TRANSBOUNDARY ENVIRONMENTAL IMPACT ASSESSMENT IN INTERNATIONAL WATERCOURSE MANAGEMENT

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INTRODUCTION

Freshwater is essential for sustaining both people and ecosystems. Maintaining an adequate supply of clean water is likely to become increasingly important as humanity faces burgeoning populations and dwindling resources. This situation is

critical in developing countries—some of the most water stressed nations.[1] The global challenges of guaranteeing sufficient freshwater are compounded by uncertainties arising from drought, floods, and other increasingly dramatic fluctuations in extreme weather phenomena associated with global climate change.[2] To improve allocation and management of water resources, nations and international institutions have sought to enhance procedures for managing these resources across borders.

This Article focuses on one of these procedures–the transboundary environmental impact assessment (TEIA)—and how it can be used to improve environmental management practice and cooperation between nations sharing watercourses.[3] With 261 major river basins shared by two or more sovereign nations

[1] "It is estimated that two out of every three people will live in water-stressed areas by the year 2025. In Africa alone, it is estimated that 25 countries will be experiencing water stress (below 1700m^3 per capita per year) by 2025. Today, 450 million people in 29 countries suffer from water shortages." U.N. ENV'T PROGRAMME (UNEP), VITAL WATER GRAPHICS: AN OVERVIEW OF THE STATE OF THE WORLD'S FRESH AND MARINE WATERS (2002), http://www.unep.org/vitalwater.

[2] El Niño/Southern Oscillation (ENSO) events, which usually last about twelve months, tend to increase the severity of both droughts and wet periods. Increasing frequency of these events, particularly in the past two decades, may be linked to global climate change. *See, e.g.*, Dennis L. Hartmann, *Tropical Surprises*, SCIENCE, Feb. 1, 2002, at 811-12. "Many malaria epidemics and other vector-borne disease outbreaks seemingly are linked to climate fluctuations associated" with ENSO events. WORLD RES. INST. ET AL., WORLD RESOURCES 1996-97, at 182 (1996).

[3] Africa presents a particular challenge, with fifty-seven international river basins that cover sixty percent of the continent's total land area and almost half of the African states having seventy-five percent or more of their total area in international water basins. WATER IN CRISIS: A GUIDE TO THE WORLD'S FRESH WATER RESOURCES tbls. I.4-I.5, at 436-37 (Peter H. Gleick ed., 1993). Africa has one of the highest population growth rates. It has seen the largest regional population rise for the period 1990-2000 and, over the next twenty-five years, population projections indicate an expected increase of an additional sixty-five percent. WHO/UNICEF JOINT MONITORING PROGRAMME FOR WATER SUPPLY AND SANITATION, GLOBAL WATER SUPPLY AND SANITATION ASSESSMENT 2000 REPORT sec.6.4 (2000), http://www.who.int/docstore/water_sanitation_health/Globassessment/GlobalTOC.htm (last visited Dec. 3, 2003). At the same time, Africa has the lowest total water supply coverage of any region, with only sixty-two percent of the population having access to improved water supply since 1990. *Id*. sec. 6.1. The challenges in managing and enhancing the future water supply are daunting. *See* CARMEN REVENGA & ANGELA CASSAR, WWF-INT'L, FRESHWATER TRENDS AND PROJECTIONS: FOCUS ON AFRICA 2-3 (2002), http://www.wwf.org.uk/filelibrary/ pdf/africa_freshwater.pdf.

worldwide,[4] international watercourses constitute a significant class of transboundary environments that require improved planning, regulation, and management. Moreover, the widespread nature of international watercourses in conjunction with increasing water scarcity has meant that nations increasingly recognize the need to consider management of transboundary waters that respects both political borders and ecological realities such as watershed delineations.[5] The world's nations have committed, through the Millennium Development Goals, to halve the number of people without access to safe drinking water by 2015.[6] The TEIA approach could be important to realizing this goal, requiring the development and refinement of environmental management practices to better handle transboundary water resources.

A number of issues that arise from the use of TEIA, largely stemming from its international nature, distinguish it from a domestic environmental impact assessment (EIA). These include an increased need for institutional coordination, sensitivity to sovereignty and different languages, public participation across borders, and harmonization of varying domestic EIA standards. This Article explores these differences in depth.

Parts I and II of this Article examine the current status of the TIEA by tracing the existing international, regional, and national approaches to TEIA, identifying relevant norms and sources of law. The relevance of other sources to the development of TEIA, including the practice of international institutions such as the

[4] Aaron T. Wolf et al., *International River Basins of the World*, 15 WATER RESOURCES DEV. 387, 391 (1999). Transboundary river basins cover 45.3% of Earth's total land area, excluding Antarctica. *Id*.

[5] *See Report of the United Nations Conference on Environment and Development*, Annex II, Agenda Item 21, U.N. Doc. A/CONF.151/26 (Vol. III) (1992) [hereinafter Agenda 21], http://www.un.org/esa/sustdev/documents/agenda21/english/agenda21toc.htm. The World Summit on Sustainable Development Plan of Implementation was adopted by the United Nations in Johannesburg, South Africa, in 2002. *See* REPORT OF THE WORLD SUMMIT ON SUSTAINABLE DEVELOPMENT 21, U.N. Doc. A/CONF.199/20*, U.N. Sales No. E.03.II.A.1 (2002) [hereinafter WSSD REPORT], http://www.johannesburgsummit.org/html/documents/summitdocs/131302_wssd_report_reissued.pdf. The Plan of Implementation adopted by the United Nations in the Report of the World Summit on Sustainable Development advances the development of integrated river basin management (IRBM) and the ecosystem approach. *See id*. at 21, 23, 25, 34.

[6] *United Nations Millennium Declaration*, G.A. Res. 55/2, U.N. GAOR, 55th Sess., Agenda Item 60(*b*), at 5, U.N. Doc A/RES/55/2 (2000), http://www.un.org/depts/dhl/resguide/r55.htm.

World Bank Group and regional development banks, are also evaluated. Part III analyzes the practical implications of the current TEIA regime, evaluating the TEIA process as it presently operates, using specific examples. Part III also traces some specific examples and case studies where TEIA has been applied worldwide, highlighting some best and emerging practices. Building on the TEIA process that is set forth, Part IV presents some practical recommendations for implementing TEIA, as well as an assessment of lessons learned, future challenges, and directions that this emerging area of international environmental management and regulation should take.

I
BACKGROUND: TEIA AND INTERNATIONAL WATERCOURSES

As TEIA has evolved out of domestic EIA experience, it is worth considering initially the goals and basic approaches of an EIA. While the international overlay of the TEIA presents a number of unique issues, the two processes are similar in the ways in which they strive to promote transparency, public participation, accountability, and improved decision-making.

A. *Overview of EIA*

An EIA is a report that includes "[a]n assessment of the likely or potential environmental impacts of [a] proposed activity."[7] The United States National Environmental Policy Act of 1969 (NEPA) is generally considered to have introduced the concept of the EIA.[8] This concept spread rapidly, with countries around the world adopting EIA laws, procedures, and institutions.[9] Differing

[7] UNEP, Governing Council Decision: Goals and Principles of Environmental Impact Assessment, princ. 4, UNEP/GC.14/17 Annex III, UNEP/GC/DEC/14/25 (June 17, 1987) [hereinafter UNEP EIA Principles], *reprinted in* UNEP, *Principles of Environmental Impact Assessment*, 17 ENVTL. POL'Y & L. 36 (1987).

[8] National Environmental Policy Act of 1969 (NEPA) § 102, 42 U.S.C. § 4332 (2000). *See* Kevin R. Gray, *International Environmental Impact Assessment: Potential for a Multilateral Environmental Agreement*, 11 COLO. J. INT'L ENVTL. L. & POL'Y 83, 89 (2000); CHRISTOPHER WOOD, ENVIRONMENTAL IMPACT ASSESSMENT: A COMPARATIVE REVIEW 1 (1995).

[9] In the 1970s, many nations adopted NEPA-style EIA processes including Canada (1973), Australia (1974), New Zealand (1974), Colombia (1974), Thailand (1975), France (1976), and Netherlands (1979). WOOD, *supra* note 8,

political regimes, regional environmental priorities, and cultural values have contributed to variations in EIA processes and standards.[10] Nevertheless, at least in principle the general elements of the EIA process are relatively consistent across different systems.

Figure 1 presents a distilled representation of the EIA process as it has emerged over the past three and a half decades. In considering the general EIA framework, it should be recalled that EIA practice frequently involves contextual nuances that shape and change the specifics of the different steps in the EIA process.

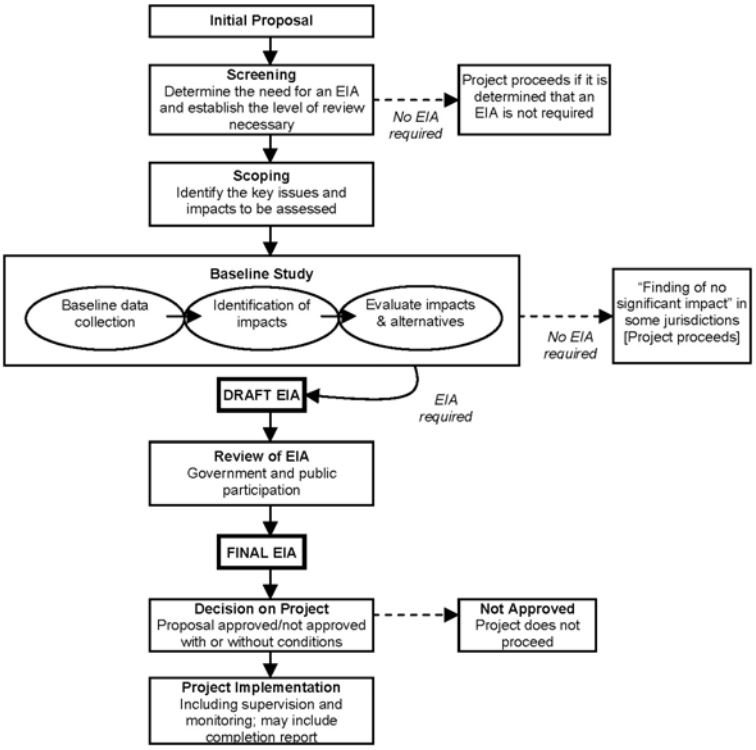

Figure 1: A Generalized EIA Process[11]

at 3-4.

[10] Erika L. Preiss, Student Article, *The International Obligation to Conduct an Environmental Impact Assessment: The ICJ* Case Concerning the Gabcikovo-Nagymaros Project, 7 N.Y.U. ENVTL. L.J. 307, 310 (1999); Alexandre S. Timoshenko, *The Problem of Preventing Damage to the Environment in National and International Law: Impact Assessment and International Consultations*, 5 PACE ENVTL. L. REV. 475, 481-82 (1988).

[11] This figure is based upon a synthesis of EIA literature. *See* UNEP

The EIA process usually begins when a proponent approaches a relevant decisionmaker with a proposal for a project that may have some environmental impacts. The decisionmaker must then determine whether an EIA is necessary. This "screening" step is a preliminary assessment of whether the proposed project triggers the EIA requirements—if the project has potentially significant environmental impacts or is of a particular type or advanced by a particular party such that an EIA is required by law.[12]

If an EIA is necessary, the "scoping" phase follows, in which the party preparing the EIA determines which impacts should be considered, as well as which alternatives should be assessed in the EIA.[13] In addition to environmental impacts, the party preparing an EIA may consider social, cultural, and economic impacts. The alternatives generally include various arrangements for the proposed project and may include the alternative of no-action. In

ENVIRONMENTAL IMPACT ASSESSMENT TRAINING RESOURCE MANUAL 112 (2d ed. 2002), http://www.unep.ch/etu/publications/EIAMan_2edition_toc.htm (last visited Dec. 4, 2003); DANIEL R. MANDELKER, NEPA LAW AND LITIGATION § 2.6 (2d ed. 1992 & Supp. 2002); Julie Teel, *International Environmental Impact Assessment: A Case Study in Implementation*, 31 Envtl. L. Rep. (Envtl. L. Inst.) 10,291, 10,294-306 (2001); Subrato Sinha, *Environmental Impact Assessment: An Effective Management Tool*, TERI INFO. MONITOR ON ENVTL. SCI., June 1998, at 1-7, http://www.teriin.org/envis/times3-1.pdf; Brian R. Popiel, Comment, *From Customary Law to Environmental Impact Assessment: A New Approach To Avoiding Transboundary Environmental Damage Between Canada And The United States*, 22 B.C. ENVTL. AFF. L. REV. 447, 462 (1995); Michael Clark & John Herington, *Introduction: Environmental Issues, Planning and the Political Process*, *in* THE ROLE OF ENVIRONMENTAL IMPACT ASSESSMENT IN THE PLANNING PROCESS 1, 4 (Michael Clark & John Herington eds., 1988); YUSUF J. AHMAD & GEORGE K. SAMMY, GUIDELINES TO ENVIRONMENTAL IMPACT ASSESSMENT IN DEVELOPING COUNTRIES 9 (1985); Preiss, *supra* note 10, at 310-11.

[12] NEPA and Agency Planning, 40 C.F.R. §§ 1501.3, 1501.4, 1507.3, 1508.9 (2002).

[13] This is a general summary of the EIA process as it exists worldwide. There are varying approaches and varying emphases on the different stages. For example, the EIA process in the United States under NEPA is a highly detailed two-tier process in which an environmental assessment (EA) is conducted to determine whether to pursue a full environmental impact statement (EIS). An EIS is not required only if there is a finding of no significant impact (FONSI) at the end of the EA. To some extent, then, the EA combines the scoping phase and the baseline study. *See* 40 C.F.R. §§ 1501.3, 1501.4, 1506.6. Other jurisdictions frequently take a more streamlined (or less rigorous, depending on one's perspective) approach to the scoping process, and may or may not involve public participation. *See, e.g.*, Dennis Te-Chung Tang, *New Developments in Environmental Law and Policy in Taiwan*, 6 PACIFIC RIM L. & POL'Y J. 245, 257-63, 304 (1997); EUROPEAN COMMTYS., GUIDANCE ON EIA SCOPING pt. A (2001).

some countries, including the United States, the public is invited to participate in the scoping stage to help identify impacts, alternatives, and data sources.[14]

Next, the draft EIA is prepared. As part of the draft EIA process, a study frequently is conducted to collect baseline data and to identify and evaluate the potential impacts and alternatives.[15] More comprehensive environmental impact evaluation and quantification then occurs, usually by the project proponent.[16] At this stage, alternatives and their predicted impacts are compared. The draft EIA is frequently reviewed by relevant governmental entities and permitting agencies. Public participation and comment is generally sought at this point, although as will be demonstrated, the specific forms and opportunities for public participation can vary considerably.[17]

After input by government agencies and the public, a final EIA is prepared. There is usually a requirement for the EIA to take into account input from the public, although the EIA does not have to follow the public's suggestions.[18] The final EIA does not necessarily recommend the approval or denial of the proposed project, although it may.[19] The EIA may also include suggested or obligatory conditions for mitigating the environmental impacts.[20] At this point, the relevant authorities may approve, deny, or approve with conditions the proposed project. In doing so, they do not have to pursue the most environmentally benign alternative.[21]

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[14] *See, e.g.*, Teel, *supra* note 11, at 10,297.

