington, D.C.

<sup>6.</sup> Article 15 of the Statute of the International Law Commission (ILC) points out two different aspects of the work of the ILC. The first aspect is the "codification of international law," that is, "the more precise formulation and systematization of rules of international law in fields where there already has been extensive State practice, precedent and doctrine," and the second aspect is the "progressive development of international law," that is, "the preparation of draft conventions on subjects which have not yet been regulated by international law or in regard to which the law has not yet been sufficiently developed in the practice of States." See IAN BROWNLEE, BASIC DOCUMENTS IN INTERNATIONAL LAW 221 (1967). For a background discussion on Article 15 of the ILC Statute, also see HERBERT W. BRIGGS, INTERNATIONAL LAW COMMISSION (1965). See also TASLIM O. ELIAS, THE MODERN LAW OF TREATIES (1974). Increasing resource scarcity and environmental pollution problems have brought transboundary resource issues to the forefront of public debate. States' practice in sharing natural resources is still evolving, and the applicable legal regime is progressively being developed.

<sup>7.</sup> Since the treaty was negotiated during the old apartheid regime, the bargaining strategies and debates reflect the thinking of the period. All apartheid laws were repealed in 1991, and an interim constitution ending minority rule was completed in 1993. A multiparty election, open to all races was held in April 1994, with the African National Congress (ANC) winning over 60% of the votes. Nelson Mandela was subsequently elected President of the

historic political change that occurred in 1991 with the repeal of all apartheid laws. As of 1996, there has been only one procedural amendment to the treaty.<sup>8</sup> Only two disputes have arisen, and these were amicably resolved.<sup>9</sup> Even though there has been no physical delivery of water, the RSA has kept to its schedule in paying royalties as agreed upon under the treaty.<sup>10</sup>

It is argued below that the water transfer treaty represents an additional component in the historical relationship between the two countries which, although characterized as one of hegemony, may be shifting, albeit imperceptibly, to one that is "relational." The primary

RSA. No attempt is made to discuss the political relationships between RSA and its neighbors since such a discussion is beyond the scope of this paper.

- 8. The amendment concerns the commencement date for water delivery to RSA. The Treaty stipulates the water delivery date from Phase IA as January 1, 1995, which would also be followed by payments of royalties. To take into account the delays in the commencement of the Project, particularly the delay in signing the Treaty, an amendment was made in Protocol IV, in terms of which the fixed royalty component becomes payable to Lesotho upon the water level in Katse reservoir reaching 1,993 meters above sea-level (this level was reached on September 6, 1996), and the actual water delivery should commence before January 1, 1997. A new date, likely to be January 1998, for the delivery of water is being discussed by the two countries in view of the need to line the entire transfer tunnel, an activity which was not planned for under the original Treaty. See communication from Pule Nthejane, Esq., Counsellor, Embassy of the Kingdom of Lesotho, to Fred O. Boadu, Associate Professor, Dep't of Agricultural Economics, Texas A & M University, 1–2 (Oct. 25, 1996) [hereinafter Communication].
- 9. There have been two disputes to date. One dispute concerns Article 10(3) of the Treaty relating to whether income tax chargeable in Lesotho constitutes a cost for which the RSA is responsible. KOL's interpretation of the clause is that income tax is part of legitimate project costs, while RSA's interpretation is the opposite. In 1993, the Parties had to decide whether to submit the issue to arbitration or to settle it amicably. The Parties decided to work on a compromise solution, in terms of which KOL has agreed to charge lower rates of taxation to contractors and consultants working on the Project, while RSA has accepted the lower taxes as legitimate Project costs for which it will bear cost responsibility. The agreement is to be embodied in Protocol V to the Treaty, intended for signature before the end of 1996. The other dispute concerns hydrology, that is, on the amount of water available in Lesotho. The dispute dates back to 1983, and several attempts to resolve the issue have to date not succeeded. However, the latest round of talks between the hydrologists of the two countries is promising some positive outcome. See Communication, supra note 8, at 2.
- 10. The first royalty payment is due at the end of October 1996, even though water has not yet been delivered. See text accompanying supra note 7; see Communication, supra note 8, at 2.
- 11. For a discussion of the concept of "relational treaties" see infra Part II. One indicator of the dependency thesis is the number of migrant workers from Lesotho to South African mines. During the 1970s migrants comprised, on the average, 30 percent of Lesotho's active work force and close to 50 percent of the active males. Migrant remittances have financed some 80 percent of the country's real growth since the 1960s and are now at least as large as the gross domestic product (GDP). See, e.g., Paul A. Wellings, Modern Sector Development and South African Investment: A Viable Strategy for Lesotho? 1 J. OF AFRICAN STUDIES 4, 13 (1986).

thesis posed in this paper is that the KOL-RSA Water Treaty has great potential as a model for discussion of joint transboundary natural resource development and exploitation. Furthermore, the treaty shows how such international agreements might be structured to promote ongoing productive relationships with a minimum of dysfunctional provisions.

To give credence to the thesis posed in this paper, one has to understand the relationships between KOL and RSA in terms of physical location, historical economic and political interaction, and most importantly the distribution of water resources in the sub-region. Lesotho is completely surrounded by RSA and has no access to the rest of the world except through the Republic. The Senqu River, a major river in Lesotho, originates from the highlands in Lesotho and joins the Orange River in South Africa to become the Senqu-Orange River System. Water from the highlands in Lesotho constitutes 50 percent of the input into the Senqu-Orange River System. The direction of flow of the Senqu River poses

Also a recent United Nations report suggested that the "Highlands power and water project would-by definition-not alter [the dependency] status of Lesotho as South Africa is the basic customer for the water and, at full development of potential, the power." See United Nations: Inter-Agency Task Force, Africa Recovery Programmed Economic Commission for Africa, South African Destabilization: The Economic Cost of Frontline Resistance to Apartheid, UN Economic Commission for Africa, Addis Ababa, Ethiopia, 36 (October 1989). The primary issue of interest in this paper is not whether South Africa has engaged in obtuse behavior in the past or not. That is conceded. This paper contends that this historical fact should not drown the potential for exploring possible pareto-superior distribution of shared resources. The concept of pareto-superior builds on the related concept of pareto-efficiency, which is defined as "a situation in which everyone is so well-off that it is impossible to make anybody better off without simultaneously making at least one person worse off. It is a situation in which all possibilities for voluntary trades which would re-allocate resources or redistribute commodities more efficiently have been exhausted." See ALAN RANDALL, RESOURCE ECONOMICS: AN ECONOMIC APPROACH TO NATURAL RESOURCE AND ENVIRONMENTAL POLICY 104 (2d ed. 1987).

12. See Feasibility Study supra note 5, for a description of the geography of Lesotho, projected water needs of the Republic of South Africa. Maps of the project area are taken from the Feasibility Study supra note 5. For detailed studies on the water resources of Lesotho, see OALABANE K. CHAKELA, SECRETARIAT FOR INTERNATIONAL ECOLOGY, SWEDEN, WATER AND SOIL RESOURCES OF LESOTHO, 1935-1970: A REVIEW AND BIBLIOGRAPHY (1973); QALABANE K. CHAKELA, SCANDINAVIAN INSTITUTE OF AFRICAN STUDIES, UPPSALA SOIL EROSION AND RESERVOIR SEDIMENTATION IN LESOTHO, UNGI Nr 54 Rapport (1981). What is known as the Orange River Basin is defined by a series of rivers and lakes. These are the Orange River forming the Namibia and South African border, the Mossob River forming the Botswana and South African border, the Molopo River also forming another Botswana and South African border, the Caledon River forming a Lesotho and South African border, and tributaries of the Orange forming another Lesotho and South African border. In effect, South Africa, Namibia, Botswana and Lesotho are the constituent countries of the Orange River Basin, which is 950,000 square kilometers (km2) in area. Sixty-six percent of South Africa's land area falls within the basin and the whole of Lesotho (100 percent of land area) is considered within the basin. See CENTRE FOR NATURAL RESOURCES, ENERGY & TRANSPORT OF THE DEP'T OF ECONOMIC

problems for South Africa because the water flows south into the Orange River, when it is needed north of the Drakensberg Range in the Vaal River above the Vaal Dam (see Map). The Vaal Region, also called the "Pretoria-Witwatersand-Vereeniging (PWV)" area, is critical to the economy of South Africa. The area accounts for approximately 40 percent of South Africa's Gross Domestic Product (GDP) and about 50 percent of its total industrial output, with 31 percent of the total population living in the area. Water demand in the PWV area in South Africa was projected to exceed supply by 1995. Water deficits were projected to grow from 1.81 m3 per second (/s) in 1995 to 106.69 m3/s by the year 2030 due largely to growth in industrial and household demand. Given the importance of the PWV area to South Africa, there is a critical need to address this projected deficit in water demand. The solution is the transfer of water from Lesotho to the PWV region under the LHWP.

To accomplish the water transfer objective, KOL and RSA agreed to an elaborate engineering undertaking under the LHWP. The LHWP is comprised of four dams, from which water from Lesotho would be carried a distance of over 400 km to the Vaal Dam through several tunnels, the longest being 53 km. The first stage of construction began in 1987 and the first water was projected to reach the Vaal Dam in 1995, but the delivery

and Social Affairs of the United Nations, Register of International Rivers 6, 22–23, 27(1978).

<sup>13.</sup> Feasibility Study supra note 5, at 3-5. Midgley has suggested the need to restructure RSA's water price regime along efficiency lines in order to deal with recurring water deficits. See D. C. Midgley, Towards a Rational Water Policy for South Africa 2 Optima (ZA) 33, 50-60 (June 1985). However, the structural characteristics of RSA's water economy show that more than a restructuring of the price regime will be needed to deal with the water deficits. On the supply side, "only about 9% of the total population appears as stream flow. The balance 91% disappears mainly into the atmosphere by evaporation and transpiration." D. F. Kokot, Water Utilisation, in STANDARD ENCYCLOPEDIA OF SOUTH AFRICA, NASIONALE OPVOEDKUNDIGE UITGENERY LTD. (vol. 11 1975). To underscore the water-poverty of RSA, Kokot provides the following examples: the Tennessee River, with a catchment area of about one-twelfth of the area of RSA, has a run-off equal to that of all the rivers of RSA. Another river in the United States, the Columbia, with a drainage area of 190,000 km2, has double the run-off of RSA with an area of 1,222,000 km2. Id. at 356. On the demand side, the author points out, "in 1970, agriculture was responsible for 78% of total water consumption as against 22% for domestic and industrial use. By the end of the century, agriculture will be only 44% of the total." Id. The water deficiency in the PWV area is, in effect, the result of the hydrological cycle and not a failure to price water efficiently to industry and agriculture.

<sup>14.</sup> For a summary of Lesotho's stake in the water project, see the Feasibility Study, supra note 5, at i; and Treaty, supra note 5, at 15. See also Africa Inst. of South Africa, University of Lesotho, 24 Lesotho: Highlands Water Project in Balance 113 (1984). Also since 1988, the Government of Lesotho has been issuing very informative annual progress reports on the water transfer project. Copies of these reports are available from the Lesotho Embassy based in Washington, D.C.

never occurred.<sup>15</sup> The final stage would be completed in 2019 with a delivery of 70 m3/s. Both South Africa and Lesotho will benefit from LHWP. According to the feasibility study carried out under the project, the cost of LHWP is about 50 percent of the estimated cost of an alternative proposed project, the Orange-Vaal Transfer System (OVTS), located entirely within South Africa.<sup>16</sup> This cost savings will be apportioned between Lesotho and South Africa, with Lesotho receiving an annual fixed payment (annuity) of about US \$13.6 million.<sup>17</sup>

In addition to the direct benefits from royalty payments, the feasibility study points to indirect benefits for Lesotho. For example, part of the project package is to develop a hydroelectric power plant in Lesotho with an initial capacity of 73.4 Million-Watts (MW) in 1995 and increasing to a maximum of 276 MW in 2021.18 It is estimated that, a hydroelectric plant based in Lesotho would save the kingdom about US \$5.1 million in 1995, rising to about US \$23.4 million in 2044. 19 In addition, benefits from agro-industry growth, increased forestry, additional fisheries, and expansion of tourism are anticipated. Moreover, since the mountain region is very sparsely populated, the development will affect only some 4,000 hectares of arable land and 18,700 hectares of grazing land, with about 273 households being displaced.<sup>20</sup> Given the positive benefits of the project identified in the feasibility studies, the task facing the two countries was reduced to designing an agreement that allowed them to capture the identified benefits. The rest of the paper explores how KOL and RSA structured their treaty in order to capture these benefits. Section II presents a theoretical and analytical approach to be used in analyzing the treaty, drawn from the transaction costs paradigm of institutional economics. Section III presents details of the procedural and substantive elements of

<sup>15.</sup> See text accompanying supra note 8.

<sup>16.</sup> See Feasibility Study, supra note 5, at 4-7. See also text accompanying infra note 52.

<sup>17.</sup> See id. at 10-3.

<sup>18.</sup> See id. at 5-10.

<sup>19.</sup> See id. at 10-4.

<sup>20.</sup> See id. at 7-3, 7-4. In 1987, Dieter Schumacher, a consultant from the United Nations Industrial Development Organization (UNIDO) and Moleboheng Ramoreboli of the Lesotho National Development Corporation (LNDC) identified several agricultural and tourism industries with linkages to the project. Even though these projects have gone through modifications, a report issued by the authors in 1996 gives the following breakdown of achievements for agricultural projects in terms of completion targets: mountain horticulture and field crops (90%); fisheries (80%); community forestry (50%); dairy programme (65%); poultry (0%); animal husbandry and range management (25%). The Lesotho authorities find the progress to-date quite satisfactory. See DIETER SCHUMACHER & MOLEBOHENG RAMOREBOLI, MANUFACTURING LINKAGES FROM PHASE I: LESOTHO HIGHLANDS WATER PROJECT, (Lesotho National Dev. Corp., Information Paper No. 4, 1987); also LESOTHO HIGHLANDS DEVELOPMENT AUTHORITY, PUB. NO. 68, QUARTERLY PROGRESS REPORT (1996).

the treaty within the framework developed in Section II, and Section IV presents conclusions.

# 1. A PARADIGM OF RELATIONAL AND TRANSACTIONAL TREATIES

The theoretical and analytical approach used to analyze the KOL-RSA treaty draws from the transaction costs paradigm of institutional economics. Although the paradigm was initially applied to the contractual difficulties facing firms, in recent literature it has increasingly gained wider application in an effort to explain the variety of institutions that have evolved to guide international interactions. The basic idea under the

- 21. The paradigm used in this study was inspired by studies from the transaction-costs literature. The principal two studies are: Ian R. Macneil, The Many Futures of Contract 47 S. CAL. L. REV. 691 (1974) [hereinafter Many Futures], and Ian R. Macneil, Adjustments of Long-Term Economic Relations Under Classical, Neoclassical and Relational Contract Law 72 Nw U. L. REV 854 (1978) [hereinafter Adjustments]. See also Oliver Williamson, Transaction Cost Economics: The Governance of Contractual Relations, 22 J.L. & ECON. 233 (1979); Charles Goetz & Robert Scott, Principles of Relational Contracts, 67 VA. L. REV. 1089 (1981); Timothy Muris, Opportunistic Behavior and the Law of Contracts, 65 MINN. L.REV. 521 (1981); Anthony Kronman, Contract Law and the State of Nature, 1 J.L. ECON. & ORG. 5 (1985); and Victor Goldberg, Toward an Expanded Economic Theory of Contract, 10 J. ECON. ISSUES 45 (1976).
- 22. Beth Yarbrough and Robert Yarbrough have applied the transaction costs paradigm to international institutions in several interesting papers. See, e.g., Beth & Robert Yarbrough, Institutions for the Governance of Opportunism in International Trade, 1 J.L. ECON. & ORG. 129 (1987); Beth & Robert Yarbrough, Free Trade, Hegemony and the Theory of Agency, 38 Kyklos 345 (1985). Lord McNair has explained the parallels between the concept of a contract and a treaty as follows:

In spite of the variety in its objects, it is obvious that the treaty as a concept of international law has been mainly indebted in the course of its development to the agreement or contract of private law. In the case of a contract, English law requires that there must be a common intention of the parties to enter into legal obligations, mutually communicated expressly or impliedly, and will be binding insofar as such an intention is known when parties enter into an agreement which in other respects conforms to the rules of law as to the formation of contracts. A corresponding rule applies to treaties, and the inference of intention referred to is even more important in the case of treaties because it sometimes happens that of two governments who conclude a treaty one at any rate has no intention of creating a legal obligation or of performing what it has promised to do.;eb LORD MCNAIR, THE LAW OF TREATIES 6 (1965).

#### Also, according to Sir Hersch Lauterpacht;

the legal nature of private law contracts and International law treaties is essentially the same. The autonomous will of the parties is, both in contract and in treaty, the constitutive condition of a legal relation which, from the moment of its creation, becomes independent of the discretionary will of one of the parties. It is the law of the state which gives objective force to a

paradigm is that parties weigh the benefits and costs of entering into a treaty or agreement, and therefore would search for the appropriate organizational structure (governance regime) which minimizes the cost of their participation in a treaty.<sup>23</sup> Governance regimes can be looked at on a continuum, ranging from a single, 'one-shot' interaction to a long-term repeated interaction. Parties may define their interaction to reflect a hybrid of these two extreme poles. The transaction costs paradigm provides a framework for analyzing the choice of governance regime used by contracting parties to govern their interaction.