[15] *See* Ahmad & Sammy, *supra* note 11, at 12-13.

[16] *See id*. at 13-14. *See also* Popiel, *supra* note 11, at 462.

[17] *See* Nicholas A. Robinson, *International Trends in Environmental Impact Assessment*, 19 B.C. ENVTL. AFF. L. REV. 591, 594 (1992); *infra* Part III.

[18] *See* Teel, *supra* note 11, at 10,304-05.

[19] *See* Ahmad & Sammy, *supra* note 11, at 18.

[20] *See* Teel, *supra* note 11, at 10,301-02.

[21] *See* Ahmad & Sammy, *supra* note 11, at 17-18. One important aspect of the EIA process—not as commonly pursued by those preparing EIAs as others—is the monitoring of the project post-implementation. Such follow-up activity is deemed good EIA practice by the World Bank. WORLD BANK, Operational Policy 4.01, *in* WORLD BANK OPERATIONAL MANUAL (1999), http://wbln0018.worldbank.org/Institutional/Manuals/OpManual.nsf [hereinafter WORLD BANK OP 4.01]. For example, the World Bank requires an implementation completion report that assesses the extent to which the project achieved its stated objectives, thereby enhancing accountability. WORLD BANK, Operational Policy 13.55, *in* WORLD BANK OPERATIONAL MANUAL (1999), http://wbln0018.worldbank.org/Institutional/Manuals/OpManual.nsf.

Conducting an EIA can yield a range of benefits. One of the most commonly regarded benefits of an EIA is its built-in process of public participation, which if utilized effectively, has the ability to provide local people and underrepresented interests an opportunity to be heard and to participate in decision-making that affects their environment and livelihoods.[22] As such, the EIA is an important practical mechanism for advancing the transparency, participation, and accountability advocated by Principle 10 of the Rio Declaration.[23]

The failure to conduct an adequate EIA—including the public review and comment components—can contribute to public resistance to the project, increased administrative costs, and a poorly designed and executed project.[24] For example, the High Aswan Dam in Egypt has created enormous adverse effects, which are largely attributed to inadequate assessment of potential impacts from its inception.[25] Even though the project was undertaken with good economic intentions, the lack of evaluation of likely environmental consequences—including the public review of the asserted impacts and benefits—resulted in numerous problems, which may have been avoided had adequate assessment of likely impacts been conducted.[26] Although the effects of the High

[22] Robinson, *supra* note 17, at 594. *See* Neil A.F. Popović, *The Right to Participate in Decisions That Affect the Environment*, 10 PACE ENVTL. L. REV. 683, 699-701 (1993).

[23] United Nations Conference on Environment and Development: Rio Declaration on Environment and Development, *adopted* June 14, 1992, U.N. Doc. A/CONF.151/5/Rev.1, 31 I.L.M. 874, 878 (1992) [hereinafter Rio Declaration]. *See generally* Carl E. Bruch & Roman Czebiniak, *Globalizing Environmental Governance: Making the Leap from Regional Initiatives on Transparency, Participation, and Accountability in Environmental Matters*, 32 Envtl. L. Rep. (Envtl. L. Inst.) 10,428 (2002).

[24] *See* Patrick J. Skelley II, Note, *Public Participation in Brownfield Remediation Systems: Putting the Community Back on the (Zoning) Map*, 8 FORDHAM ENVTL. L.J. 389, 398 (1997).

[25] *See* Robinson, *supra* note 17, at 595. The dam's construction and operation significantly altered the natural hydrological profile of the Nile River downstream, resulting in environmental, social, and economic impacts. The construction of the dam led to an increase in the incidence of disease (including the blood disease schistosomiasis from the bilharzia parasite), increased salination and destruction of agricultural land, the destruction of entire sardine fisheries, and erosion problems in the once fertile and prosperous Nile delta area. *See* Popiel, *supra* note 11, at 464; George D. Appelbaum, Comment, *Controlling the Environmental Hazards of International Development*, 5 ECOLOGY L.Q. 321, 324-326 (1976).

[26] Gary M. Ernsdorff, Comment, *The Agency for International Development*

Aswan Dam were largely confined to Egypt, with no significant transboundary effects, the experiences demonstrate the importance of conducting a proper EIA prior to large developments.

The domestic EIA process that has been outlined here has, over the past 35 years, become a relatively commonplace procedure in many countries and international institutions with certain components generally agreed upon, at least in theory.[27] Although constituting important procedural mechanisms for the effective management of environmental, social, cultural and other resources, EIAs and TEIAs are not in themselves endpoints of environmental management and regulation.

B. *Distinguishing TEIA from EIA*

The EIA process becomes significantly more complex when a transboundary element is imposed. Simply stated, a TEIA is an EIA where the potential impacts being assessed have the potential to affect two or more States. The precise definition of what is considered a TEIA is not settled, but a TEIA differs from an EIA in that TEIA focuses on addressing international impacts. Thus, a TEIA is similar to an EIA that considers transboundary, not just domestic, impacts and notifies all relevant stakeholders (including both States and potentially affected individuals and groups) of potential impacts for their review and comment.

A TEIA is normally required where there is a risk of significant environmental impact to States other than the "source State"—the State where the environmental harm originates. This transboundary aspect, common with international watercourses, imposes political, economic, cultural, and social interactions on the process far more complex than most situations requiring domestic EIAs. While states or provinces within a federal system may face challenges of harmonization, institutional coordination, and public

and NEPA: A Duty Unfulfilled, 67 WASH. L. REV. 133, 133 n.2 (1992); Popiel, *supra* note 11, at 464.

[27] For example, the African nations of Algeria, Burkina Faso, Cape Verde, Comoros, Congo, Egypt, Gabon, The Gambia, Ghana, Guinea, Libya, Madagascar, Malawi, Mauritius, Nigeria, Senegal, Republic of Seychelles, South Africa, Togo, Tunisia, Uganda, and Zambia, *inter alia*, all have EIA provisions in national environmental laws. *See* UNEP/UNDP JOINT PROJECT ON ENVTL. LAW AND INST. IN AFRICA, FRAMEWORK LAWS AND EIA REGULATIONS (1996 ed. & Supp. 1998).

participation,[28] the federal government usually imposes a common framework for an EIA. In instances where states or provinces adopt additional EIA procedures, implementing a TEIA can pose additional coordination challenges between national, sub-national, and transnational authorities.

A TEIA has many elements in common with a domestic EIA, including public participation and the overall chronology of stages such as scoping and draft preparation. However, a TEIA imposes additional political, administrative, and regulatory layers not seen in domestic EIA processes. A number of factors can be identified which distinguish a domestic EIA from a TEIA. Although many of the issues raised in this Section may also arise in a domestic EIA context, they are potentially more pronounced in a transboundary context and present unique challenges. Briefly, these include an increased need for institutional coordination, information exchange, sensitivity to sovereignty, political partnerships, varying cultural approaches, language differences and public participation across borders (which also raises constitutional issues such as standing, distance and scale).[29]

Due to administrative complexities, TEIA is usually only available for large projects or projects likely to have a significant impact.[30] A successful TEIA also involves a harmonization component between administering States, as common objectives

[28] For example, in the federal systems of the United States and Australia, states frequently have a significant role in implementing EIA. Variation in legal standards and approaches between states can impose some challenges similar to those experienced with TEIA. However, these are generally lessened by constitutional provisions that help to ensure that in the event of an inconsistency federal provisions prevail. *See, e.g.*, U.S. CONST. art. VI, cl. 2; AUSTL. CONST. ch. V, § 109. Language also is not generally a barrier as states usually share a common language, although this could be more of a challenge in federal systems such as Ethiopia (with eighty-two recognized living languages) or Nigeria (with 505 recognized living languages). *See* SIL Int'l, Ethnologue Report for Ethiopia, *at* http://www.ethnologue.com/show_country.asp?name=Ethiopia (last visited Dec. 3, 2003); SIL Int'l, Ethnologue Report for Nigeria, *at* http://www.ethnologue.com/show_country.asp?name=Nigeria (last visited Dec. 3, 2003). Nevertheless, there are examples where EIAs examining projects with potential impacts crossing internal (state or provincial) boundaries in a federal system may pose a challenge, such as where one state has significantly weaker EIA standards than a neighboring state.

[29] *See generally* John H. Knox, *The Myth and Reality of Transboundary Environmental Impact Assessment*, 96 AM. J. INT'L L. 291 (2002).

[30] The definition of "significant'' is by no means settled and requires further consideration. *See infra* notes 267-273 and accompanying text.

may be forged more easily in the face of common values.[31]

II
SOURCES OF TEIA LAW

Over the past decades, TEIA procedures has emerged through a patchwork of treaties, declarations, and customary law. International organizations, such as United Nations Environment Programme (UNEP), and the Organization for Economic Cooperation and Development (OECD) have addressed the issue of TEIAs, and the World Bank has endeavored to incorporate the TEIA process into its project assessment and management procedures.[32] Yet, it appears that the developments of TEIA requirements have emerged more often through regional initiatives, in which nations share specific watercourses and geophysical and/or socio-political contexts. Thus, to some extent, the current status of TEIA may be better understood by comparing and contrasting these various regional articulations of principles, mechanisms, and approaches. Moreover, since watercourses are inherently regional environments, regional agreements offer perhaps the most appropriate scale at which to regulate and manage them.[33] Before such a cross-region comparison can be understood, however, a discussion of the background international law requirements and norms is necessary.

A. *International Law*

1. *Treaties and Declarations*

While international environmental agreements have developed principles of the EIA process, the TEIA process is not as well-developed under international law. For example, the Rio Declaration, in Principle 17, specifically promotes the EIA "as a

[31] Specific case studies also bring to light political will as a factor that has ultimately influenced the success of TEIAs in practice. *See infra* Part IV.C.

[32] *See* Preiss, *supra* note 10, at 322-23.

[33] Carl Bruch, *Charting New Waters: Public Involvement in the Management of International Watercourses*, 31 Envtl. L. Rep. (Envtl. L. Inst.) 11,389, 11,415 (2001); *see generally* Bruch & Czebiniak, *supra* note 23, at 10,429 (examining "how the experiences of ongoing regional initiatives has laid a foundation for the development of a global framework that ensures sound environmental governance").

national instrument."[34] Elaborating on the Rio Declaration, Agenda 21 also strongly endorses the importance of the EIA in various aspects of environmental management.[35]

Even before its explicit incorporation in the Rio Declaration and Agenda 21, the principles and approaches of the EIA process were advanced in a variety of international fora. Environmental planning is a significant theme of the 1972 Stockholm Declaration;[36] Principle 21 of the Stockholm Declaration—often referred to as the "no (significant) harm principle"—establishes an implicit mandate for an EIA process at the international level.[37]

Building on the Stockholm Declaration, the 1983 World

[34] Rio Declaration, *supra* note 23, at 879 ("Environmental impact assessment, as a national instrument, shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of a competent national authority.").

[35] The following chapters of Agenda 21 all include a specific EIA requirement: Chapter 6 (Protecting and Promoting Human Health); Chapter 7 (Promoting Sustainable Human Settlement Development); Chapter 9 (Protection of the Atmosphere); Chapter 11 (Combating Deforestation); Chapter 15 (Conservation of Biological Diversity); Chapter 17 (Protection of the Oceans, All Kinds of Seas, Including Enclosed and Semi-Enclosed Seas, and Coastal Areas and the Protection, Rational Use and Development of Their Living Resources); Chapter 18 (Protection of the Quality and Supply of Freshwater Resources and Application of Integrated Approaches to the Development, Management and Use of Water Resources); Chapter 20 (Environmentally Sound Management of Hazardous Wastes, Including Prevention of Illegal International Traffic in Hazardous Wastes); Chapter 22 (Safe and Environmentally Sound Management of Radioactive Wastes); Chapter 23 (Strengthening the Role of Major Groups); Chapter 34 (Transfer of Environmentally Sound Technology, Cooperation and Capacity Building); and Chapter 38 (International Institutional Arrangements). Agenda 21, *supra* note 5.

[36] Stockholm Declaration of the United Nations Conference on the Human Environment, June 16, 1972, *Report of the United Nations Conference on the Human Environment*, G.A. Res. 2997, U.N. GAOR, 27th Sess., 21st mtg., princ. 21, at 2 & Corr. 1, U.N. Doc. A/CONF.48/14, *reprinted in* 11 I.L.M. 1416, 1420 (1972) [hereinafter Stockholm Declaration]. *See* Preiss, *supra* note 10, at 317 ("The Stockholm Declaration recognizes the need for environmental 'planning' in seven of its twenty-six principles.").

[37] Stockholm Declaration, *supra* note 36, princ. 21, at 1420 ("States have . . . the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States."). *See also* Rio Declaration, *supra* note 23, princ. 2, at 876. *See* Knox, *supra* note 29, at 312. *Cf.* Michael A. Hyman, Note, *Under the Danube Canopy: The Future of International Waterway Law*, 23 WM. & MARY ENVTL. L. & POL'Y REV. 355, 361, 363-64 (1998) (noting that Principle 21 recognizes the principle of *sic utere*, under which "a state is obligated not to use, or allow the use of, its territory for acts contrary to the rights of other states").

Charter for Nature[38] reiterates the "no harm principle"[39] and notes the important of the EIA process which should be conducted sufficiently in advance of a proposed project's commencement.[40] Although this instrument is considered "soft law," and therefore is not legally binding, it nevertheless reinforces and expands upon international law in many ways. One important aspect of the EIA process—the requirement of public participation—is also codified in this instrument.[41] Since the 1983 World Charter for Nature, the EIA process has been included as a standard element of, if not central to, many international and regional environmental

[38] *World Charter for Nature*, G.A. Res. 37/7, U.N. GAOR, 37th Sess., Agenda Item 21, U.N. Doc A/RES/37/7 (1982), *reprinted in* 22 I.L.M. 455 (1983). The World Charter for Nature was adopted by a vote of 111 countries for, one against (the United States), and 18 abstentions (mostly Latin American countries, plus Algeria and Lebanon). *Id*.

[39] *Id*. princ. 21(d) (States shall "ensure that activities within their jurisdictions or control do not cause damage to the natural systems located within other States or in the areas beyond the limits of national jurisdiction."). *See also* Aaron Schwabach, *Diverting the Danube: The Gabcikovo-Nagymaros Dispute and International Freshwater Law*, 14 BERKELEY J. INT'L L. 290, 332 (1996).

[40] *See* World Charter for Nature, *supra* note 38, princ. 11(c) ("Activities which may disturb nature shall be preceded by assessment of their consequences, and environmental impact studies of development projects shall be conducted sufficiently in advance, and if they are to be undertaken, such activities shall be planned and carried out so as to minimize potential adverse effects.").

[41] *See id*. princs. 16, 23. Principle 16 states:

> All planning shall include, among its essential elements, the formulation of strategies for the conservation of nature, the establishment of inventories of ecosystems and assessments of the effects on nature of proposed policies and activities; all of these elements shall be disclosed to the public by appropriate means in time to permit effective consultation and participation.

Id. princ. 16. Principle 23 states: "[a]ll persons, in accordance with their national legislation, shall have the opportunity to participate, individually or with others, in the formulation of decisions of direct concern to their environment, and shall have access to means of redress when their environment has suffered damage or degradation." *Id*. princ. 23. For discussion of another soft law instrument that addresses transboundary provision of environmental information, the International Law Commission's Draft Articles on the Prevention of Transboundary Harm, *Report of the International Law Commission*, U.N. GAOR, 56th Sess., Supp. No. 10, at 366-436, U.N. Doc. No. A/56/10 (2001), http://www.un.org/law/ilc/reports/2001/2001report.htm, see Carrie Noteboom, *Addressing the External Effects of Internal Environmental Decisions: Public Access to Environmental Information in the International Law Commission's Draft Articles on Prevention of Transboundary Harm*, 12 N.Y.U. ENVTL. L.J. 245 (2003).

agreements.[42]

As the EIA has become a standard tool of environmental regulation and management, the international community has increasingly considered how the principles and approaches advanced in the domestic context might be applied to the management of transboundary resources. A growing number of international instruments explicitly mandate the use of a TEIA. These include the Convention on Biological Diversity (CBD), the United Nations Convention on the Law of the Sea (UNCLOS), and the Protocol on Environmental Protection to the Antarctic Treaty.[43] In most instances, TEIA requirements are for specific aspects of environmental management, such as biodiversity and marine protection. For the most part, countries are still in the process of implementing these provisions.

The 1997 United Nations Convention on the Law of the Non-Navigational Uses of International Watercourses recognizes a number of foundational elements of TEIA.[44] It contains identifiable TEIA elements, including requirements for notification and information to be shared between States

> [b]efore a watercourse State implements or permits the implementation of planned measures which may have a significant adverse effect upon other watercourse States, it shall provide those States with timely notification thereof. Such notification shall be accompanied by available technical data and information, including the results on any environmental impact assessment, in order to enable the notified States to

[42] For a historical review of the evolution of public participation under international law, see Bruch & Czebiniak, *supra* note 23.

[43] *See* Convention on Biological Diversity, June 5, 1992, art. 14, S. TREATY DOC. NO. 103-20, 1760 U.N.T.S. 143, 151-52 (entered into force Dec. 29, 1993); Convention on the Law of the Sea, Dec. 10, 1982, art. 206, 1833 U.N.T.S. 397, 481 (entered into force Nov. 16, 1994). Although not strictly involving transboundary EIA, as there are no official sovereign claims in Antarctica (only "territories"), the Protocol on Environmental Protection to the Antarctic Treaty requires prior assessment of the impacts of the activities on the Antarctic environment, with Annex 1 of the protocol containing detailed procedure for carrying out the EIA. Protocol on Environmental Protection to the Antarctic Treaty, *opened for signature* Oct. 4, 1991, art. 8, 30 I.L.M. 1455.

[44] Convention on the Law of the Non-Navigational Uses of International Watercourses, *opened for signature* May 21, 1997, G.A. Res. 51/229, U.N. GAOR, 51st Sess., Agenda Item 144, U.N. Doc. A/RES/51/229, *reprinted in* 36 I.L.M. 700 [hereinafter U.N. Watercourses Convention].

evaluate the possible effects of the planned measures.[45]

However, the onus is on the notified States to evaluate possible effects of any proposals, which does not necessarily accord with the TEIA (or EIA) principles that have evolved from international treaties and various soft law instruments, in which the proponent generally bears responsibility for formulating the TEIA.[46]

The 2002 World Summit on Sustainable Development in Johannesburg (WSSD) focused extensively on promoting the integrated management of watersheds, particularly international watersheds, in its Plan of Implementation.[47] This Plan of Implementation also focused on the need to enhance the "use [of] environmental impact assessment procedures."[48] In particular, the Plan of Implementation seeks to "[d]evelop and promote the wider application of environmental impact assessments, *inter alia*, as a national instrument, as appropriate, to provide essential decision-support information on projects that could cause significant adverse effects to the environment."[49]

2. *Customary Law*

In addition to treaties and declarations requiring and suggesting EIA and TEIA processes, customary law has evolved to promote EIA at the international level, creating an emerging TEIA process. In August 1966, at the fifty-second conference of the International Law Association (ILA), the Helsinki Rules on the Uses of the Waters of International Rivers were drafted,[50] reflecting customary international water law and serving as the basis for negotiations of the 1997 U.N. Watercourses Convention.[51] ILA is now in the process of reviewing, updating,

[45] *Id*. art. 12, at 707-08.

[46] *See supra* note 16 and accompanying text.

[47] WSSD REPORT, *supra* note 5, paras. 25(a)-(g), at 20-21. *See also id*. para. 28, at 22 (promoting coordination on water-related issues).

[48] *Id*. para. 19(e), at 15.

[49] *Id*. para. 135, at 63-64 (emphasis added).

[50] ILA, THE HELSINKI RULES ON THE USES OF THE WATERS OF INTERNATIONAL RIVERS (1967), http://www.internationalwaterlaw.org/IntlDocs/Helsinki_Rules.htm.

[51] *See* Peter Beaumont, *The 1997 UN Convention on the Law of Non-Navigational Uses of International Watercourses: Its Strengths and Weaknesses from a Water Management Perspective and the Need for New Workable Guidelines*, 16 INT'L J. WATER RESOURCES DEV. 475, 475-76 (2000),

and revising this highly regarded statement of customary legal principles to reflect contemporary developments in international environmental law.[52] The original Helsinki Rules are now dated and, as a result, have been updated to better reflect customary law on watercourses.

Chapter VIII of the ninth draft revision, on "Impact Assessments" requires States to use the TEIA process in managing transboundary watercourses:

> States, individually or jointly, together with international organizations, as appropriate, shall undertake prior and continuing assessment of the impact of programs, projects, or activities that may have a [significant] [more than a minimal] effect [on the aquatic environment or] on the sustainable use of waters within a State's jurisdiction or control.[53]

Potential impacts that are to be assessed, according to Article 38(2), include:

(a) Effects on human health and safety;
(b) Effects on the environment;
(c) Effects on existing or prospective economic activity;
(d) Effects on cultural or socio-economic conditions; and
(e) Effects on the sustainability of the use of waters.[54]

The draft revisions also heavily emphasize developments in customary international law favoring public participation in the TEIA process.[55] Customary law cases arising prior to 1966, including cases decided by the International Court of Justice (ICJ), do not relate directly to EIA or TEIA processes but nevertheless collectively establish foundational principles that have shaped the evolution of TEIA processes and requirements in international law.[56]

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http://www.ce.utexas.edu/prof/mckinney/ce397/Topics/WaterRights/Beaumont.pdf. *See also* U.N. Watercourses Convention, *supra* note 44.

[52] ILA, THE [REVISED] INTERNATIONAL LAW ASSOCIATION RULES ON EQUITABLE AND SUSTAINABLE USE OF WATERS (9th draft 2003), http://www.ila-hq.org/pdf/Water%20Resources/Draft%20Rules9November2003.pdf [hereinafter Draft Helsinki Revisions].

[53] *Id*. art. 38(1), at 81.

[54] *Id*. art. 38(2), at 81.

[55] *See id*. arts. 10-11, at 29-33.

[56] *See generally* Shashank Upadhye, *The International Watercourse: An Exploitable Resource for the Developing Nation Under International Law?*, 8 CARDOZO J. INT'L & COMP. L. 61 (2000); Srecko "Lucky" Vidmar, 2001-2002 Leonard V.B. Sutton Award, *Compulsory Inter-State Arbitration of Territorial Disputes*, 31 DENV. J. INT'L L. & POL'Y 87 (2002). *See also* Gray, *supra* note 8,

a. Gabčíkovo-Nagymaros Project

The *Gabčíkovo-Nagymaros Project*, a recent ICJ case, directly considered problems concerning the TEIA process.[57] The *Gabčíkovo-Nagymaros Project* involved the construction of a system of locks on the border between Hungary and Slovakia, in which both parties had committed to complete the project.[58] To this end, the Hungarian People's Republic and the Czechoslovak People's Republic (prior to the independence of Slovakia) signed the Treaty Concerning the Construction and Operation of the Gabčíkovo-Nagymaros System of Locks (Gabčíkovo-Nagymaros Treaty) on September 16, 1977, which entered into force on June 30, 1978.[59] By 1989, negotiations on construction had broken down, and the parties sought a decision from ICJ.[60] ICJ held that the 1977 Gabčíkovo-Nagymaros Treaty still applied.[61] While the case and the ultimate decision by ICJ did not turn on a TEIA, the majority and concurring opinions both advanced the legitimacy and scope of TEIA under customary law, albeit to differing degrees. The majority decision did not directly address the issue of TEIA, but when examined more closely the judgment implicitly supports the emerging principles of TEIA. Further, Vice-President Weeramantry's separate opinion, which agreed with the majority, explicitly supports TEIA as an emerging area of customary law.[62]

In interpreting the Gabčíkovo-Nagymaros Treaty, the majority noted "that newly developed norms of environmental law are relevant for the implementation of the Treaty,"[63] and that "the

at 92-94; Hyman, *supra* note 37, at 364-66; Valentina Okaru-Bisant, *Institutional and Legal Frameworks for Preventing and Resolving Disputes Concerning the Development and Management of Africa's Shared River Basins*, 9 COLO. J. INT'L ENVTL. L. & POL'Y 331, 351-52 (1998).

[57] Gabčíkovo-Nagymaros Project (Hung. v. Slovk.), 1997 I.C.J. 3 (Sept. 25). *See also* A. Dan Tarlock, *Safeguarding International River Ecosystems in Times of Scarcity*, 3 U. DENV. WATER L. REV. 231, 242-46 (2000); Schwabach, *supra* note 39; Preiss, *supra* note 10.

[58] Gabčíkovo-Nagymaros Project, 1997 I.C.J. at 17.

[59] *Id*. Treaty Concerning the Construction and Operation of the Gabčíkovo-Nagymaros System of Locks, Sept. 16, 1977, Hung.-Czech Rep., 1109 U.N.T.S. 235 (entered into force June 30, 1978) [hereinafter Gabčíkovo-Nagymaros Treaty], http://www.gabcikovo.gov.sk/doc/it1977en/treaty.html (last visited Dec. 3, 2003).

[60] Gabčíkovo-Nagymaros Project, 1997 I.C.J. at 25.

[61] *Id*. at 72.

[62] *Id*. at 111 (separate opinion of Vice-President Weeramantry).

[63] *Id*. at 67.

Treaty is not static, and is open to adapt to emerging norms of international law."[64] The relevant articles of the Treaty were Articles 15, 19 and 20,[65] which the majority held "oblige the parties jointly to take, on a continuous basis, appropriate measures necessary for the protection of water quality, of nature and of fishing interests."[66]

Although not referring to TEIA explicitly, the majority went on to consider what would be required to implement the Gabčíkovo-Nagymaros Treaty. The court first stated that implementation "requires a mutual willingness to discuss in good faith actual and potential environmental risks."[67] By noting the dynamic nature of the Treaty and observing the increased recognition of the need for continual assessment of risks,[68] the court laid the groundwork for recognizing the implementation of a TEIA as a principle of international law.

In fact, Hungary sought to require a TEIA, arguing that "a joint environmental impact assessment of the region" should be implemented.[69] The court did not make any specific order on a

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[64] *Id*. at 67-68.

[65] Article 15 specified that the contracting parties "shall ensure . . . that the quality of the water in the Danube is not impaired as a result of the construction and operation of the System of Locks." Gabčíkovo-Nagymaros Treaty, *supra* note 59, art. 15, at 244. Article 19 required the parties to "ensure compliance with the obligations for the protection of nature arising in connection with the construction and operation of the System of Locks." *Id*. art. 19, at 245. Article 20 provided for the Parties to take appropriate measures for the protection of fishing interests. *Id*. art. 20, at 245.

[66] Gabčíkovo-Nagymaros Project, 1997 I.C.J. at 65.

[67] *Id*. at 68.

[68] *Id*. ("The awareness of the vulnerability of the environment and the recognition that environmental risks have to be assessed on a continuous basis have become much stronger in the years since the Treaty's conclusion. These new concerns have enhanced the relevance of Articles 15, 19 and 20.").

[69] *Id*. at 73. Hungary had initially suspended work at Nagymaros in 1989, citing the need for further studies of the project and thus implying a TEIA requirement. *Id*. at 31-32. To justify the suspension of works, Hungary claimed "a state of ecological necessity." *Id*. at 35. ICJ noted:

> Hungary argued that, if that dam had been built, the bed of the Danube upstream would have silted up and, consequently, the quality of the water collected in the bank-filtered wells would have deteriorated in this sector. What is more, the operation of the Gabčíkovo power plant in peak mode would have occasioned significant daily variations in the water level in the reservoir upstream, which would have constituted a threat to aquatic habitats in particular. Furthermore, the construction and operation of the Nagymaros dam would have caused the erosion of the riverbed downstream, along Szentendre Island. The water level of

TEIA, stating that "[i]t is for the Parties themselves to find an agreed solution that takes account of the objectives of the Treaty, which must be pursued in a joint and integrated way, as well as the norms of international environmental law and the principles of the law of international watercourses."[70]

Vice-President Weeramantry agreed with the majority of the court in its conclusions, however he also delivered a separate concurring opinion in which he addressed the issue of TEIA directly. He noted that "the principle of EIA was also built into the [1977] Treaty."[71] He also went on to observe that

> [e]nvironmental law in its current state of development would read into treaties which may reasonably be considered to have a significant impact upon the environment, a duty of environmental impact assessment and this means also, whether the treaty expressly so provides or not, a duty of monitoring the environmental impacts of any substantial project during the operation of the scheme.[72]

Although the majority did not consider the issue of TEIA explicitly, their judgment is indicative of a more general shift in customary law toward emerging environmental principles such as

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> the river would therefore have fallen in this section and the yield of the bank-filtered wells providing two-thirds of the water supply of the city of Budapest would have appreciably diminished. The filter layer would also have shrunk or perhaps even disappeared, and fine sediments would have been deposited in certain pockets in the river. For this twofold reason, the quality of the infiltrating water would have been severely jeopardized.