In the context of international treaties, 'transaction costs' refer to those costs associated with interactions between nations. These include "information, contracting and policing costs (ICP)."24 Information cost in negotiating a treaty could be quite high. For example, parties need to know about each other's outlook, behavior, intent, desire to deal in good faith, and willingness to abide by negotiated commitments.25 They include an understanding of the history, culture, politics, and the entire social matrix within which the parties function. Parties also need to have information about the technical and economic characteristics of the subject matter or object of the treaty. Gathering and processing this information is costly. Several options are available to deal with information costs. For example, each party may decide to incur information gathering and processing costs independently of the other's actions. On the other hand, the parties may freely trade information, conduct collaborative research, or jointly engage the services of third parties where the subject matter may not be within their competence.

Parties to a treaty incur contracting, or bargaining, costs in order to maximize benefits by reducing their risks and avoiding being victims of opportunism.<sup>26</sup> Each party in a negotiation attempts to obtain concessions

contract in private law, and it is the rule pacta sunt servanda[,] [treaties are binding] one of the fundamental of international law, which imparts objective force to international treaties.

SIR HERSCH LAUTERPACHT, PRIVATE LAW SOURCES AND ANALOGIES OF INTERNATIONAL LAW: WITH SPECIAL REFERENCE TO INTERNATIONAL ARBITRATION 156 (1970).

- 23. See Williamson, supra note 21, at 233.
- 24. A. MITCHELL POLINSKI, AN INTRODUCTION TO LAW AND ECONOMICS 12 (1983). See also Thomas Crocker, Externalities, Property Rights and Transaction Costs: An Empirical Study, 14 J. L. & ECON. 451 (1971).
  - 25. Sources supra note 21, provide information on these characteristics.
  - 26. Opportunism has been defined as: When a performing party behaves contrary to the other party's understanding of their contract, but not necessarily contrary to the agreement's explicit terms, leading to a transfer of wealth from the other party to the performer . . . . Because of the wealth transfer, parties have an incentive to avoid becoming victims of opportunism, yet whatever strategy

from the other party through bargaining. The concessions obtained become a part of the treaty. The process is time consuming and, depending on the ultimate goal of the contracting parties, costs associated with the process can be substantial. For example, it is very costly to reduce every minute detail of a treaty to writing since future contingencies are difficult to predict. Even if the parties are able to come up with a list of reasonable future contingencies, they must negotiate on each one. Such negotiation can be very lengthy because one party may behave strategically or adopt 'hold out' tactics. It is not inconceivable that tactics used by one or bo h parties may thwart a potentially beneficial treaty. In contrast, parties may deliberately follow a cooperative approach in order to reduce bargaining costs and capture economies. Techniques such as 'good faith' bargaining and 'best effort' to arrive at a mutually beneficial conclusion help reduce transaction costs. Also, parties may jointly reduce costs by deferring difficult issues for future deliberation using mechanisms such as "agree-

of self-protection they choose, deterrence will be costly. Thus, for a given amount of opportunism avoided, an individual will choose the least costly method or combination of protective methods.

Muris, supra note 21, at 521.

- 27. Macneil defined the phenomenon as "presentiation." See Macneil, supra note 21, at 863. "Presentiation" refers to efforts on the part of parties in a transactional contract to reduce all future contingencies to the present. Id. The phenomenon is inapplicable in a relational contract. Id.
- 28. See Richard Bilder, Managing the Risks of International Agreement 11, 24 (1981). A reviewer brought to my attention the relevance of "prisoner's dilemma" issues in this type of contracting. Even though game-theoretic approaches to treaty negotiation have not been discussed in this paper, their relevance to the current discussion should not be overlooked. For example, embedded within the concept of "opportunism" is the idea of a "game". Opportunism includes bluffs, threats, and games of "chicken" designed to exploit another party's presumed bargaining disadvantage. Goetz & Scott, supra note 21, at 1101. A relational treaty concerning a transboundary resource is analogous to the outcome of a game that is repeated an indefinite number of times and where both parties are interested in sustained ongoing payoffs in the future. For these repeated games, both parties have an incentive to cooperate. For further insights on the game-theoretic approaches, see ROBERT AXELROD, THE EVOLUTION OF COOPERATION (1984). See also ALVIN E. ROTH ED., GAME-THEORETIC MODELS OF BARGAINING (1985). Runge has suggested that in the international arena, the popular "prisoner's dilemma" game may not be applicable. The author has labeled the negotiation problem in the international arena as an "assurance problem." In this case the solution lies in searching for a common mutual contract of cooperation that is assured by an institutional rule to which every player conforms. See Carlisle Ford Runge, Institutions and the Free Rider: The Assurance Problem in Collective Action, 46 J. Pol. 154 (1984).
- 29. According to Goetz & Scott, "[p]arties enter into relational contracts because such agreements present an opportunity to exploit certain economies. Each party wants a share of the benefits resulting from these economies and consequently seeks to structure the relationship so as to induce the other party to share the benefits of the exchange." Goetz & Scott, supra note 21, at 1092.

<sup>30.</sup> See BILDER, supra note 28.

ments to agree or tacit agreements or they may establish joint committees or other procedures to attempt to implement their cooperative objective."31

Policing costs are costs incurred to ensure performance by the other party.<sup>32</sup> Parties may renege on their commitment in several ways including outright refusal to perform, performance below a required standard, shirking of responsibility, or engaging in opportunistic behavior.<sup>33</sup> A treaty may contain both explicit and implicit mechanisms to ensure performance. Methods of dispute resolution which are stated in a treaty document, and, sometimes, trading of 'hostages' are examples of explicit mechanisms to ensure performance.<sup>34</sup> Implicit policing mechanisms include provisions defining nonperformance or inadequate performance, rewarding full performance, decreasing the probability of the other party gaining from nonperformance, or making nonperformance more costly, by tying or linking benefits under the agreement to other existing or future benefit in a different treaty between the parties.<sup>35</sup>

The characterization of a treaty as 'transactional' or 'relational' depends on decisions made by parties to economize on information, bargaining, and policing costs. In a transactional interaction, information on the identity of parties is immaterial because parties are not planning for a long-term ongoing relationship.<sup>36</sup> Since parties in a transactional interaction may not know each other, each incurs independent costs to insure against the lack of credibility of the other party, conducts independent studies on the technical aspects of the object of the interaction, engages in strategic bargaining which may tie-up the process in minute details, and when disputes arise, may resort to costly lawsuits, seeking damages or court-ordered performance.<sup>37</sup>

In contrast, the identity of parties in a relational interaction is material because the parties seek a long-term progressive development of relations.<sup>38</sup> To avoid future conflict, the parties in a relational interaction

<sup>31.</sup> Id.

<sup>32.</sup> See POLINSKI, supra note 24, at 5.

<sup>33.</sup> See BILDER, supra note 28.

<sup>34.</sup> Id.; see also Yarbrough & Yarbrough, supra note 22.

<sup>35.</sup> See BILDER, supra note 28.

<sup>36.</sup> Macneil, supra note 21, at 720–21. "The transactional contract is described as "sharp in by clear agreement sharp out by clear performance." Id. at 738; compare with text accompanying supra, note 27.

<sup>37.</sup> As Macneil points out, "Should the initial presentation fail to materialize because of nonperformance, the consequences are relatively predictable from the beginning and are not open-ended." Macneil, *supra* note 21, at 864.

<sup>38. &</sup>quot;The fiction of discreteness [transaction] is fully displaced as the relation takes on the properties of a 'mini-society with a vast array of norms beyond those centered on the exchange and its immediate processes." Williamson, supra note 21, at 238, quoting Macneil, supra note 21.

work towards a common understanding of the subject matter of their interaction through voluntary trading of information, replace costly strategic bargaining on minute details with a focus on developing a long-term stable relationship, and when disputes arise, remedies tend to take "the restorational form of negotiation, mediation, arbitration, orders to do things and other processes fostering cooperation, rather than substitutional monetized remedies." <sup>39</sup>

The above discussion hardly exhausts the many distinctions between the characteristics of a relational versus transactional governance structure. Two key points must be kept in mind. First, the determination of a relational or transactional governance structure is based on the nature of an interaction in its entirety and not based on a concatenation of isolated elements of an agreement. Second, the long-term nature of an agreement does not necessarily imply a relational governance structure. Rather, it is the deliberate and purposive effort on the part of parties to economize on costs and share benefits through cooperative undertakings that define a relational interaction. Did KOL and RSA achieve a relational governance outcome in their treaty to share the benefits from the Orange River basin development? We argue below that they did, and the treaty could be a useful example for other countries contemplating a transboundary water treaty.