Id. at 35-36. Hungary further argued that any future long-term regime concerning possible operation of the dam should be "capable of avoiding damage, including especially damage to biodiversity prohibited by the [1992 Convention on Biological Diversity]." *Id*. at 73. In response, Slovakia argued that Hungary's claim was "an exaggeratedly pessimistic description of the situation," denying that there had been an ecological state of necessity either in 1989 or subsequently. *Id*. at 37. Indeed, Slovakia "invoked the authority of various scientific studies" in making its argument. *Id*. Slovakia further argued that "the state of necessity upon which Hungary relied did not constitute a reason for the suspension of a treaty obligation recognized by the law of treaties." *Id*.

[70] *Id*. at 78. It is curious that ICJ did not take judicial notice of the fact that the 1992 Helsinki Convention and the Espoo Convention, discussed *infra*, two regional conventions applicable to both Hungary and Slovakia, include obligations to conduct a TEIA in circumstances such as those presented in this case.

[71] *Id*. at 111 (separate opinion of Vice-President Weeramantry) (extrapolating from the inclusion of Articles 15 and 19 in the Treaty).

[72] *Id*. at 112.

TEIA. The separate opinion of Vice-President Weeramantry in the case concerning the Gabcíkovo-Nagymaros Project, although more forcefully and explicitly stated, expands upon the majority's reasoning and may reflect longer-term shifts in this emerging area.

b. Trail Smelter Arbitration

The *Trail Smelter Arbitration*[73] was not born of particularly strong legal origins—it stemmed from an ad hoc tribunal decision between Canada and the United States—but has come to represent an important case in international customary law.[74] The major principle from this case is that "no State has the right to use or permit the use of its territory in such a manner as to cause injury . . . in or to the territory of another,"[75] an early manifestation of the "no harm principle" incorporated decades later by the Stockholm Declaration.[76] Naturally flowing from this mandate is a procedural imperative to determine potential transboundary impacts of a proposed action and identify potential mitigation measures—the TEIA.

c. *Other International Case Law*

Later cases, such as the *Corfu Channel*[77] and the *Lake Lanoux Arbitration*,[78] adopted similar approaches to limit actions taken by one nation that affect another. It was not until 1995 that ICJ considered the issue of the TEIA, in a re-examination of the *Nuclear Tests* between New Zealand and France.[79] New Zealand

[73] Trail Smelter Arbitration (U.S. v. Can.), 3 R.I.A.A. 1905 (1941), *reprinted in* 35 AM. J. INT'L L. 684 (1941).

[74] For example, in interpreting NEPA, the Council on Environmental Quality (CEQ) issued guidance in 1997 on analyzing transboundary impacts, stating that "[i]t has been customary law since the [1941] Trail Smelter Arbitration that no nation may undertake acts on its territory that will harm the territory of another state." CEQ, Guidance on NEPA Analyses for Transboundary Impacts (July 1, 1997), *at* http://ceq.eh.doe.gov/nepa/regs/transguide.html (last visited Dec. 3, 2003).

[75] Trail Smelter, *supra* note 73, at 1965.

[76] *See supra* notes 36-37 and accompanying text.

[77] Corfu Channel (U.K. v. Alb.), 1949 I.C.J. 4, 22 (Apr. 9) (determination on the merits) (stating that it is "every State's obligation not to allow knowingly its territory to be used for acts contrary to the rights of other States"). *See also* Schwabach, *supra* note 39, at 327.

[78] Lake Lanoux Arbitration (Fr. v. Spain), 12 R.I.A.A. 281 (1957), *reprinted in* 53 AM. J. INT'L L. 156 (1959). *See also* Schwabach, *supra* note 39, at 327-28.

[79] The original case was decided by ICJ in 1974. *See* Nuclear Tests Case

argued, *inter alia*, that France was "under an obligation in customary international law, based on widespread international practice, to conduct an EIA before carrying the [nuclear] tests."[80] Although ICJ did not rule on this, the separate opinion of Vice-President Weeramantry held that the principle of TEIA was "gathering strength and international acceptance, and [had] reached the level of general recognition [such that the] Court should take notice of it."[81]

3. *Initiatives of International Organizations*

Beyond treaty and custom, there are other sources of international law that provide guidance on the scope of TEIA. These sources are particularly useful given the dearth of detailed provisions at this formative stage in the evolution of TEIA. Several international organizations have sought to clarify and elaborate principles and best practices for TEIA. While these principles are non-binding,[82] they do provide detailed guidance that countries increasingly follow in practice and serve to clarify further the specific obligations to conduct TEIAs and the procedures which should be used in doing so.

In May 1978, the Governing Council of UNEP adopted non-binding "Principles of Conduct" for the management of shared natural resources, including transboundary water resources.[83] Consistent with the "no significant harm principle," Principle 4 states that "States should make environmental assessments before

(N.Z. v. Fr.), 1974 I.C.J. 457 (Dec. 20).

[80] Gray, *supra* note 8, at 92. *See also* Request for an Examination of Situation in Accordance with Paragraph 63 of the Court's Judgment of 20 December 1974 in the *Nuclear Tests (N.Z. v. Fr.)* Case, 1995 I.C.J. 288, 290 (Sep. 22) [hereinafter Nuclear Tests Re-Examination].

[81] Nuclear Tests Re-Examination, *supra* note 80, at 344 (separate opinion of Justice Weeramantry). The majority dismissed the application on procedural grounds, concluding that the parties' "Request for an Examination of the Situation" pursuant to ICJ's earlier judgment did not fall within that judgment's mandate, preventing the exercise of ICJ's jurisdiction. *Id*. at 306. *See also* Gray, *supra* note 8, at 93.

[82] *See* Preiss, *supra* note 10, at 322.

[83] Draft 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, *in Co-Operation in the Field of the Environment Concerning Natural Resources Shared by Two or More States*, UNEP, 6th Sess., U.N. Doc. GC.6/CRP.2 (1978), *reprinted in* 17 I.L.M. 1091, 1097.

engaging in any activity with respect to a shared natural resource which may create a risk of significantly affecting the environment of another State or States sharing that resource."[84] UNEP also promulgated the Principles of Environmental Impact Assessment in 1987.[85] While emphasizing domestic EIA, these Goals and Principles encourage reciprocal procedures for notification, information exchange, and consultation on activities likely to have significant transboundary effects.[86]

Other international organizations have also promoted conducting TEIAs by elaborating guidelines for effective development and implementation. OECD recommended in 1979 that member governments consider transboundary impact assessment procedures, particularly with regards to transboundary pollution.[87] Since then, OECD has facilitated the development and harmonization of EIA laws and practice by publishing "Guidelines for Managing Environmental Assessment of Development Projects" in 1999.[88] OECD further identifies "Good Practice" for domestic and transboundary EIA procedures.[89]

B. *Regional Practices and Conventions*

Due to the inherently transboundary nature of TEIA and the impacts it seeks to address, regional norms, institutional frameworks, and practices can be a particularly relevant level at which to develop and implement TEIA. Moreover, regional

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[84] *Id*. princ. 4, at 1098.

[85] UNEP EIA Principles, *supra* note 7. *See also* Preiss, *supra* note 10, at 322.

[86] *See* UNEP EIA Principles, *supra* note 7, princ. 12, at 37.

[87] Recommendation of the Council on the Assessment of Projects with Significant Impact on the Environment, OECD C(79) 116 (May 8, 1979), http://webdomino1.oecd.org/horizontal/oecdacts.nsf/ (last visited Dec. 4, 2003). Paragraph 8 of the Council Recommendation directs parties to "Consider, in accordance with OECD Recommendations of the Council dealing with transfrontier pollution, instituting environmental assessment procedures for actions that might have significant transboundary effects." *Id*. para. 8.

[88] TASK FORCE ON COHERENCE OF ENVTL. ASSESSMENT FOR INTL. BILATERAL AID, OECD, COHERENCE IN ENVIRONMENTAL ASSESSMENT ch. IV (1999), http://www.oecd.org/dataoecd/13/23/1884214.pdf. "The Guideline is structured according to the general stages in a project cycle and according to the sequential aspects of an assessment. It is designed for application from the earliest point at which a project is considered through to final evaluation." *Id*.

[89] *Id*. Annex I (stating that "off-site effects, including transboundary, delayed and cumulative effects, should be assessed.").

approaches can account for the different levels of economic development, varying cultural practices, and specific political and geographical situations. As an emerging body of law and practice, TEIA also can benefit from the variety of regional norms and practices that are emerging. As much of the practical, on-the-ground development thus far has been at the regional and bilateral level, this provides a particularly rich body of experience for distilling the practical means of implementing the mandates for TEIA thus far. Practices are not uniform or universal for individual countries or regions. Indeed, the variety of approaches offers some lessons learned on approaches that are promising. As will be shown, Europe has taken a particularly more doctrinal approach to TEIA evolution than other regions such as Africa, and it is posited that this may be an especially promising, appropriate, and effective course for developing TEIA.

1. *Europe*

Early in the evolution of TEIA principles and practice, European States—in part due to geographical necessity and in part reflecting the broader political integration—were developing ways to address the challenges of conducting environmental assessments across national borders. In 1985, the European Community adopted a Council Directive on the assessment of the effects of certain public and private projects on the environment.[90] The Directive included a few general provisions that could apply to transboundary effects.[91] In 1997, the Directive was amended to include clearer definitions and more explicit TEIA provisions.[92]

Article 7 was expanded to clarify TEIA. Article 7 requires States to notify States that may be affected by actions or projects with potentially significant transboundary effects.[93] This notice

[90] Council Directive 85/337/EEC, 1985 O.J. (L 175) 40, http://europa.eu.int/eur-lex/en/index.html. *See also* COMM'N OF THE EUROPEAN COMMTYS., REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL ON THE APPLICATION AND EFFECTIVENESS OF THE EIA DIRECTIVE (DIRECTIVE 85/337/EEC AS AMENDED BY DIRECTIVE 97/11/EC): HOW SUCCESSFUL ARE THE MEMBER STATES IN IMPLEMENTING THE EIA DIRECTIVE, COM(2003)334 final [hereinafter EIA DIRECTIVE REPORT], http://europa.eu.int/comm/environment/eia/report_en.pdf.

[91] *See, e.g.*, Council Directive 85/337/EEC, *supra* note 90, arts. 2, 6, 8, at 41, 42.

[92] Council Directive 97/11/EC, 1997 O.J. (L 073) 5.

[93] *Id*. art. 7, at 7.

must include a description of the project and the nature of the decision regarding the proposed action or project.[94] The potentially affected State must have an opportunity to participate in the EIA process.[95] Each State is required to make information on the project, proposed decisions, and potential impacts available to the public within a reasonable time, and potentially affected individuals and groups are given an opportunity to participate.[96]

Similar to domestic EIA processes, Article 8 of the amended Directive requires the competent authority to consider the comments received from the potentially affected member States and public in the decision-making process.[97] Article 9 requires the notifying State to inform the affected member State and public of the final decision.[98]

The amended Directive also seeks to improve TEIA by promoting harmonization of EIA systems in the region, allowing for improved collaboration in transboundary matters.[99] In advancing harmonization, the Directive seeks to overcome disparate cultural, political, and legislative requirements.[100] It emphasizes an agreed-upon set of projects that require an assessment, the main obligations of the developers, and the contents of an EIA.[101]

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[94] *Id*. arts. 7(1)(a)-(b), at 7.

[95] *Id*. art. 7(2), at 7.

[96] *Id*. arts. 7(3)(a)-(b), at 7.

[97] *Id*. art. 8, at 8.

[98] *Id*. arts. 9(1)-(2), at 8.

[99] *Id*. at 5. As noted above, this analysis seeks to determine elements of effective TEIA systems by considering actual examples. As will be discussed below, harmonization of approaches to TEIA is an important consideration. *See infra* Part IV.B. TEIA can be significantly easier to implement effectively where there are common domestic approaches and institutional mandates, as well as regional organizations such as the European Union (EU), East African Community, ASEAN, or the Mekong River Commission to facilitate TEIA. While harmonization through regional bodies does not necessarily address all transboundary environmental impacts (which may cross regional borders), harmonization is nevertheless an incremental step beyond smaller, more numerous sovereign delineations and at the same time recognizes political and environmental realities.

[100] *See, e.g.*, Council Directive 85/337/EEC, *supra* note 90, art. 11, at 43 (mandating the exchange of information regarding Directive implementation); Council Directive 97/11/EC, *supra* note 92, art. 7, at 7 (providing uniform TEIA methodology).

[101] Council Directive 97/11/EC, *supra* note 92, Annex I (listing types of projects for which an EIA is mandatory); Annex II (listing types of projects that

Building on the European Community Council Directive, the two conventions discussed below have expanded the framework for TEIA, particularly in the context of transboundary watercourses. Both Conventions were negotiated, adopted, and implemented under the auspices of the United Nations Economic Commission for Europe (UNECE), which includes all of Europe (extending to Central Asia, through the Commonwealth of Independent States), as well as Canada and the United States.[102] As a practical matter, however, these Conventions are of most significance to the European countries that have ratified and implemented the Conventions.[103]

a. *UNECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes*

The UNECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Helsinki Convention)[104] focuses specifically on management of transboundary watercourses, and includes an innovative provision on joint monitoring and assessment,[105] as well as public access to information. Under the Helsinki Convention: "Riparian Parties shall ensure that information on the conditions of transboundary

may require an EIA, to be determined either on a case-by-case basis or application of threshold criteria set by individual member states); Annex III (listing selection criteria for determining whether Annex II projects require an EIA); Annex IV (describing the EIA process required by the Directive). *See also id.* at 9-15.

[102] For a list of members of UNECE, see UNECE, Dates of Membership of the Economic Commission for Europe: 55 Member Countries, *at* http://www.unece.org/oes/about/members.htm (last visited Dec. 4, 2003).

[103] While not discussed in detail in this Article, the UNECE Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (Aarhus Convention) sets forth detailed provisions on EIA and includes non-discrimination provisions that would apply in transboundary contexts. Convention on Access To Information, Public Participation in Decision-Making and Access To Justice in Environmental Matters, *done* June 25, 1998, 38 I.L.M. 517 (entered into force Oct. 30, 2001) [hereinafter Aarhus Convention]. *See also* Bruch & Czebiniak, *supra* note 23, at 10,432-36; Svitlana Kravchenko, *Promoting Public Participation in Europe and Central Asia*, *in* THE NEW "PUBLIC": THE GLOBALIZATION OF PUBLIC PARTICIPATION 95-103 (Carl Bruch ed., 2002) [hereinafter THE NEW "PUBLIC"].

[104] Convention on the Protection and Use of Transboundary Watercourses and International Lakes, *done* Mar. 17, 1992, 31 I.L.M. 1312 [hereinafter Helskini Convention].

[105] *Id.* art. 11, at 1320.

waters, measures taken or planned to be taken to prevent, control and reduce transboundary impact, and the effectiveness of those measures, is made available to the public."[106]

Although the Helsinki Convention does not explicitly use the term "TEIA," it does require the use of EIAs and other means of joint monitoring and assessment in managing the transboundary watercourses that fall within its purview, which is, in both process and form, TEIA. Considering both the intrinsic transboundary watercourse and lake emphasis of the Helsinki Convention as well as its public participation element, the Helsinki Convention goes a long way toward establishing a legal and policy framework for TEIA to be used in the region's international watercourses because it explicitly addresses international watercourses and also has specific provisions on TEIA. This is rare and represents a strong mandate for TEIA in international watercourse management specifically, compared to existing instruments that address the TEIA principles more generally.

The Helsinki Convention also anticipates linkages with other relevant conventions, including the Espoo Convention, discussed below, governing transboundary EIA matters in the UNECE region. For example, the Helsinki Convention states that participation and implementation of EIAs shall be in accordance with international regulations.[107] As a result, EIA procedures under the Helsinki Convention must be consistent with the requirements of the Espoo Convention and the Aarhus Convention.[108]

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[106] *Id*. art. 16(1), at 1322. Article 16 of the Helsinki Convention further highlights the importance of reasonable timeframes and access that is free of charge. Specific mention is made of water quality objectives, permits, and results of sampling and compliance checks. Further, the parties "shall ensure that this information shall be available to the public at all reasonable times for inspection free of charge, and shall provide members of the public with reasonable facilities for obtaining from the Riparian Parties, on payment of reasonable charges, copies of such information." *Id*., art. 16(2), at 1322.

[107] *Id*. art. 9(2)(j), at 1319 (One task of a joint body of Riparian Parties shall be to "participate in the implementation of environmental impact assessments relating to transboundary waters, in accordance with appropriate international regulations.").

[108] In fact, at the Ministerial Conference in London in 1999, Parties to the Helsinki Convention adopted a Protocol on Water and Health that integrates provisions of the Aarhus Convention into the framework of the Helsinki Convention. Protocol on Water and Health to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes, art.

b. *Espoo Convention*

The Convention on Environmental Impact Assessment in a Transboundary Context, also known as the Espoo Convention, is arguably the most authoritative and specific international legal codification of TEIA.[109] The preamble of the Espoo Convention sets forth the overall objectives for TEIA, stating that Parties are "*[d]etermined* to enhance international co-operation in assessing environmental impact in particular in a transboundary context" and are "*[m]indful* of the need and importance to develop anticipatory policies and of preventing, mitigating and monitoring significant adverse environmental impact in general and more specifically in a transboundary context."[110] Thus, the main goal of the Espoo Convention is the avoidance and mitigation of transboundary impacts.

The Espoo Convention requires States to notify and consult each other on all major projects under consideration that are likely to have a significant adverse environmental impact across boundaries.[111] As a practical matter, the Espoo Convention requires that the country of origin (namely, the country where the proposed action would take place) open its EIA and decision-making procedures to the public and to the authorities in neighboring, potentially affected States, taking their comments into account.[112]

Parties to the Espoo Convention have made legally binding commitments to specifically implement and advance TEIA.[113] In a number of instances, the requirements are general. For example, there is not yet settled authority regarding the precise meanings of terms such as "significant impact" or "reasonable time," as State practices regarding the terms differ. To a certain extent, then, the

10, June 17, 1999, U.N. Doc. MP.WAT/2000/1 (1999), http://unece.org/env/documents/2000/wat/mp.wat.2000.1.e.pdf.

[109] Convention on Environmental Impact Assessment in a Transboundary Context, *done* Feb. 25, 1991, 1989 U.N.T.S. 309 (1997), 30 I.L.M. 800 (1991) (entered into force Sept. 10, 1997) [hereinafter Espoo Convention].

[110] *Id*. pmbl., at 310, 30 I.L.M. at 802.

[111] *Id*. art. 3, at 313-14, 30 I.L.M. at 804-6.

[112] *Id*. art. 2(6), at 312, 30 I.L.M. at 804. *See also* Jan Jaap de Boer, *Bilateral Agreements for the Application of the UN-ECE Convention on EIA in a Transboundary Context*, 19 ENVTL. IMPACT ASSESSMENT REV. 85, 87 (1999). *See also infra* note 134 and accompanying text.

[113] Espoo Convention, *supra* note 109, art. 2(1), at 312, 30 I.L.M. at 803.

Espoo Convention represents a general framework within which TEIA will continue to evolve both through practice and further normative elaboration.[114]

The appendices to the Espoo Convention do include much of the detailed information that is necessary to ensure effective implementation of TEIA. Appendix I provides a list of projects with transboundary effects requiring an EIA, upon which individual States may expand.[115] Appendix II outlines the procedures and content required for an EIA in a transboundary context and is thus important in setting forth the minimum, standardized substantive requirements of TEIA.[116] Appendix III provides guidance on what triggers application of the Espoo Convention, referring to properties of proposals such as size, location, and effects of the activity that are likely to invoke the Espoo Convention.[117]

In preparing its EIA, the Party of origin is required by Appendix II to address a number of considerations. At a minimum, an EIA must contain:

> (a) [a] description of the proposed activity and its purpose;
> (b) [a] description . . . of reasonable alternatives . . . to the proposed activity and also the no-action alternative;
> (c) [a] description of the environment likely to be significantly affected by the proposed activity and its alternatives;
> (d) [a] description of the potential environmental impact of the proposed activity and its alternatives and an estimation of its significance;
> (e) [a] description of mitigation measures to keep adverse environmental impact to a minimum;
> (f) [an explanation] of predictive methods and underlying assumptions as well as the relevant environmental data used;
> (g) [a]n identification of gaps in knowledge and uncertainties encountered in compiling the required information;

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[114] For example, the Protocol on Strategic Environmental Assessment in a Transboundary Context, adopted at the Espoo Convention Fifth Ministerial Conference in Kiev during May 2003, addresses strategic environmental assessment—essentially an EIA process for plans, programs, and policies—that was not resolved by the Espoo Convention. Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Transboundary Context, May 21, 2003, http://www.unece.org/env/eia/documents/protocolenglish.pdf.

[115] Espoo Convention, *supra* note 109, app. I, at 321-22, 30 I.L.M. at 812-13.

[116] *Id.* app. II, at 323, 30 I.L.M. at 814.

[117] *Id.* app. III, at 324, 30 I.L.M. at 814-15.

> (h) . . . an outline for monitoring and management programmes . . .; and
> (i) [a] non-technical summary including a visual presentation as appropriate (maps, graphs, etc.).[118]

The Espoo Convention provides a formula upon which more regionally specific bilateral agreements may be built.[119] It also presents an opportunity to harmonize EIA laws in the region.[120] As one commentator noted,

> Since national systems of environmental law and administrative procedures differ from country to country, the implementation of ESPOO in national legal systems may require new legislation or amendments to existing legislation. This may also provide an opportunity to harmonize national systems on the basis of the convention, and strengthen the process of transmitting information on transboundary environmental effects of proposed activities.[121]

The enforcement mechanisms in the Espoo Convention are not particularly strong.[122] If a dispute arises between two or more

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[118] *Id*. app. II, at 323, 30 I.L.M. at 814; *see also* John F. Beggs, Note, *Combatting Biospheric Degradation: International Environmental Impact Assessment and the Transboundary Pollution Dilemma*, 6 FORDHAM ENVTL. L.J. 379, 385-86 (1995).

[119] Espoo Convention, *supra* note 109, art. 8, at 316, 30 I.L.M. at 807. Some States have pursued such agreements, and these are considered in more detail in the following sections.

[120] While harmonization can strengthen EIA, it is also possible that harmonization could lead to lower standards than would have otherwise been applied at the national level. For example, it is positive if there is a "stepping up" of responsibility and commitment to both EIA and public participation procedures; however, harmonization may lead to a "stepping down" of legal commitment to EIA in a transboundary context, in which the lowest common denominator may prevail. These challenges will be addressed in more detail below, when state practice is considered. *See infra* Parts III, IV.B.

[121] Karel Van Der Zwiep & Jiri Dusk, *Public Participation in the Transboundary Context*, *in* REG'L ENVTL. CTR. FOR CENT. AND E. EUR., MANUAL ON PUBLIC PARTICIPATION IN ENVIRONMENTAL DECISIONMAKING: BEYOND BOUNDARIES: THE INTERNATIONAL DIMENSIONS OF PUBLIC PARTICIPATION FOR THE COUNTRIES OF CENTRAL AND EASTERN EUROPE ch. 5 (1996), http://www.rec.org/rec/Publications/BndBound/cover.html.

[122] The Espoo Convention created a Secretariat, which is empowered to "conven[e] and prepar[e] meetings of the Parties" and "transmi[t] reports and other information . . . to the Parties." Espoo Convention, *supra* note 109, arts. 13(a)-(b), at 317, 30 I.L.M. at 809. *See also* Beggs, *supra* note 118, at 387-88. In contrast, the compliance mechanism of the Aarhus Convention, also a UNECE instrument, has significantly more authority to facilitate and compel compliance by States. *See* Decision I/7: Review of Compliance, 1st. mtg.,

parties regarding the interpretation or application of the Espoo Convention, the Parties are encouraged to negotiate,[123] though they maintain the option to submit their dispute to the International Court of Justice or request arbitration.[124] In this regard, the strength of the Espoo Convention and its potential for implementation lie in the ability of Parties to formulate bilateral agreements under its auspices. Several European States have taken this approach.[125]

Despite its imperfections, the Espoo Convention is significant for articulating a relatively comprehensive framework for TEIA. It establishes international minimum standards for TEIA. It also establishes a model that other regions may consider as they develop their own frameworks for TEIA, particularly since there are now a number of lessons from implementation. Following sections of this Article will discuss some of the more specific implications of the Espoo Convention's impact at the ground level through specific examples. Although the specific European context may limit direct application of the Espoo Convention to other regions, its implementation experiences can offer guidance regarding options for implementing the common elements of TEIA in other regions. Furthermore, when viewed together, the Espoo Convention and the Helsinki Convention provide the UNECE region with a clear legal framework for TEIA, particularly with regards to international watercourses.

c. *European Regulatory Approach: The Example of the Nordic and Baltic States*

As noted above, the European TEIA legal framework of the

Parties to the Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, Oct. 21-23, 2002, art. XII(g)-(h) (advance unedited copy), *at* http://www.unece.org/env/pp/mop1/decision.1.7.e.doc (last visited Dec. 4, 2003).

[123] Espoo Convention, *supra* note 109, art. 15(1), at 318, 30 I.L.M. at 810.

[124] *Id*. arts. 15(2)(a)-(b), at 318, 30 I.L.M. at 810.

[125] *Id*. app. VI(1), at 328, 30 I.L.M. at 817. States are encouraged to enter into subsequent bilateral and multilateral agreements to fulfill their responsibilities under the Convention and to reduce transboundary pollution. *Id*. app. VI(2)(a)-(g), at 328, 30 I.L.M. at 817. For instance, States are permitted to forge their own "[i]nstitutional, administrative and other arrangements . . . on a reciprocal and equivalent basis;" further develop and harmonize methods for the identification and assessment of transboundary impacts; and create joint monitoring programs, independent of the Convention's mandates. *Id*. app. VI(2)(b), (d), (g), at 328, 30 I.L.M. at 817.

European Union (EU) and UNECE instruments is comparatively advanced. No other region has a legally binding framework in place. This regional approach emphasizes upholding existing agreements and legal standards, formulating bilateral agreements, and detailing the specific requirements of TEIA, such as the TEIA process and under what circumstances it is required.[126] There are several examples where bilateral agreements have been promulgated under the auspices of the Espoo Convention process. These will be discussed in following sections. There are numerous countries across Europe that follow this pattern—the Nordic and Baltic States are just two examples.

The Nordic States have a long history of international cooperation in environmental matters. As a result, it seems that the Espoo Convention fits in nicely with an already existing collaborative political framework. This collaborative framework was begun with the 1974 Nordic Convention on the Protection of the Environment, which allows persons affected by nuisances caused by environmentally harmful activities originating in another State to bring proceedings challenging such activities in administrative tribunals or courts of the polluting State.[127] Although retrospective, and not directly applicable to the prospective processes of TEIA, it helped to establish a tradition of transboundary cooperation in environmental matters in the Nordic States. It also avoided one of the major legal pitfalls encountered in transboundary cooperation: how to overcome the issue of standing for non-nationals in environmental matters that directly affect them.

In 1996, the Nordic countries of Finland, Sweden, Denmark, and Norway embarked upon a project called the Coordinated Application of the Espoo Convention.[128] This was a further step toward applying TEIA and a strong basis upon which to promote the development of TEIA, as the Nordic States have a long

[126] *See generally* UNECE, ENVIRONMENTAL SERIES 6, CURRENT POLICIES, STRATEGIES AND ASPECTS OF ENVIRONMENTAL IMPACT ASSESSMENT IN A TRANSBOUNDARY CONTEXT, UN Doc. ECE/CEP/9, U.N. Sales No. E.96.II.E.11 (1996).

[127] Convention on the Protection of the Environment Between Denmark, Finland, Norway and Sweden, Feb. 19, 1974, art 3, 1092 U.N.T.S 279, 296 (1978) [hereinafter Nordic Environmental Protection Convention].

[128] *See generally* Arne Tesli & Stig Roar Husby, *EIA in a Transboundary Context: Principles and Challenges for a Coordinated Nordic Application of the Espoo Convention*, 19 ENVTL. IMPACT ASSESSMENT REV. 57 (1999).

tradition of cooperation. The problem remained, however, that their specific national laws governing EIA varied.[129] This strong response extends beyond the commitment to implementing TEIA principles in most countries. For example, all the Nordic States have ratified the Espoo Convention, as well as the older Nordic Convention on the Protection of the Environmental,[130] yet the Nordic Council of Ministers felt the need to establish coordinated practice in the application of TEIA.[131]

In balancing cooperation with sovereignty, the States focused on the principle of equality in implementing the TEIA provisions of the Espoo Convention.[132] As a practical matter, the principle of equality means that the EIA procedures of the State of origin govern whenever the Espoo Convention applies.[133] Operation of this principle can be demonstrated by the notification requirement in Article 3(1) of the Espoo Convention: the nationals of the potentially affected State must be notified no later than the source State would notify its own citizens under its domestic EIA law, regardless of the EIA requirements in the affected State(s).[134]

The Espoo Convention encourages States to formulate their own, more detailed and geographically specific bilateral agreements to clarify the more general principles of the Espoo Convention,[135] as does the Helsinki Convention.[136] Two Baltic States—Estonia and Latvia—concluded such an agreement in 1997.[137] This agreement clearly states that the State of origin will bear the costs of any EIA and sets out the responsibilities of the parties for disseminating information.[138] The Annex to this agreement includes a list of proposed activities within fifteen kilometers from the shared border that are subject to the

[129] *See id*. at 59-65.