# III. APPLICATION OF THE TRANSACTION COST PARADIGM TO THE KOL-RSA TREATY

The essence of the characterization of a contract as transactional or relational is "to categorize contract transactions and relations along some kind of behavioral lines." This means that by carefully examining the

Goetz & Scott, supra note 21, at 1091.

<sup>39.</sup> Macneil, Many Futures, supra note 21, at 864.

<sup>40.</sup> Goetz and Scott have explained the implication of length of contract as follows: although a certain ambiguity has always existed, there has been a tendency to equate the term "relational contract" with long-term contractual involvements. We here adopt a very specific construction of the term that is based more precisely on a contrast with the classical contingent contract. A contract is relational to the extent that the parties are incapable of reducing important terms of the arrangement to well-defined obligations. Such definitive obligations may be impractical because of inability to identify uncertain future conditions or because of inability to characterize complex adaptations adequately even when the contingencies themselves can be identified in advance...long-term contracts are more likely than short-term arrangements to fit this conceptualization, but temporal extension per se is not the defining characteristic.

<sup>41.</sup> Macneil, Many Futures, supra note 21, at 736.

language, duties, and responsibilities in a treaty, one may gain an understanding of the parties' aspirations, hopes, and the choice of governance regime intended to govern the distribution of benefits between the present and the future. Where the language, duties, and responsibilities convey a sense of a 'one-shot' deal, the parties intended a transactional treaty, and where there is a sense of continuity and conscious effort to jointly minimize costs by reducing risks and avoiding opportunism, a relational treaty is intended. In the sections below, we examine the substantive language and procedural mechanisms in the KOL-RSA treaty to determine how the parties made conscious choices regarding the sharing of information, the conduct of bargaining, and imposition of policing mechanisms in an effort to reduce risk and avoid opportunism. Based on the conclusions reached about parties' choices, inferences will be made as to whether a relational or transactional governance structure was intended.

#### a. Information Costs

In negotiating the treaty, KOL and RSA took joint action to reduce information costs, thus indicating a mutual desire to work towards a relational governance structure. They accomplished this in two ways: (1) by incorporating and building on the historical commonalities between the two countries rather than a costly search for new sources of trust and (2) by a joint undertaking to share the information cost for all the technical and non-technical aspects of the treaty. A good example of a conscious effort on the part of the parties to reduce information costs is the manner in which they utilized their common historical institutional origins in designing the dispute resolution mechanism under the treaty.

Despite being politically separate entities, KOL and RSA share much common cultural and historical background. In addition to the geographical proximity and historical political interaction, KOL shares some common legal traditions with RSA. By a proclamation in 1884, Roman Dutch Common Law (South African) became a part of KOL's common law so that KOL's legal system today includes both English and Dutch Common Law principles.<sup>42</sup> The two nations built on their common

<sup>42.</sup> The General Law Proclamation of May 29, 1884, stated: "[i]n all suits, actions or proceedings, civil or criminal, the law to be administered shall, as nearly as the circumstances of the country will permit, be the same as the law for the time being in force in the colony of the Cape of Good Hope..." Sebastian Poulter, The Common Law in Lesotho, XIII, 13 J. AFR. L. 127–28 (1969); see also James Beardsley correspondence 14 J. AFR. L. 198–202 (1970) (responding to Poulter's article). As Poulter points out, this proclamation is exceptional in that even though Lesotho, then Basutoland, was a British protectorate, Roman-Dutch law rather than English Common law was introduced. Poulter, id. For excellent discussions of the common

legal heritage in developing the rules of arbitration under the treaty. The treaty text is the basic law to be applied by the Arbitral Tribunal. For the interpretation or application of the treaty, however, the Arbitral Tribunal may use the following sources in the order in which they are listed: a) international agreements entered into by both parties; b) customary international law universally recognized or having received the assent of both parties; c) Roman Dutch customary law; and d) all such other rules of law in force in both the Kingdom of Lesotho and the Republic of South Africa.<sup>43</sup>

KOL and RSA also took joint action to reduce the cost of information about the project itself, primarily through joint research and feasibility studies. Negotiation for the transfer of water from Lesotho to the Republic of South Africa has been ongoing for over three decades. The first study was undertaken for the Government of Basutoland in 1955-1956. The current treaty is based on a feasibility study completed in 1987, and sponsored jointly by RSA and KOL in order to avoid the high cost of separately funded studies. Although each party engaged the services of internationally recognized experts on water basin development, the experts worked together to produce a single document.

The treaty addressed both the logistical and engineering aspects of the water transfer and the implications of the project for tourism, fisheries development and water-related recreational activities in Lesotho, as well as the water needs issues in the PWV area in RSA. The collaborative spirit in which the parties gathered information about the treaty is a reflection of the relational governance preference of the parties. By going beyond the mere logistics of a water transfer scheme to address issues of domestic policy interest to the parties, the parties obtained cost economies, thereby

law in Lesotho and the influence of South African Roman-Dutch principles, see Poulter, id. at 127–44; see also Beardsley, supra this note (1970).

<sup>43.</sup> Note that the rules of arbitration suggested in the KOL-RSA Treaty capture both the neutral international guidelines and the Roman-Dutch customary principle shared by KOL and RSA. See Poulter, supra note 41. For example, Article I of the Model Rules on Arbitral Procedure requires Parties to bring disputes about arbitration to the International Court of Justice to be resolved by "means of its summary procedure." Report of the Commission to the General Assembly [1958], 2 Y.B. Int'l L. Comm'n 83.

<sup>44.</sup> Bruce S. Young, Projected Hydroelectric Schemes in Basutoland, 60 J. GEOGRAPHY 225-27 (1961) citing Ninham Shand, Report on the Regional Development of the Water Resources of Basutoland (1956). Prior to independence in 1966, Lesotho was known as Basutoland. Id.

<sup>45.</sup> The government of Lesotho engaged the services of the Lahmeyer MacDonald Consortium consisting of Lahmeyer International GmbH, Sir M. MacDonald and Partners, Ltd. and the Electricity Supply Board of Ireland. South Africa engaged the services of the Olivier Shand Consortium consisting of Ninham Shand, Inc. and Henry Olivier and Associates. All the organizations are internationally recognized. See Feasibility Study, supra note 5, at preface.

avoiding another costly investigation or simply not addressing the problems.<sup>46</sup>

# b. Bargaining Costs

A relational governance structure requires that parties avoid costincreasing bargaining techniques like hold-outs, risk increasing techniques in the form of ambiguities in language, and opportunism, promoting techniques like open-ended drafting of provisions. A basic strategy used by RSA and KOL to reduce bargaining costs was the reliance on independent, internationally recognized experts, and the conscious decision to follow guidelines suggested by the international community of nations.<sup>47</sup> By following the guidelines suggested by the United Nations, the KOL-RSA treaty gives credence to the usefulness of general principles.<sup>48</sup> In

- 46. It is not possible to identify the economic development policies of the government of Lesotho in a single document. Statements of policies are found in various development plans, position papers, official pronouncements and speeches by various government officials. Joshua Carpenter has summarized the general intent of the government of Lesotho to: (1) give agriculture the highest priority; (2) develop small scale industries; (3) emphasize primary education; (4) exploit the water and mineral resources of the country; and (5) promote effective local government. Joshua Carpenter, A Critique of Economic Development Planning Since World War II: Selected African Case Studies (1977) (unpublished Ph.D. dissertation, Colorado State University) (on file with author).
- 47. In 1984, the United Nations Environmental Program (UNEP) requested, from governments and international organizations, information on how the United Nations "Principles of Conduct in the Field of the Environment for the Guidance of States in the Conservation and Harmonious Utilization of Natural Resources Shared by Two or More States" was being applied. UNEP, supra note 1, at 4. Lesotho was one of forty-six countries that expressed a commitment to implement U.N. General Assembly Resolution 37/217. Id. at 1. In reply to requests for information submitted by the UN Secretariat, the Government of Lesotho stated:

Lesotho expects to draw upon the principles (drawn by the UN) during negotiations with South Africa currently under way regarding the transfer of waters from the Senqu River headwaters in Lesotho to the Vaal Basin in South Africa. Lesotho is of the opinion that international organizations could assist in strengthening existing joint institutional mechanisms or in the establishment of new mechanisms by providing third-party fairness in dealings from treaty negotiation to reconciliation during construction and operation.

Id. at 6 (emphasis added).