[130] *Id*. at 58. *See also* Nordic Environmental Protection Convention, *supra* note 127.

[131] Tesli & Husby, *supra* note 128, at 57, 58.

[132] *Id*. at 59.

[133] *Id*.

[134] *See id*.; Espoo Convention, *supra* note 109, art. 3(1), at 313, 30 I.L.M. at 804.

[135] Espoo Convention, *supra* note 109, art 8, at 316, 30 I.L.M. at 807.

[136] Helsinki Convention, *supra* note 104, art. 9(1), at 11.

[137] Agreement on Environmental Impact Assessment in a Transboundary Context, Mar. 14, 1997, Est.-Lat., 1986 U.N.T.S. 116 [hereinafter Estonia-Latvia Agreement].

[138] *Id*. art. 16, at 120.

agreement, which is more specific than the Espoo Convention.[139] The agreement also establishes a commission that decides, on a case-by-case basis, the procedural issues for conducting a TEIA.[140]

The establishment of a neutral, common body and the case-by-case approach set clear guidelines for the implementation of TEIA in Estonia and Latvia. This is notable because *who* is responsible for determining the need for TEIA and *how* this is to be done is ambiguous under existing multilateral and international treaties and thus a source of potential conflict.[141] Specific regional and bilateral arrangements have enhanced the coordination of the TEIA process for the Nordic and Baltic States. Although such regional and bilateral agreements may not necessarily be as effective in other regions where TEIA regulatory structures are not as evolved (and where a procedural approach may be more appropriate), this approach is working in the context of Europe. As following sections articulate, legally binding arrangements in other regions of the world may not necessarily be the most effective means to advance TEIA practice. Specific regional means can implement the emerging TEIA principles through legal approaches (as is the case for Europe), various policy mechanisms, and institutional dialogues within organizations such as river basin organizations. This will be discussed in greater detail below.

2. *North America*

North America has also needed to address the issue of TEIA with respect to some large transboundary watercourses (e.g., the Colorado and Columbia Rivers, the Rio Grande, and the North American Great Lakes) which are socially, economically, and ecologically important. Canada, Mexico, and the United States are much larger sovereign States than their European counterparts, and all three are federal nations with discrete sub-national states and provinces. Since the North American nations cover a larger geographic area, have lower population densities, operate under federal political systems, and have other issues unique to the region as compared to Europe, development of TEIA in North

[139] *Id*. Annex, at 122.

[140] *Id*. arts. 4-5, at 118.

[141] As will be seen below, some European states have not taken such a case-by-case approach, preferring instead to adopt general threshold requirements that are not specific. *See infra* note 269 and accompanying text.

America is not as advanced as in Europe, although there is a long history of TEIA-like activities, particularly with regards to watercourses along the United States-Canada border.[142]

The development and implementation of TEIA in this region has largely occurred through state practice and ad hoc experiences with the International Joint Commission (IJC).[143] The primary international framework addressing TEIA on the continent is the North American Agreement on Environmental Cooperation (NAAEC)[144] and the North American Commission on Environmental Cooperation (NACEC or CEC) established by NAAEC.[145]

As a side agreement to the North American Free Trade Agreement (NAFTA),[146] NAAEC was signed by Canada, Mexico, and the United States and entered into force January 1, 1994. In accordance with Article 10(7) of NAAEC, the Council of CEC must consider and develop recommendations with a "view to agreement" regarding:

> (a) [assessment of] the environmental impact of proposed projects . . . [that are] likely to cause significant adverse transboundary effects . . .;
> (b) notification, provision of relevant information and consultation between Parties with respect to such projects; and
> (c) mitigation of the potential adverse effects of such projects.[147]

In June 1997, the Parties resolved through CEC Council Resolution 97-03 to complete a "legally-binding" agreement consistent with their Article 10(7) obligations by April 15, 1998.[148]

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[142] *See* John L. Sullivan, Note, *Beyond the Bargaining Table: Canada's Use of Section 115 of the United States Clear Air Act to Prevent Acid Rain*, 16 CORNELL INT'L L.J. 193, 200 & n.37 (1983).

[143] These experiences are described as ad hoc because the development of TEIA within IJC has been exclusively through practice. There is no formal agreement that TEIA is a necessary component of development jointly affecting the two States.

[144] North American Agreement on Environmental Cooperation, Sept. 14, 1993, 32 I.L.M. 1480 (1993) (entered into force Jan. 1, 1994) [hereinafter NAAEC].

[145] *Id*. at 1485.

[146] North American Free Trade Agreement, Dec. 17, 1992, 32 I.L.M. 289 (1993) [hereinafter NAFTA].

[147] NAAEC, *supra* note 144, arts. 10(7)(a)-(c), at 1486-87.

[148] *Transboundary Environmental Impact Assessment*, Res. No. 97-03, NAFTA Environment Commission, CEC Doc. No. C/97-00/RES/01/Rev.3

In particular, the environment ministers of Canada, Mexico, and the United States committed to developing a Transboundary Environmental Impact Assessment Agreement (TEIAA).[149] However, this process has stalled, and TEIAA remains in draft form.[150]

There are a number of reasons why TEIAA remains in draft form.[151] The original mandate for negotiations set forth in NAAEC contemplated that the agreement would apply only to "proposed projects subject to decisions by a competent government authority," yet did not specify the level of governmental involvement required.[152] John Knox has observed that the draft TEIAA appendix lists projects in a manner reflecting Mexican law governing EIA, which, like European EIA laws, requires EIA for listed categories of projects, whether private or public.[153] The national EIA laws of both Canada and the United States, on the other hand, apply only to proposed actions of the

(1997), http://www.cec.org/files/pdf/council/res97-03e.pdf; *1997 Regular Session of Council*, NAFTA Environment Commission, 4th Sess., Agenda Item 5.3, at 3, CEC Doc. No. C/97-00/SR/01/Rev.2 (1997), http://www.cec.org/files/pdf/council/97-00e_en.pdf. *See also* CEC, ANNUAL PROGRAM AND BUDGET 1998, Annex 1, at 93 (1998), http://www.cec.org/files/pdf/publications/budget98_en.pdf.

[149] *Transboundary Environmental Impact Assessment*, *supra* note 148, at 3. *See also* CEC, FINAL COMMUNIQUÉ of the NAFTA Environment Commission's 4th Annual Session (June 13, 1997), http://www.cec.org/files/pdf/council/97-00fin_en.pdf.

[150] "The [TEIAA] negotiations were not completed by April 15, 1998, as expected, because of the as yet unresolved issues relating to the applicability of the TEIA Agreement to non-federal governments." Ignacia S. Moreno et al., *Free Trade and the Environment: The NAFTA, the NAAEC, and Implications for the Future*, 12 TUL. ENVTL. L.J. 405, 430 n.142 (1999). Although little progress has been made in recent years, CEC continues to recognize the commitment made by the three member states to develop an agreement on TEIA, pursuant to article 10(7) of the NAAEC. *See, e.g.*, CEC, NORTH AMERICAN AGENDA FOR ACTION: 2001-2003, at 111, http://www.cec.org/files/pdf/publications/Pp01-03_en.pdf.

[151] *See* Draft North American Agreement on Transboundary Environmental Impact Assessment (1997) [hereinafter Draft TEIAA], *at* http://www.cec.org/pubs_info_resources/Law_treat_agree/pbl.cfm?varlang=english (last visited Dec. 4, 2003).

[152] NAAEC, *supra* note 144, art. 10(7)(a), at 1486.

[153] Knox, *supra* note 29, at 306. *See also* Ley General del Equilibrio Ecologico y la Proteccion al Ambiente [General Law of Ecological Equilibrium and Environmental Protection], art. 28, D.O.F., Dec. 13, 1996 (Mex.) [hereinafter LGEEPA], http://www.paot.org.mx/informe/informe/anexos/pdf/lgeepa.pdf.

federal government.[154]

A deadlock between the governments of Mexico and the United States has resulted on this issue. For example, a recent proposal by the State of Texas to build a low-level radioactive waste disposal facility in Sierra Blanca was particularly controversial.[155] As a state-sponsored project, the proposed waste facility would not require an EIA under NEPA, as there is no federal action, even if it is located near the border with Mexico. Mexico has also argued that since Mexican law requires an EIA for similar waste facilities, with or without federal involvement,[156] there should at least be some kind of reciprocity if a project is likely to affect Mexico. The United States has refused to accept the Mexican position, and while it is theoretically possible to reach consensus on this issue,[157] United States political support for such a consensus is lacking. Mexico has insisted that TEIAA include projects with action taken by U.S. border states, representing a crossing over from federal to state jurisdiction—an extension that the United States is unwilling to accept.[158] This disagreement has delayed agreement regarding the scope of TEIAA.

If finalized, TEIAA would establish a formal process of early notification and provide the government and citizens in each country with an opportunity to participate in EIA processes for proposed projects that may affect them. However, as TEIAA remains in draft form and is incomplete, with many of the provisions yet to be elaborated, it is difficult to comment with any certainty on the exact extent and scope of TEIAA,[159] though the provisions on public participation and notification are the most developed.[160]

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[154] *See* 42 U.S.C. § 4332(C) (2000); Canadian Environmental Assessment Act, ch. 37, § 5(1), 1995 S.C. 617 (1992) (Can.). For a comparative overview of the three EIA laws, see CEC, NORTH AMERICAN ENVIRONMENTAL LAW & POLICY 3 (1999), http://www.cec.org/files/pdf/LAWPOLICY/Vol-3e_EN.pdf.

[155] *See* Knox, *supra* note 29, at 306-07.

[156] LGEEPA, *supra* note 153, art. 28(IV) (requiring an EIA for hazardous waste facilities).

[157] *See* Knox, *supra* note 29, at 307 n.104 ("It is questionable whether the federal government could constitutionally require state governments to carry out such EIAs . . . but an international agreement could provide a constitutional basis for legislation enabling the federal government itself to conduct the EIAs.").

[158] *Id*. at 306-07.

[159] *E.g.*, Draft TEIAA, *supra* note 151, arts. 14, 16-20.

[160] *Id.* pmbl., arts. 2-8, 12.

CEC has a general role in implementing TEIA in a North American context. The tri-national body provides a mechanism for investigating allegations of non-enforcement of national environmental laws and for monitoring the potentially adverse impacts of NAFTA. CEC has emerged as a useful barometer of environmental trends in the region[161] and an important facilitator of tri-national solutions that advance regional sustainable development. CEC's role in working on the draft TEIAA has been central; if the draft TEIAA is adopted, it will represent a milestone for CEC.[162]

One aspect of TEIAA which is perhaps not entirely in line with the emerging principles of TEIA is how it addresses language differences and the implications of language barriers to accessibility to information and public participation. For example, Article 6(1) of the draft TEIAA states that: "[n]otifications and other communications pursuant to this Agreement shall be sent in at least one of the official language(s) of the Party of Origin."[163] However, considering that the three significant languages in the region—French, Spanish, and English—are all found along the border regions, requiring communications and notifications to be in only one language could limit the effectiveness of TEIAs in alerting potentially affected populations about proposed actions or enabling them to participate effectively. The failure to adequately translate the necessary information can prove problematic for projects along both the United States-Mexico border and the United States-Quebec border.[164]

Other agreements in North America have developed guiding principles on TEIA. For instance, the Agreement Between the United States and Mexico on Cooperation for the Protection and Improvement of the Environment in the Border Area, also known as the La Paz Agreement, requires an EIA when a project may cause transboundary impacts.[165] There are also initiatives

[161] *See, e.g.*, CEC, TAKING STOCK 2000: NORTH AMERICAN POLLUTANT RELEASES AND TRANSFERS (2003), http://www.cec.org/files/pdf/pollutants/TS00_Sourcebook_en.pdf.

[162] Stephen P. Mumme, *NAFTA and Environment*, FOREIGN POL'Y IN FOCUS, Oct. 1999, at 1, http://www.fpif.org/pdf/vol4/26ifnaft.pdf.

[163] Draft TEIAA, *supra* note 151, art. 6(1).

[164] Article 6(2) does encourage translation into a language other than that of the source State "where practicable." *Id*. art. 6(2).

[165] Agreement Between the United States of America and the United Mexican

underway to improve EIA processes along the United States-Mexico border through the Border XXI Program—a range of national and bi-national initiatives aimed at environmental improvements.[166] IJC also has extensive practical experience that informs the development of TEIA in North America, as well as more broadly.[167]

a. Domestic Law—The National Environmental Policy Act (United States)

North American TEIA treaties rely heavily upon U.S. domestic environmental law, which, as noted above, also serves as the basis for most EIA regimes around the world. Therefore, understanding U.S. domestic environmental law is necessary to understanding North American TEIA treaties. In principle, the provisions of NEPA are to be applied to federal agency actions with significant extraterritorial impacts.[168] However, in practice, there have been various limitations to the actual implementation of this principle.

As noted above, the United States follows a two-phase approach to EIA.[169] The first phase involves an EA to determine whether there are potentially significant environmental impacts or whether a proposed federal action falls within certain categories whose effects are presumed to be potentially significant.[170] If such impacts potentially exist or are imputed, an EIS, the equivalent of an EIA, must be prepared.[171] If not, the EA results in a finding of no significant impact (FONSI), and the project may proceed.[172]

The scoping process begins with a publication of a *Federal*

States on Cooperation for the Protection and Improvement of the Environment in the Border Area, Aug. 14, 1983, U.S.-Mex., art. 7, 35 U.S.T. 2916, 2919, 22 I.L.M. 1025, 1027-28 [hereinafter La Paz Agreement].

[166] Mumme, *supra* note 162, at 2-3.

[167] *See infra* Part II.B.2.b.

[168] *See* 42 U.S.C. § 4332(2)(F) (2000); *see also* Exec. Order No. 12,114, 3 C.F.R. 356 (1979), *reprinted as a note in* 42 U.S.C.A. § 4321 (West 2003); Lilias C. Jones et al., *Assessing Transboundary Environmental Impacts on the U.S.-Mexican and U.S.-Canadian Borders*, 12 J. BORDERLANDS STUD. 73 (1997).

[169] *See supra* notes 13-14 and accompanying text.

[170] 40 C.F.R. §§ 1501.3, 1508.4, 1508.9 (2002).

[171] 40 C.F.R. § 1501.4; *see also* 42 U.S.C. § 4332(2)(C).

[172] 40 C.F.R. §§ 1501.4, 1508.13. *See also* Albert I. Herson, *Project Mitigation Revisited: Most Courts Approve Findings of No Significant Impact Justified by Mitigation*, 13 ECOLOGY L.Q. 51, 51-54 (1986).