48. Article 38(1c) of the Statute of the International Court of Justice (ICJ) states "the general principles of law recognized by civilized nations" as the third category of rules which the Court must apply in accordance with its statute. The phrase, "general principles of law recognized by civilized nations," refers to principles so general as to be applicable within all systems of law. These general principles must be found in the municipal law of nations. Michael Virally, The Sources of International Law, reprinted in LOUIS HENKIN ET AL., INTERNATIONAL LAW 88, 89 (2d ed. 1980). Since KOL and RSA share a common Roman-Dutch legal

the words of Caponera, "general rules emphasize the interdependence of states' interests in optimum utilization of the world's water resources in a global perspective." Thus, the treaty contributes to the progressive development of the law on transboundary resources.

Two issues raised during the negotiations deserve further comment in order to gain support for the relational hypothesis posed in this study. Some observers have suggested that, to some extent, KOL was coerced into the present treaty because RSA always raised the possibility of developing an alternative project without KOL's participation. Also, RSA has used strong-arm tactics like economic blockades against Lesotho and harassment of residents in the capital. These observations suggest that the treaty may be 'unequal', in which case the 'relational' thesis pursued in this paper would be undermined. The suggestion of an 'unequal' treaty is untenable for the following reasons. First, consider the

tradition, the identification of general principles in interpreting their treaty becomes less onerous.

- 49. Caponera, supra note 1, at 587.
- 50. In 1984, South Africa withdrew from the scheme as part of a campaign to persuade Lesotho to sign a nonaggression pact.... Despite the obvious economic difficulties faced by Lesotho by this action, it is not totally without some choice. This is because regional friends of Lesotho initiated plans for an alternative scheme. [M]embers of the [SADCC] revived the Oxbow hydroelectric project as an alternative to [LHWP]. Even though the Oxbow scheme would not meet all of Lesotho's needs (only 60%), it shows that Lesotho is not totally without alternatives.

Susan Turner, Lesotho: The Economy, in AFRICA SOUTH OF THE SAHARA 1990 593 (19th ed. 1989). See also BULLETIN supra note 14, at 114 (on the issue of coercion prior to 1993).

51. A report issued prior to 1991 states: South Africa has launched murder raids, kidnappings and some sabotage attacks against South African refugees and their friends. Nearly 500 deaths have resulted during the years 1980–88. Economic costs of South African aggression may reach between \$75 million and \$100 million for the 1980-88 period. Excess defense spending during this period approaches \$75 to \$100 million, while GDP loss amounts to between \$250 and \$300 million.

UNITED NATIONS DEP'T OF PUB. INFORMATION, SOUTH AFRICAN DESTABILIZATION: THE ECONOMIC COST OF FRONTLINE RESISTANCE TO APARTHEID, PRESS SUMMARY 8 (Oct. 14, 1989).

52. One legal scholar has described unequal treaties as "treaties which are not concluded on the basis of mutual recognition of the equality and sovereignty of the contracting states, and which do not contain the crucial element of reciprocity where rights are conferred and obligations imposed . . . . "PETER WESLEY-SMITH, UNEQUAL TREATY, 1898-1997: CHINA, GREAT BRITAIN AND HONG KONG'S TERRITORIES 3 (1980). Note that the concept of 'equality' as used in international law means legal equality and not political equality. Legal equality, in turn, means that: (1) states, whatever political influence they may have or whatever size they may be, are all alike before international law; and (2) states shall have the same capacity to exercise their rights and to assume obligations. See Ingrid Detter, The Problem of Unequal Treaties, 15 INT'L & COMP, L.O. 1069, 1070 (1966).

two options available to RSA with respect to getting water to the critical PWV region:<sup>53</sup>

- 1. Capture the Senqu River in Lesotho and let the water flow by gravity into the Vaal Dam in the PWV area; to be known as the Lesotho Highlands Water Project (LHWP). The supply to the Vaal Dam in this case will be under the control of Lesotho.
- 2. Let the water flow southwestward out of Lesotho to join the Orange River in South Africa and then pump it back up along the Vaal River System to be the Vaal Dam in the PWV area, to be known as the Orange Vaal Transfer System-OVTS (see Map). In this case South Africa will be in control of the source of supply.

The OVTS costs would entail very high pumping costs.54 There are no estimates of how these high pumping costs would affect the price of domestic and industrial water in the PWV area, but water price increases could be substantial. 55 Second, it is important to recognize that negotiations for the treaty have been on-going for over three decades, including the period when apartheid had thick skin, and seemingly impervious to international pressure.56 There are no rational reasons for the RSA to engage in such a lengthy negotiation process, especially when it has the military and economic might to impose its will. The more rational inference is that RSA considered a relational treaty to be a cheaper alternative to a coerced and 'unequal' treaty. The high cost of controlling violence and disruption of social life within its own borders during the period, could easily factor in RSA's calculus regarding its ability to cheaply police an extra-territorial water project. Thirdly, the treaty is littered with language from which one could infer that, RSA's overriding concern in the treaty is KOL'S ability to deliver what is promised. If a coercive or 'unequal' treaty was intended, it would have been unnecessary to expend the time and

<sup>53.</sup> There are four possible combinations based on the two options: (1) a Lesotho Highland Water Project (LHWP) only for various yields up to 70 m3/s. (based in Lesotho); (2) an Orange-Vaal Transfer Scheme (OVTS) as a follow-on to LHWP with various yields (OVTS based in RSA); (3) combinations of LHWP and OVTS to yield 70 m3/s. (OVTS based in RSA, LHWP based in Lesotho); and (4) OVTS with a yield of 70 m3/s (based in RSA). Cost of any of the options based in RSA would be significantly higher than the option based in KOL alone. See Feasibility Study, supra note 5, at 4–7. Note that the four options discussed above represent only the options reported in the feasibility study report. Actually, "more than 2,000 variants of several alternatives were evaluated before the final proposals were made." JOINT PERMANENT TECHNICAL COMMISSION (JPTC), LESOTHO HIGHLANDS PROJECT (1990).

<sup>54.</sup> See supra text accompanying note 16.

<sup>55.</sup> See supra discussion note 13.

<sup>56.</sup> See Young, supra note 44, at 593.

resources to incorporate the extensive procedural and substantive rules aimed at ensuring performance under the treaty.

Another issue which consumed a lot of bargaining time and, according to some observers almost scuttled the whole treaty, was the issue of control of the 'tap': which party actually controls the flow of water. RSA expressed concerns about KOL's ability to ensure the security of the source of supply, referring to the constant guerrilla attacks on another project—the Cunene Dam. Reproblem was resolved by allowing each party to be responsible for that part of the project located in its territory, granting access for personnel from RSA to those parts of the water conveyance system situated in Lesotho. Personnel from RSA are to maintain a close liaison with KOL personnel to ensure the proper implementation, operation, and maintenance of that part of the conveyance system located in Lesotho. The joint control of the 'tap' is essentially a least-cost solution to an otherwise difficult bargaining issue and represents an effort on the part of the participants to achieve a relational governance structure.

# c. Policing Costs

In a sense, the KOL-RSA treaty was given a life of its own so as to protect it from potentially subversive domestic legislation. This was accomplished by setting up three new institutions specifically tailored to deal with the implementation and monitoring of the project. The internal

<sup>57.</sup> See Turner, supra note 50, at 593.

<sup>58.</sup> The reference is to a hydroelectric and water scheme on the Cunene on the Namibian and Angolan border. There is also the Cahora Bassa hydroelectric scheme on the Zambezi River. South African officials expressed a lot of concern about the security problems with the Lesotho scheme because both the Cunene and Cahora schemes have not functioned too well due to armed conflict in the area. In fact, the security problems were among the thorniest during the treaty negotiations. See Africa Inst. of South Africa, supra note 14.

<sup>59.</sup> The provisions on "access" are tantamount to the creation of a servitude. The essential elements of an international servitude were summarized by the Representative of the United States in the North Atlantic Fisheries Arbitration in 1910 as follows:

<sup>[</sup>t]he real right must belong to a nation; it must be a permanent right; it must be one which makes the territory of one state serve the uses and purposes of another state; and it must be restrictive of river banks and international railway connections, rights of fishery and navigation of national waterways, rights to draw on such waterways for the purposes of irrigation or the generation of hydroelectric power are examples of active servitudes. Rights, on the other hand, to the neutralization or demilitarization of a territory, rights of support, such as the rights of a state to extend a hydroelectric dam across a boundary river, are examples of passive servitudes.

Yimer Fisseha, State Succession and the Legal Status of International Rivers, in The LEGAL REGIME OF INTERNATIONAL RIVERS AND LAKES 183 (Ralph Zacklin & Lucius Caflisch eds., 1981).

structure and operation of these institutions encourage the use of risk reducing strategies, low transaction costs in project management, and the prevention of opportunism by contracting parties. The provisions governing these institutional mechanisms are spread throughout the body of the treaty, and are emphasized specifically in the procedural rules outlined in the treaty. Furthermore, the provisions governing the method of sharing benefits under the treaty (royalty payments) and for the settlement of disputes lend support to the relational objectives of the parties because they are structured to allow each party to easily determine gains under the treaty. A critical analyses of the structure and functions of the institutions created to monitor the water transfer treaty, the rules for sharing benefits, and strategies for settling disputes under the treaty is that these varied provisions collectively define a treaty policing system based on threats and rewards to achieve the desired relational governance regime.

## a. The Lesotho Highland Development Authority (LHDA)

Article 6 Section 4 of the Treaty mandates the formation, under the laws of the Kingdom of Lesotho, of an autonomous statutory body to be called the Lesotho Highlands Development Authority (LHDA). It is managed and controlled by a Board of Directors appointed by Lesotho. The Board is responsible for setting the policies of LHDA to be implemented by a Chief Executive, also appointed by Lesotho. The Chief Executive is charged with several responsibilities including the preparation of proposals concerning the internal administration and procedures of LHDA; preparation of budgets for LHDA subject to the approval of the Board of Directors and the Joint Permanent Technical Commission (JPTC); controlling expenditures and borrowings of LHDA within limits set by the Board; responsibility for all agreements and contracts on behalf of LHDA; staff appointments to LHDA; and any other duties the Board of Directors may assign from time to time. The total membership of the Board of

<sup>60.</sup> The power to regulate water use in Lesotho is conferred on the Ministry of Water, Energy and Mining (WEMMIN) under the WATER RESOURCES ACT OF 1978, No. 22 (1978) (Lesotho). Prior to the establishment of WEMMIN, the Ministry of Works was responsible for Water Project Development. There are five departments within WEMMIN, two of which are directly involved with water issues. These are the Department of Water Affairs and the Water and Sewerage Branch. LHDA presumably will be another addition to the various departments under WEMMIN. For background and operation of WEMMIN, see Central Planning Office, Lesotho: First Five-Year Development Plan, 1970/71–1974/75 188 (1970). Subsequent Development Plans for Lesotho also discuss changing responsibilities of WEMMIN and its departments.

<sup>61.</sup> Treaty, supra note 5, arts. 36, 37, 38a-g, 39, 40.

Directors is not specified in the treaty document and presumably is to be determined by agreement in the implementing statutes.

The responsibilities, powers, and modus operandi of LHDA are set out in great detail under Article 7, consisting of 40 subsections. The overall thrust of the provisions governing LHDA is to avoid sources of friction that might impair Lesotho's ability to live up to its commitment under the treaty. This was done by entrusting total responsibility to LHDA for both water deliveries to RSA and hydroelectric power generation in Lesotho. The output of LHDA was in effect tied to the benefits accruing to both RSA and Lesotho under the treaty. To ensure that LHDA performs, Article 7 details reporting requirements, maintenance of minimum flows in rivers and water levels in dams, prior submission of operational plans, and a detailed system of inter-reservoir water transfers so as to meet negotiated output levels. 62

Recognizing the immense managerial expertise needed for a project of this magnitude, the treaty provisions outline specific management procedures to guide LHDA's performance. These include the establishment of a comprehensive management information system, performance of its functions in accordance with internationally recognized standards of managerial and technical competence, expertise and practice and review of its performance by the JPTC.<sup>63</sup> The parties also imposed strict cost accounting rules on all the various agencies charged with implementation of the treaty. The rules cover the apportionment of costs between KOL and RSA; the establishment of separate accounts for water delivery, hydroelectric power generation, and social development projects (tourism, irrigation, fisheries, and potable water supply), and the designation of depositories for all monies.<sup>64</sup>

To protect against the tendency of some governments to charge the so-called "social" interest rate to quasi-governmental entities, the treaty requires all funds to be deposited at market related interest rates and all interest accruing on monies in an individual account to be utilized exclusively for the implementation, operation, and maintenance of that part

<sup>62.</sup> When the water transfer project is fully developed it will consist of five major dams ranging from 126 m to 180 m in height with a total active storage capacity of some 6,5 km3; a smaller dam, 55 m high, forming the tailpond of the hydroelectric power-station; a total of 225 km of tunnels; three pumping stations; two power-stations with a total installed capacity of some 110 MW; new or upgraded access roads totalling 650 km in length. See JOINT PERMANENT TECHNICAL COMMISSION, LESOTHO HIGHLANDS PROJECT 5 (1990).

<sup>63.</sup> The structure and functions of the Joint Permanent Technical Committee are discussed in greater detail at infra Part III(c)(ii).

<sup>64.</sup> Treaty, supra note 5, art. 29.

of the project for which the monies bearing such interest were obtained.<sup>65</sup> It is clear from the language of the treaty that the project is to proceed on market efficiency principles, leaving little or no room for political prices inconsistent with market efficiency. LHDA is also required under the treaty to take out insurance against all loss or damages on the basis of normal commercial considerations.

# b. The Trans-Caledon Tunnel Authority (TCTA)

A companion organization to LHDA is the Trans-Caledon Tunnel Authority (TCTA). TCTA is to be responsible for the implementation, operation, and maintenance of those parts of the project located in the RSA and for monitoring the quantity of water delivered to RSA under the treaty. The responsibilities, powers, and modus operandi of TCTA are set out in Article 8, consisting of 20 subsections. Most of the provisions governing TCTA parallel those of LHDA, specifically provisions on accounting requirements, managerial requirements, pollution control, projections and reporting requirements, cost plans, funding, and management of project money. TCTA accounts shall be established with the South African Reserve Bank and all market efficiency considerations for investments apply.<sup>66</sup>

<sup>65.</sup> There is a tendency on the part of governments in developing countries to charge a lower interest rate on loans to quasi-governmental entities, especially state-owned enterprises. The interest rate is often below the prevailing market rate. The reason often given is that since the state-owned enterprise is using the funds for the benefit of the whole society, a lower rate is justifiable. The massive failures of state-owned enterprises in Africa suggests that the practice of charging lower interest rates that do not reflect the cost of capital may be ill-advised. For the rationale and use of "social" discount rates in project analysis, see generally J. PRICE GITTINGER, ECONOMIC ANALYSIS OF AGRICULTURAL PROJECTS (1982). The KOL-RSA treaty emphasizes the use of market-based principles in financial dealings. See Treaty, supra note 5, art. 7(29).

<sup>66.</sup> For provisions on money management see Treaty, supra note 5, arts. 27–31. The requirement for spending money on particular parts of the project refers to expenditures on the hydroelectric component versus expenditure for the water transfer component. The provisions on money management also point to a desire on the part of KOL and RSA to establish a relational treaty. Under the treaty, RSA assumes the debt-service obligations and risk in respect to all loans raised for the water transfer component of the project. These borrowings will be treated as an "enclave", separate from the other borrowings of KOL. This bearing of risk by RSA means that KOL's borrowing capacity will not be limited or constrained by water transfer related borrowings. This absence of risk, together with the substantial increase in the infrastructure developments of the country means that KOL will be able to utilize its borrowing capacity for developments the economic benefits of which will accrue to Lesotho. See Lesotho Highlands Development Authority (LHDA), Lesotho Highlands Water Project (undated). To compare these concrete steps to protect Lesotho's interests under the Treaty with the view that the Treaty represents an "unequal" arrangement, see generally supra Section III.

There are fewer provisions covering TCTA than LHDA and for good reasons. Since LHDA is controlling the supply, fairly detailed and technical rules are set out to define the quantity of water and how this water is to be delivered to RSA. Another reason for the much longer provisions covering LHDA may be that, unlike the provisions covering TCTA, the treaty spells out the duties, responsibilities, and reporting requirements for the Board of Directors and the Chief Executive of LHDA. This extreme detailing may be due to the fact that the object of the treaty is located in Lesotho but, more importantly, corporate practice and behavior in RSA is very well established. It may therefore be unnecessary to list in specific detail, expectations for the Board of Directors of TCTA.<sup>67</sup>

# c. The Joint Permanent Technical Commission (JPTC)

In order to coordinate the activities of LHDA and TCTA, the treaty mandates the formation of a Joint Permanent Technical Commission (JPTC) to be composed of two delegations. Each party is to nominate three representatives as well as an alternate for each of the nominated representatives. Chairmanship of the IPTC is to be on a rotation basis. The IPTC possesses full legal personality in the territory of each party and is not subject to legal action in the territory of either party. Members of the JPTC are of the rank of diplomats in each party's country and enjoy full diplomatic immunity.68 The offices of the IPTC shall be in Maseru, the capital of Lesotho, and the IPTC is to maintain a bank account with a bank in Lesotho. Costs associated with the functioning of the JPTC shall be shared equally by the parties with each party responsible for the costs of its own delegation. The IPTC has monitoring and advisory powers for the delivery of water to RSA and for hydroelectric power generation in Lesotho. It has monitoring powers over the activities of LHDA and TCTA and it shall establish its own rules of procedures including the necessary regulations with regard to meetings, technical, administrative, and financial activities 69

<sup>67.</sup> The argument presented here is that risk of failure of the agreement lies more with Lesotho than with South Africa. South Africa may violate the agreement only by delaying payments or some form of economic blockade as it has done in the past. However, for Lesotho, risk of failure may be due to technical, managerial, or political decisions. The detailed provisions covering LHDA are intended to deal with these contingencies.