Register notice.[173] A preliminary meeting is held, and procedural guidelines are set for preparing the draft EIS.[174] A draft EIS is then prepared and distributed to state, local, and federal officials, organizations, and the general public for comments.[175] Anyone who requests a copy of the draft or final EIS is to be sent one and given reasonable time to prepare comments.[176] In preparing the final EIS, the agency must take due account of the comments it received.[177] The process of approving a final EIS can take two years.[178]

As a practical matter, the United States approach to TEIA is not settled. In instances with potential transboundary impacts, commentators have observed that there is a lack of coordination between U.S. agencies and regional bodies established to address transboundary issues, such as IJC and the Border Environment Cooperation Commission (BECC).[179] Political will and commitment is an important facilitator, or hindrance, to the successful implementation of a TEIA regime. The All-American Canal lining project between the United States and Mexico, detailed below, has been described as a "victim of wider Colorado River water politics that include Nevada and Arizona."[180]

In summary, the NEPA process focuses on the United States' interests, and is limited in its capacity to apply extraterritorially.[181]

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[173] 40 C.F.R. § 1507.3.

[174] *Id.*; *see also* 40 C.F.R. §§ 1502.4, 1508.18.

[175] 40 C.F.R. §§ 1502.9, 1503.1-.4.

[176] *Id.* § 1502.19(c).

[177] *Id.* § 1503.4(a).

[178] *See* Jones et al., *supra* note 168, at 75.

[179] *Id.* at 80.

[180] *Id.* at 81. *See also infra* Part III.B.2.

[181] *See* Envtl. Def. Fund v. Massey, 986 F.2d 528, 536 (D.C. Cir. 1993) (holding that presumption against extraterritoriality does not apply when state action would affect "an area over which the United States has substantial interest and authority . . . "); Born Free USA v. Norton, Civil Action No. 03-1497 (JDB), 2003 U.S. Dist. LEXIS 13770, at *36-39 (D.D.C. Aug. 8, 2003) ("The law concerning extraterritorial application of NEPA is unsettled."); NEPA Coalition of Japan v. Aspin, 837 F. Supp. 466, 468 (D.D.C. 1993) (holding that NEPA does not require an assessment of the environmental impacts of U.S. military installations in Japan); Greenpeace USA v. Stone, 748 F. Supp. 749 (D. Haw. 1990) (holding that NEPA does not apply to transportation of chemical weapons by the United States Army from Germany to the South Pacific). In contrast, some courts have explicitly or implicitly assumed that NEPA applies. *See, e.g.*, Swinomish Tribal Cmty. v. Fed. Energy Regulatory Comm'n, 627 F.2d 499 (D.C. Cir. 1980) (effects in Canada of raising the High Ross Dam in Washington

The Act "does not expressly mention transboundary EIA, and whether it should apply extraterritorially has been the subject of lengthy, inconclusive debate by scholars, courts, and federal agencies."[182] President Carter issued an Executive Order in 1979 that considered the issue of NEPA's application extraterritorially for specific actions.[183] The Executive Order, however, has been criticized as inconclusive, unclear, and limited in scope.[184] In 1997, CEQ issued guidance on the extraterritorial application of the CEQ regulations on EIA.[185] The 1997 guidance provides that whenever federal agencies prepare an EA for a proposed action in the United States, those agencies must analyze the action's reasonably foreseeable transboundary effects.[186] Yet the legal effect of this guidance is questionable, as it did not receive the concurrence of the Departments of State and Defense, which maintain that CEQ lacks authority to decide unilaterally whether NEPA applies extraterritorially.[187]

b. *International Joint Commission (United States–Canada)*

IJC is a bilateral institution established by the United States and Canada under the Treaty Relating to Boundary Waters of 1909 (Boundary Waters Treaty).[188] Nearly a century old, this institution has a wealth of experience in managing transboundary waters. Close inspection reveals that IJC has pursued TEIA, albeit through

State); Sierra Club v. Adams, 578 F.2d 389 (D.C. Cir. 1978) (construction of highway in Panama); Nat'l Org. for Reform of Marijuana Laws v. United States Dep't of State, 452 F. Supp. 1226 (D.D.C. 1978) (herbicide spraying of marijuana and poppy plants in Mexico); Wilderness Soc'y v. Morton, 463 F.2d 1261 (D.C. Cir. 1972) (impacts of Alaskan oil pipeline in Canada). *See also* Knox, *supra* note 29, at 298-99 n.50.

[182] Knox, *supra* note 29, at 298.

[183] Exec. Order No. 12,114, 3 C.F.R. 356 (1979) (requiring assessment of transboundary impacts of certain types of actions with extraterritorial effects).

[184] *See* Karen A. Klick, Note, *The Extraterritorial Reach of NEPA's EIS Requirement After* Environmental Defense Fund v. Massey, 44 AM. U. L. REV. 291, 301-03 (1994).

[185] CEQ, *supra* note 74.

[186] *Id*.

[187] *See* Karen V. Fair, *Environmental Compliance in Contingency Operations: In Search of a Standard?*, 157 MIL. L. REV. 112, 146 n.136 (1998); Knox, *supra* note 29, at 298-99 n.50.

[188] Treaty Relating to Boundary Waters Between the United States and Canada, Jan. 11, 1909, U.S.-Gr. Brit., 36 Stat. 2448 [hereinafter Boundary Waters Treaty]; *see also* ELI, AN EVALUATION OF THE EFFECTIVENESS OF THE INTERNATIONAL JOINT COMMISSION (1995).

an informal process and without explicitly terming such actions TEIA.

IJC utilizes applications which may be considered an informal TEIA process. Article VIII of the Boundary Waters Treaty requires the Parties or members of the affected public to submit applications to IJC, which the IJC approves or denies, for permission of intended "uses, obstructions, and diversions . . . affecting the natural level or flow of boundary waters on the other side" of the United States-Canada border and prohibits the pollution of water on one side of the border that would lead "to the injury of health or property on the other."[189] The process of application is straightforward and closely resembles a TEIA procedure. A proponent submits an application for approval first to their relevant government authority. The government assesses the need for IJC approval under Articles III and IV of the Boundary Waters Treaty. If deemed necessary, the application is submitted to IJC, which creates a Board of Control for the geographic region involved or refers the application to an existing Board of Control.[190] The Board may then inform the applicant and advise IJC as it deems necessary. The process for dealing with failure to meet conditions of approval or other problems is informal, and there is open, on-going communication among the applicants, Boards of Control, and IJC.[191]

IJC then reviews the application, publishes notice of the proposal in both the *Canada Gazette* and the United States *Federal Register*, as well as in a newspaper of each country once a week for three weeks to enable people to comment on the proposed action.[192] Public hearings are held in which all interested persons and governments are entitled to be heard.[193] Following this process, IJC can recommend an application, and if it is approved, issues an order of approval, which may include conditions for a project's operation.[194]

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[189] Boundary Waters Treaty, *supra* note 188, arts. III, VIII, at 2449-50. For more in-depth discussion on this process, see ELI, *supra* note 188, at 19-20.

[190] Boundary Waters Treaty, *supra* note 188, arts. III-IV, at 2449.

[191] ELI, *supra* note 188, at 20.

[192] IJC, R. PROC. OF THE INT'L JOINT COMM'N pt. II, para. 15(2), *at* http://www.ijc.org/rel/agree/water.html.

[193] *Id*.

[194] *E.g.*, *id*. pt. III, para. 16(1); Boundary Waters Treaty, *supra* note 188, art. VIII, at 2450.

The process of handling applications is informal, and the process outlined may be modified as deemed appropriate. For example, IJC may, after consultation with the Board of Control and/or the applicant, decide whether or not to hold a public hearing.[195] Through informal mechanisms such as the approval process developed by IJC, Canada and the United States have a framework in place that resembles TEIA. Operated in good faith, this system has been mutually beneficial for both countries.[196]

For example, IJC played an important role in resolving the High Ross Dam Controversy—a controversy centered around a proposal to raise the height of the Ross Dam (in Washington State), the result of which would flood land in the Canadian province of British Columbia.[197] Affected Canadians complained, among other things, that the compensation being offered was inadequate.[198] In 1971, a joint reference by the parties asked IJC to examine the environmental consequences of the flooding, and in 1980, British Columbia submitted an application to IJC requesting it to rescind its 1942 order approving the higher dam.[199] IJC denied the application, but in 1982 ordered Seattle to postpone raising the dam for one year.[200] The two nations ultimately agreed that British Columbia would be compensated for what the project would have cost in exchange for British Columbia agreeing to provide Seattle with the electricity the higher dam would have generated.[201] This led to a treaty between the United States and Canada relating to the Skagit River, Ross Lake, and the Seven Mile Reservoir on the Pend D'Oreille River.[202]

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[195] ELI, *supra* note 188, at 20.

[196] *See* Richard Paisley, *Adversaries Into Partners: International Water Law and the Equitable Sharing of Downstream Benefits*, 3 MELBOURNE J. INT'L L. 280, 284-88 (2002), http://www.law.unimelb.edu.au/mjil/issues/archive/2002(2)/03paisley.pdf.

[197] *See generally* Paul Marshall Parker, Note, *High Ross Dam: The International Joint Commission Takes a Hard Look at the Environmental Consequences of Hydroelectric Power Generation—The 1982 Supplementary Order*, 58 WASH. L. REV. 445 (1983).

[198] *Id*. at 453.

[199] *Id*.

[200] ELI, *supra* note 188, at 91.

[201] Parker, *supra* note 197, at 455-57.

[202] Treaty Relating to the Skagit River and Ross Lake, and the Seven Mile Reservoir on the Pend d'Orielle River, Apr. 2, 1984, U.S.-Can., T.I.A.S. No. 11,088; *see also* ELI, *supra* note 188, at 92.

c. *Border Environment Cooperation Commission (United States–Mexico)*

There is no similar history of open, equal participation between the United States and Mexico on management of transboundary watercourses. Like IJC, BECC does require an EA in order to certify projects in the United States-Mexico border region.[203] Historically, though, the United States has asserted absolute territorial sovereignty over the Rio Grande.[204]

Projects located within 100 km (sixty-two miles) on either side of the United States-Mexico border may be considered for certification by BECC.[205] BECC has established a technical assistance program for aiding border communities that lack sufficient resources to undertake activities necessary for project certification, including EAs.[206] If a project requires an EIA according to the domestic law of the place where the project will be located or executed, the EIA that was submitted to the appropriate domestic authority also must be submitted to BECC.[207] Otherwise, for projects that do not require an EIA under the relevant domestic law, the EA required by BECC must, at a minimum, contain the following components:

- Discussion of direct, indirect, cumulative, and short and long-term positive and negative effects of the project on the environmental components of the affected area (e.g. ecosystem integrity, biological diversity, sensitive environmental habitats, and human health).
- Description of unavoidable negative impacts and actions to be taken to mitigate these impacts.
- Discussion of the environmental benefits, risks, and costs of the proposed project as well as the environmental standards and objectives of the affected area.[208]

[203] *See* BECC, PROJECT CERTIFICATION CRITERIA 14 (1996), http://www.cocef.org/criterios/criten96.doc. BECC certification is necessary for projects seeking financing from the North American Development Bank. BECC also assists local communities and other sponsors in developing and implementing environmental infrastructure projects. *Id*. at 1.

[204] *See* Stephen C. McCaffrey, *The Harmon Doctrine One Hundred Years Later: Buried Not Praised*, 36 NAT. RESOURCES J. 725 (1996).

[205] BECC, *supra* note 203, at 2.

[206] *Id*. at 4-5.

[207] *Id*. at 14.

[208] *Id*. at 15.

The purpose of BECC is not to serve as a regulatory body but rather more as a facilitating body. BECC conducts its certification process as a "binational team," with an overall mission to improve quality of life in the United States-Mexico border region through an open public process.[209]

3. *Africa*

On November 30, 1999, Kenya, Uganda, and Tanzania signed the East African Treaty establishing the East African Community (EAC).[210] This Treaty includes a number of provisions relating to both watercourse management and EIA. Chapter 19 of the Treaty, "Cooperation in Environment and Natural Resources Management," endorses both timely notification[211] and harmonization of laws,[212] with a strong focus on the importance of cooperation in the management of water resources shared by the three countries.[213]

In anticipation of the pending East African Treaty, the three East African nations concluded a Memorandum of Understanding (MOU) on Environment Management in late 1998.[214] The MOU provides for public involvement in environmental decision-making and harmonization of environmental laws among the EAC

[209] *See* BECC, BECC Mission, *at* http://www.cocef.org/antecedentes/MisionCOCEFing.htm (last visited Dec. 4, 2003).

[210] Treaty for the Establishment of the East African Community, Nov. 30, 1999, 7 AFR. Y.B. INT'L L. 421 (entered into force July 7, 2000) [hereinafter EAC Treaty], http://www.eachq.org/Treaty/EACtreaty.pdf. For more detailed discussion of TEIA in Africa, see Carl Bruch, *African Environmental Governance: Opportunities at the Regional, Subregional and National Levels*, *in* INTERNATIONAL ENVIRONMENTAL LAW AND POLICY IN AFRICA 217 (Beatrice Chaytor & Kevin R. Gray eds., 2003); George Michael Sikoyo, *Public Participation in the Development of Guidelines for Regional Environmental Impact Assessment (EIA) of Transboundary Aquatic Ecosystems of East Africa*, *in* PUBLIC PARTICIPATION AND GOVERNANCE IN INTERNATIONAL WATERSHED MANAGEMENT (Carl Bruch et al. eds., forthcoming 2004).

[211] EAC Treaty, *supra* note 210, art. 111(1)(d), at 485 (States "shall provide prior and timely notification and relevant information to each other on natural and human activities that may or are likely to have significant trans-boundary environmental impacts and shall consult with each other at an early stage.").

[212] *Id*. art. 112(2)(j), at 487.

[213] *See id*. art. 114(2)(b), at 488.

[214] Memorandum of Understanding Between the Republic of Kenya and the United Republic of Tanzania and the Republic of Uganda for Cooperation on Environment Management, Oct. 22, 1998 (on file with the *New York University Environmental Law Journal*) [hereinafter East African MOU].

States.[215] The MOU endorses TEIA in international water management through explicit promotion of EIA and harmonization of EIA laws[216] in conjunction with managing shared water resources, such as Lake Victoria,[217] and non-discrimination provisions.[218]

The African Centre for Technology Studies (ACTS) and other organizations are seeking to implement the various TEIA provisions in the East African Treaty and MOU by facilitating the development of EIA guidelines for shared ecosystems in Africa.[219] With support from the United States Agency for International Development, ACTS is supporting EAC's efforts to develop guidelines for regional EIA of shared ecosystems of East Africa. While addressing environmental issues broadly, the guidelines have been developed bearing in mind the crucial role that Lake Victoria and other shared waters play in EAC. The guidelines seek to promote multi-stakeholder involvement in projects, and a broad range of sectors and interests have contributed to the development of guidelines for regional EIAs of shared ecosystems of East Africa.[220] The guidelines are expected to be finalized in the near future and pilot tested.