<sup>68.</sup> See generally Treaty, supra note 5, at annexure III.

<sup>69.</sup> See Treaty, supra note 5, arts. 4, 5, 6. The JPTC is intended to be an impartial, autonomous body. This means their decisions are not influenced in any way by the position of their respective governments on an issue. However, since under Article 9, Paragraph 2 either party may terminate the nomination of its representative on the JPTC with a 30-day notice to the other party, a representative to the JPTC is not altogether immune from political

Subsection 11 lists fifteen specific decisions by LHDA and TCTA that require approval by JPTC in order to take effect. These include the appointment of auditors and consultants, approval of budgets, implementation plans for various phases of the project, operating and maintenance plans, tender procedures and tender documents, allocation of costs between parties, financing and loan arrangements, review of accounting and management in formation systems, establishment of accounts with banking institutions, insurance and foreign exchange issues, and the determination of the Nominal Annual Yield.<sup>70</sup>

Subsection 14 of the Treaty states that "where a decision is one concerning purely the generation of hydroelectric power in Lesotho or purely for the delivery of water to RSA, approval of JPTC is not required." This is an attempt to restore some control to the contracting parties regarding decisions that may be considered purely domestic. The rather extensive powers of JPTC under Subsection 11 raise issues about the sovereignty of the parties and, without a balancing provision, could make the gathering of public support for the agreement difficult. For Lesotho, where the payments from the treaty will be a major component of government revenues, the approval requirement by a non-governmental commission on what to do with their money is obviously objectionable. For South Africa, with strong political parties, opposition may exploit Subsection 14 as an example of the surrender of sovereignty to a much smaller country. The provisions of Subsection 14 shield such important sovereign decisions and prerogatives from outside interference.

control. Only "good faith" adherence to the underlying principles of the treaty would prevent such manipulation. *Id.* at art. 9(2).

LOUIS HENKIN, HOW NATIONS BEHAVE, LAW AND FOREIGN POLICY 81 (1979).

<sup>70.</sup> Article 1 of the Treaty defines "Nominal Annual Yield" as "that quantity of water determined from time to time in accordance with the provisions of Paragraph (5) of Article 7." Paragraph (5) Article 7 states, "The Lesotho Highlands Development Authority shall from time to time establish the Nominal Annual Yield which shall be that quantity of water, the annual delivery of which from the phases of the project implemented at that stage, can be maintained continuously on a long-term basis with a reliability of ninety-eight per cent." Id. at art. 1, 5(7). Once again, the effort to ensure credible performance and avoid opportunism is demonstrated by the specificity of obligation under the treaty.

<sup>71.</sup> See text accompanying supra note 58.

<sup>72.</sup> The importance of domestic support for effective implementation of a treaty has been summarized as,

<sup>[</sup>a] major influence for observance of international law is the effective acceptance of the law into national life and institutions. When international law or some particular norm or obligation is accepted national law will reflect it, the institutions and personnel of government will take account of it, and the life of the people will absorb it. With acceptance comes observance, then the habit and inertia of continued observance.

# d. Royalty Payments

Under the treaty, the Republic of South Africa is to pay for water in two ways: 1) payments for excess water, or 2) royalty payments. Payments for water begin upon the implementation of sub-phase 1A of the project. Under the treaty, sub-phase 1A entails the construction of storage dams, delivery tunnels to convey water to designated outlet points in RSA, and a hydroelectric power complex in Lesotho. Water deliveries from this phase are to commence in the year 1995 and a total of 57 million cubic meters of water is to be delivered.73 The target delivery date was not achieved and water is to be delivered by January 1997.74 This new delivery date is the subject of discussion between the Parties as a result of a need to line the entire transfer tunnel, which was not planned for in the original document.75 Consistent with the relational thrust of the treaty, water deliveries to RSA are tied to the development of hydroelectric power in Lesotho in order to reduce a party's incentive to shirk its responsibility.76 The royalty provisions are fairly detailed but perhaps their most important characteristics are the scattered indications from the language of the treaty of a desire on the part of the contracting parties to enter into a stable relationship. For example, the royalty provisions in the treaty are tied to another much older treaty arrangement between the parties, The Southern Africa Customs Union (SACU).77 RSA's share of the common revenue pool

<sup>73.</sup> See supra note 8. See also Treaty, supra note 5, at annexure 1(2).

<sup>74.</sup> Id.

<sup>75.</sup> Id.

<sup>76.</sup> The idea of tying the benefits of the project to ensure performance is clearly intended by the scheduling of various phases of the project.

<sup>77.</sup> Treaty, supra note 5, art. 12(3). The SACU agreement dates as far back as 1910 when the Union (now Republic) of South Africa was established. The most recent SACU agreement, made in 1969, provides for payments to Botswana, Swaziland and Lesotho (the BSL countries) to be made on the basis of their share of goods imported by SACU countries, multiplied by an "enhancement" factor of 1.42 as a form of compensation from the BSL countries' loss of freedom to conduct a completely independent economic policy and for the costs that this restriction involves in trade diversion and loss of investment. SACU revenue is paid two years in arrears and earns no interest, but for Lesotho it has formed up to 70 percent of government recurrent revenues in recent years. In Lesotho's 1986/1987 budget SACU revenue was projected at M147m or 61 percent of total recurrent revenue of M241.2m. The SACU agreement of 1969 requires that parties seek South African approval before entering into any other trading arrangement. Thus, when the BSL countries wanted to join PTA, the South African government objected that the PTA Treaty discriminated in that it specifically called for a "reduction of BSL dependence on South Africa." Later, South Africa agreed to the BSL countries joining the PTA provided there was "no conflict in any way" with the SACU agreement. D. Anglin, Economic Liberation and Regional Cooperation in Southern Africa: SADCC and PTA 4 INT'L ORG. 681-711 (1983) [hereinafter Economic Liberation]. See also D. Anglin, SADCC after Nkomati, 84 AFR. AFF. 163 (1985).

of SACU is considered an advance payment to Lesotho under the water treaty and Lesotho's share of the common revenue pool is used as a set off against Lesotho's share of the investment element of the net benefits. In effect, an impairment of SACU will also impair payments under the current treaty. By linking SACU, the trade arrangement, and the water treaty, opportunism may be further reduced because both the RSA and KOL derive considerable revenues from the trade arrangement.

Another relational characteristic of the royalty clause is that RSA agrees to pay Lesotho royalties in cash regardless of water quantity delivered plus a unit cost component based on each cubic foot of water delivered. The payment provision allows Lesotho to plan its economic development on a firmer basis since there is some security of expectations as to future revenues. The fixed payments are adjusted only when Lesotho fails to deliver the required amount of water. Where this failure comes under the provisions of Article 14 dealing with situations of "Force Majeure," fixed payments would continue and the shortfalls due to the unforeseen circumstances would be made up once normality is restored.79 The resolution of disputes about royalties also points to a desire on the part of the parties to enter into a relational treaty. The JPTC is responsible for settling disputes on royalties and, pending the resolution of any dispute, RSA is to make payments on the best possible estimate by the JPTC.80 Any adjustments to disputed amounts shall be reflected in subsequent invoices. In effect, payments do not cease when there is a dispute. Since RSA is making advance payments for the fixed components of the net benefits, one may conclude that, with some good faith, the potential to hold payments to Lesotho hostage is very significantly reduced. The Reserve Bank of RSA is to make available to Lesotho convertible foreign exchange for any foreign transactions that Lesotho authorizes from the proceeds of royalty payments or any other payments. The language of Paragraph 27 of Article 12 seems to suggest that the use of the foreign exchange requested from RSA is not

<sup>78.</sup> Treaty, supra note 5, art. 12(11-12). See generally D. Anglin, Economic Liberation, supra note 77. References cited by Anglin are especially useful.

<sup>79.</sup> Basically, where the project is canceled for some other reason than a unilateral cancellation by RSA or KOL, net benefits would be computed as if the project had been performed up to the point of cancellation, including projected performance. The computation of benefits in this case excludes the hydropower component. Thus, if Lesotho were to cancel the project, it could bear substantial costs equal to the cost of complete performance. The Force Majuere clause in the treaty relieves both parties of their obligations under the agreement if nonperformance is due to causes which are outside the control of either party, and could not be avoided by exercise of due care. Force Majuere clauses have their origins in the Law of Insurance. See BLACK'S LAW DICTIONARY 330 (5th ed. 1983).

<sup>80.</sup> Treaty, supra note 5, at art. 19.

restricted to purchases connected with the project.<sup>81</sup> Again, the sovereign right of Lesotho to use its resources for any purpose is not impaired by its dealings with the Reserve Bank of RSA.

# e. The Prevention and Settlement of Disputes

The provisions governing the settlement of disputes under the treaty is further evidence of the desire on the part of the parties to enter into a long-term sustainable relationship. The procedures may also serve as a model for other countries on the continent that may seek to negotiate rules about natural resources shared by other countries.

The provisions begin with a reminder of the overriding preference for conciliation in the spirit of the goals set out in the Preamble. The initial provisions also emphasize dispute avoidance. In the event of a dispute's arising, LHDA or TCTA may request the JPTC to conduct an investigation and present its written recommendations to the parties. The JPTC is to conclude its investigation within 14 days or else request an extension of time for consideration of the matter. The JPTC may recommend the proper action to be taken at the end of its investigations or may recommend recourse to more formal procedures.<sup>82</sup>

Where a dispute is not resolved based on the actions and recommendations of the JPTC, the dispute shall be made the subject of negotiation between the parties. If the issue is not resolved after negotiation between the parties, it must be submitted to arbitration. Either Lesotho or RSA or both may institute arbitration proceedings, upon serving notice of existence of a dispute. The Arbitral Tribunal shall consist of three arbitrators—each party shall select one arbitrator and the third arbitrator, who shall be the President of such Tribunal, shall be appointed by agreement between the two arbitrators appointed by the parties. In a situation where the arbitrators appointed by the parties are unable to select the third arbitrator, the President of the International Commission on Large Dams (ICOLD) shall, at the request of either party, appoint someone as

<sup>81.</sup> The Treaty states, "South Africa shall cause the South African Reserve Bank to make available to Lesotho through the Central Bank of Lesotho freely convertible foreign exchange at its most favorable exchange rates for any foreign transactions that Lesotho authorizes from the proceeds of royalty payments and payments in terms of Paragraph (18)." Treaty, supra note 5, at art. 12(27). Payments under Paragraph (19) consist of payments for excess water delivered. Note that this provision differs from those under Article 7 Paragraphs 28–30 controlling the use of funds by LHDA. Id., art. 12(19), 7(28–30).

<sup>82.</sup> Treaty, supra note 5, at art. 16(10(a)). Provisions on arbitration are covered under Paragraphs 9-16 of Article 16. Id. at art. 16(9-16).

<sup>83.</sup> Id.

President of such Tribunal. 4 The individual selected may not be a citizen of Lesotho or RSA.

The provisions on arbitration raise questions about a nation's sovereign right to refuse to be a Party to a judicial or arbitral proceeding. To address this question, Paragraph 10(c) of Article 16 authorizes the President of the Arbitral Tribunal to appoint the other arbitrator, where one party initiates the arbitration process and the other party, even though duly notified, refuses to nominate the one other arbitrator within sixty calendar days. <sup>85</sup> In this case, provisions under paragraph 10(b) will apply and the President himself is to be appointed by the President of ICOLD. <sup>86</sup> In effect, a party may not frustrate the arbitral process by refusing to appoint or nominate an arbitrator. Even though these provisions may be interpreted as demonstrating the parties' desire to keep the treaty viable, the implications for the sovereign rights of the parties may be far reaching. <sup>87</sup> The Arbitral Tribunal has authority to determine the time and venue for its work, rules of procedure, competence, jurisdiction, and necessary personnel.

Decisions of the Arbitral Tribunal shall be by a majority both of the members and, in the event of there being no majority vote, the President shall have a casting vote in addition to a deliberative vote. Both Lesotho and RSA are entitled to a fair hearing before the Tribunal and a failure to respond or appear before the Tribunal may lead to a default judgment against the party. The decision of the Arbitral Tribunal is binding on the parties, and the parties are required under the treaty to expeditiously give effect to the decision of the Arbitral Tribunal. Any dispute about an award is to be referred back to the Arbitral Tribunal within sixty calendar days of the rendering of the award.<sup>88</sup>

<sup>84.</sup> *Id.* at art. 16(15). The structure of the Arbitral Tribunal is fairly standard practice. *See, e.g.,* Article 12 of the Air Transport Agreement between the United States and Italy, Feb. 6, 1948, 62 Stat. 3729, T.I.A.S. No. 1902, 73 U.N.T.S. 113.

<sup>85.</sup> Treaty, supra note 5, at art. 16(10(b)).

<sup>86.</sup> Id.

<sup>87.</sup> As harsh as the arbitration provisions may sound, they are useful in avoiding potential conflicts and impasse and, in this sense, may serve as a useful example for other countries on the continent. For example, contrast the outcome in the absence of this type of provision in the Shalt-AL-ARAB treaty, "refusal by one party to appoint a member of the arbitral commission may prevent the birth of the Arbitration Committee." Elihu Lauterpacht, River Boundaries: Legal Aspects of the SHALT-AL-ARAB Frontier, 9 INT'L & COMP. L. Q. 208, 208–36 (1960).

<sup>88.</sup> Decisions and the binding force of an arbitral award are effective only to the extent that parties do intend to be bound. Under the Model Rules on Arbitral Procedure, the validity of an award may be challenged by either party on one or more of the following grounds that:

a. The tribunal has exceeded its powers,

b. There was corruption on the part of a member of the tribunal,

#### IV. CONCLUSIONS

The specific objective of this paper was to analyze the recent water transfer treaty between the Republic of South Africa and the Kingdom of Lesotho within the transaction cost paradigm of institutional economics. A broader objective, however, was to suggest that, given the inherent problems with transboundary resources, agreements to share these resources should be relational rather than transactional because relational arrangements reduce risk of failure, transaction costs, and opportunism. Furthermore, for developing countries with an uneven distribution of natural resources, sharing of transboundary resources may one day be the most effective way to improve the welfare of people. The RSA-KOL treaty was analyzed to show how two countries with vastly uneven distribution of resources have been able to negotiate a treaty to share a common resource to the benefit of its citizens. Examples of purely or mainly transactional treaties in the resource sharing field are hard to find: it is more likely that a resource sharing treaty would include both relational and transactional characteristics. However, it was necessary to draw a clear distinction between relational and transactional governance structures in the case of the RSA-KOL treaty given the very unstable political environment within which treaty negotiations took place.89 Even though it may

c. There has been a failure to state the reasons for the award or a serious departure from a fundamental rule of procedure, and/or

d. The undertaking to arbitrate or the *compromise* is a nullity.

See International Law: Cases and Materials 853 (Henkin et al. eds., 1980).

<sup>89.</sup> A comparison of the terms of this treaty with those of an earlier one between RSA and Portugal will serve to illustrate the relational thrust of the current treaty. The RSA-Portugal treaty dealt with a similar subject matter as the RSA-KOL treaty. The objective of the RSA-Portugal treaty was for the joint utilization of the water resources of the Cunene River Basin and part of the project was the generation of hydroelectric power and the provision of irrigation water to Southwest Africa, then under South African mandate. In the treaty, however, South Africa's interest was monetized and implied that its participation with Portugal was to be transactional. Article 4.1.9 states, "notwithstanding South Africa's financial participation, ownership of the entire works shall rest in the Portuguese authorities." There was no mention of regional cooperation and anticipated benefits were quite specific and restricted to a geographical area. This contrasts with the RSA-KOL treaty where ownership is mutual and anticipated benefits extend beyond the borders of the contracting parties. See United Nations, Treaties Concerning the Utilization of International Water Courses for other Purposes than Navigation: Africa, under title: Agreement Between the Government of the Republic of South Africa and the Government of Portugal in Regard to the First Phase of Development of the Water Resources of the Cunene River Basin (21 January 1969); Natural Resources/Water Series No. 13 ST/ESA/131 (1984). Even though there is no information available regarding the entry into force of this agreement, there exists a hydroelectric and water scheme on the Cunene on the Namibian and Angolan border.

still be too early to determine the stability of the commitments under the treaty, the theoretical approach and evidence based on the language of the treaty suggest that the potential for conflict is greatly minimized through the creation of a relational structure.