Following the establishment of the Southern African Development Community in 1992,[221] the East African Community developed a Protocol on Shared Watercourse systems as its first sectoral protocol.[222] While this Protocol was revised in 2002, the TEIA requirements remain unchanged. In pertinent part, the Protocol requires that

> [b]efore a State Party implements or permits the implementation of planned measures which may have a significant adverse effect upon other Watercourse States, it

[215] *Id*. arts. 3(1), 6, 8, 15, 16(2)(d), at 3, 5, 7, 12, 13.

[216] *Id*. art. 14, at 11-12 (development and harmonization of EIA).

[217] *Id*. art. 7, at 6-7 (development and harmonization of environmental laws, regulations, and guidelines, including EIA processes and procedures and management of Lake Victoria and other shared natural resources).

[218] *Id*. art. 16(2)(d), at 13.

[219] *See* Sikoyo, *supra* note 210 (manuscript at 2, on file with authors).

[220] *Id*. (manuscript at 2-3, on file with authors).

[221] Treaty of the Southern African Development Community, Aug. 17, 1992, 32 I.L.M. 116 (1993).

[222] Revised Protocol on Shared Watercourses in the Southern African Development Community (SADC), Aug. 7, 2000, 40 I.L.M. 321 (2001) [hereinafter SADC Protocol].

> shall provide those States with timely notification thereof. Such notification shall be accompanied by available technical data and information, including the results of any environmental impact assessment, in order to enable the notified States to evaluate the possible effects of the planned measures.[223]

Most recently, the African Union Assembly adopted a revised African Convention on the Conservation of Nature and Natural Resources which updated the thirty-five year old convention to include more provisions for public participation and also for water management.[224] Article VII directs Parties to establish and implement policies for the planning, conservation, management, utilization, and development of water resources, and directs States to give due regard to water cycles and catchment areas and the integrated management of water resources.[225] The Convention obliges Parties to ensure that EIAs are conducted at the earliest possible stage.[226] It also includes a number of new provisions seeking to promote broader access to information and public participation.[227]

4. *Asia*

The Mekong River basin is one of the most critical transboundary river basins in Asia due to the number of communities that depend on it and because it has ecologically significant reaches that are not completely developed, unlike many rivers in Asia.[228] The Mekong River Commission (MRC) has started to consider ways to promote EIA. This includes both

[223] *Id*. art. 4(1)(b), at 325.

[224] African Convention on the Conservation of Nature and Natural Resources (Revised Version), *opened for signature* July 11, 2003, [hereinafter Algiers Convention], *at* http://www.africa-union.org/Official_documents/Treaties_%20Conventions_%20Protocols/nature%20and%20natural%20recesource.pdf.

[225] *Id*. art. VII(2), at 5-6.

[226] *Id*. art. XIV, at 10-11. In particular, Article XIV(2)(b) requires parties to "ensure that policies, plans, programmes, strategies, projects and activities likely to affect natural resources, ecosystems and the environment in general are the subject of adequate impact assessment at the earliest possible stage and that regular environmental monitoring and audit are conducted." *Id*. art. XIV(2)(b), at 11.

[227] *Id*. art. XVI, at 12.

[228] *See* Tun Myint, *Democracy in Global Environmental Governance: Issues, Interests, and Actors in the Mekong and the Rhine*, 10 IND. J. GLOBAL. LEGAL STUD. 287, 297-98 (2003).

domestic EIA within individual States and also TEIA in river management. MRC consists of four member States of Cambodia, Lao People's Democratic Republic (Lao PDR), Thailand, and Vietnam; the People's Republic of China (PRC) is not a member of the MRC, despite occupying the upper reaches of the Mekong River Basin. MRC has "commissioned consultants to work with the National Mekong Committees to develop guidelines and suggest potential procedures and protocols" that the four member States may adopt to incorporate transboundary impacts into their environmental impact procedures.[229]

While no specific agreement on this issue has been reached as of this writing, the riparian nations do have some experience in dealing with EIA and TEIA in the context of the Mekong River. For example, the 1995 Agreement on the Sustainable Development of the Mekong River Basin[230] between Cambodia, Lao PDR, Thailand, and Vietnam requires the riparian nations to provide timely notification and consultation prior to implementing any projects using the river.[231] While not directly referencing TEIA or EIA, the substantive requirements are similar, including the obligation to evaluate and discuss the potential impacts of a proposed use of the river.[232] The impacts to be considered include those affecting water users as well as any other impacts.[233]

Cambodia, Lao PDR, Thailand, and Vietnam already have EIA procedures and legislation in place which apply throughout their respective countries.[234] However, none of the domestic laws explicitly address transboundary impacts. There are several issues that need to be addressed on a regional basis, and the formal acknowledgement of these issues is encouraging. Some of the issues related to the Mekong River basin that need to be addressed on a regional basis include: 1) how to establish mechanisms that allow environmental impact investigations to be carried out across national borders; 2) how the pre-project investigations should

[229] MRC, ANNUAL REPORT 2001, at 10 (2002), http://www.mrcmekong.org/pdf/annual_report_2001.pdf.

[230] Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin, Apr. 5, 1995, 34 I.L.M. 864.

[231] *Id*. art. 5, at 869.

[232] *Id*. arts. 5, 7, at 869, 870.

[233] *Id*. art. 8, at 870.

[234] *See* Ben Boer, *The Rise of Environmental Law in the ASEAN Region*, 32 U. RICH. L. REV. 1503, 1522 (1999).

proceed; 3) the legitimacy of applying the laws of neighboring countries to another State; and 4) whether investigations should be carried out by agencies in both (or all) countries.[235]

In addition to MRC's efforts to promote TEIA and EIA along the river, there are a few efforts to promote public participation in the region more broadly. These include a proposed regional framework for ensuring transparency, public participation, and accountability,[236] as well as efforts by an NGO coalition.[237] These broader initiatives promoting EIA, as well as transparency and public participation more generally, stand to inform and reinforce the efforts that MRC is currently pursuing.

C. *International Financial Institutions*

In addition to formal arrangements between States, the practices of international financial institutions offer specific and practical guidance in the administration and implementation of TEIA procedures.

1. *The World Bank*

Since 1984 the World Bank has required an environmental assessment (EA) for all "relevant" projects,[238] including those with transboundary impacts.[239] In 1989, EAs became formal requirements under Operational Directives 4.00 and 4.01,[240]

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[235] *See* MRC, ANNUAL REPORT 2002, at 16 (2002), http://www.mrcmekong.org/pdf/annual_report_2002.zip.

[236] *See* Somrudee Nicro et al., Thail. Envtl. Inst., *Public Involvement in Environmental Issues: Legislation, Initiative and Practice in Asian Members of ASEM Countries*, *in* PUBLIC INVOLVEMENT IN ENVIRONMENTAL ISSUES IN THE ASEM—BACKGROUND AND OVERVIEW 37-40 (2002), http://www.vyh.fi/eng/intcoop/regional/asian/asem/asem.pdf; *see also* Mikael Hildén & Eeva Furman, *Towards Good Practices for Public Participation in the Asia-Europe Meeting Process*, *in* THE NEW "PUBLIC", *supra* note 103, at 137, 142-43.

[237] *See, e.g.*, The Access Initiative, *at* http://www.accessinitiative.org (last visited Dec. 4, 2003).

[238] *See* Gray, *supra* note 8, at 107; *see also* CHRISTOPHER J. BARROW, ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT: AN INTRODUCTION 203-04 (1997); Nathalie Bernasconi-Osterwalder & David Hunter, *Democratizing Multilateral Development Banks*, *in* THE NEW "PUBLIC", *supra* note 103, at 151, 157-58.

[239] EA is a term coined by the World Bank and has slightly different connotations to the "EA" as referred to in NEPA. EA in the context of the World Bank OD is characteristically the same as an EIA pursuant to NEPA.

[240] ENV'T DEP'T, WORLD BANK, ENVTL. ASSESSMENT SOURCEBOOK UPDATE NO. 1, THE WORLD BANK AND ENVIRONMENTAL ASSESSMENT: AN OVERVIEW 2

replaced by Operational Policy 4.01 in 1999, for all World Bank operations expected to have "significant adverse environmental impacts that are sensitive, diverse, or unprecedented."[241] EAs are initiated "at the project design stage so that environmental impacts are factored in throughout the planning process."[242] There are four categories of projects requiring an EA by the Operational Policy, based upon the "type, location, sensitivity, and scale of the project and the nature and magnitude of its potential environmental impacts."[243] The categories are:

> *Category A*: A proposed project is classified as Category A if it is likely to have significant adverse environmental impacts that are sensitive, diverse, or unprecedented. . . . [A]n EA for a Category A project examines the project's potential negative and positive environmental impacts, compares them with those of feasible alternatives (including the "without project" situation), and recommends any measures needed to prevent, minimize, mitigate, or compensate for adverse impacts and improve environmental performance.[244]
>
> *Category B*: A proposed project is classified as Category B if its potential adverse environmental impacts on human populations or environmentally important areas . . . are less adverse than those of Category A projects. These impacts are site-specific; few if any of them are irreversible; and in most cases mitigatory measures can be designed more readily than for Category A projects. The scope of EA for a Category B project may vary from project to project, but it is narrower than that of Category A EA. Like Category A EA, it examines the project's potential negative and positive environmental impacts and recommends any measures needed to prevent, minimize, mitigate, or compensate for adverse impacts and improve environmental performance.[245]
>
> *Category C*: A proposed project is classified as Category C if it is likely to have minimal or no adverse environmental impacts. Beyond screening, no further EA action is required for a Category C project.[246]

(1993), http://www.worldbank.org.

[241] WORLD BANK OP 4.01, *supra* note 21, para. 8(a).

[242] Gray, *supra* note 8, at 107-08.

[243] WORLD BANK OP 4.01, *supra* note 21, para. 8.

[244] *Id*. para. 8(a).

[245] *Id*. para. 8(b).

[246] *Id*. para. 8(c).

> *Category FI*: A proposed project is classified as Category FI if it involves investment of Bank funds through a financial intermediary, in subprojects that may result in adverse environmental impacts.[247]

The scope of an EA in the World Bank's Operational Policy is broad, addressing both domestic and transboundary effects.[248] In practice, TEIA has arisen in a number of cases, some of which are examined specifically below.

2. *Regional Development Banks*

A number of regional development banks have also established guidelines for implementing EIA in their respective regions,[249] although the extent to which these regional EIA guidelines address transboundary matters varies. For example, the Asian Development Bank has established guidelines for implementing EIA in Asia, but these do not generally consider TEIA in-depth.[250]

By contrast, the European Bank for Reconstruction and Development (EBRD) has a structured mandate to implement TEIA guidelines already in place by virtue of the Espoo Convention. EBRD policy notes that "[the] ERBD will, within the framework of its mandate, support through investments the implementation of . . . relevant global and regional agreements on environment and sustainable development, including . . . the Convention on Environmental Impact Assessment in a Transboundary Context, and the Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters."[251]

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[247] *Id*. para. 8(d).

[248] *Id*. para. 3 (stating that an EA should address "the natural environment (air, water and land); human health and safety; social aspects (involuntary resettlement, indigenous peoples and cultural property); and transboundary and global environmental aspects").

[249] *See generally* Bernasconi-Osterwalder & Hunter, *supra* note 238.

[250] *See generally* 1 BINDU N. LAHONI ET AL., ASIAN DEV. BANK, ENVIRONMENTAL IMPACT ASSESSMENT FOR DEVELOPING COUNTRIES IN ASIA (1997), http://www.adb.org/documents/books/environment_impact; ASIAN DEV. BANK, ENVIRONMENTAL ASSESSMENT GUIDELINES (2003), http://www.adb.org/Documents/Guidelines/Environmental_Assessment/Environmental_Assessment_Guidelines.pdf.

[251] EUROPEAN BANK FOR RECONSTRUCTION & DEV., ENVIRONMENTAL POLICY para. 42, at 13-14 (2003), http://www.ebrd.com/about/policies/enviro/policy/policy.pdf. *See also* EUROPEAN BANK FOR RECONSTRUCTION & DEV., EBRD

In pursuing its policies, EBRD has engaged in an active dialogue with the Secretariat of the Espoo Convention, and EBRD staff has participated in a number of Espoo Convention workshops and meetings.[252]

III
TEIA IN PRACTICE

There is growing consensus that when a proposed project could have environmental effects on another nation, a TEIA is necessary. As highlighted in the previous section, there is a degree of variability in the specificity of the requirements for TEIAs. Practical experience with TEIAs reveals significant variability in approaches and limited practical experience. Although the available examples are scant, there are some common elements of the TEIA process. These commonalities tend to be broad and thematic, with variation by geographic, political, or environmental context.

A. *Common Elements*

Several elements of TEIA echo the generalized EIA process outlined in Figure 1 above.[253] However, unique transboundary aspects such as state sovereignty, varying legal standards, and environmental priorities complicate implementation of EIA in an international setting.

1. *Who Prepares a TEIA*

Which Party is responsible for preparing a TEIA may depend on the proposed project. Standard procedure is for the proponent (usually a private person or company) from the source State to prepare a TEIA in accordance with relevant TEIA guidelines.[254] This is not, however, universal. For example, a TEIA may be

ENVIRONMENTAL PROCEDURES (2003), http://www.ebrd.com/about/policies/enviro/procedur/procedur.pdf.

[252] Mehrdad M. Nazari, *The Transboundary EIA Convention in the Context of Private Sector Operations Co-Financed by an International Financial Institution: Two Case Studies from Azerbaijan and Turkmenistan*, 23 ENVTL. IMPACT ASSESSMENT REV. 441, 443 (2003).

[253] *See* text accompanying note 11.

[254] This follows the TEIA procedure recommended for implementation in countries around the world by UNEP. *See* UNEP, *supra* note 11, at 112.

prepared by governments, NGOs, or both.[255] The TEIA may also be prepared through ad hoc intergovernmental arrangements, [256] even when the project proponent is a private company.[257] In other cases, separate domestic EIAs may be pursued, with cross-border issues addressed by intergovernmental technical committees.[258]

2. *Screening*

Screening is the first stage of a TEIA process. Screening involves a formal evaluation of whether a TEIA may be required. In some instances, this stage may appear to blend with the next stage—scoping. Depending on each State's individual practice, the scoping process may be an in-depth analysis or a rudimentary preliminary evaluation.

At the screening stage, consultation is generally required to determine whether to proceed with a TEIA. Who is consulted at this stage can include governmental and agency personnel, NGOs, and the general public. Public participation at this stage varies, as with EIA practice. For example, Canadian law leaves the decision

[255] For example, a TEIA for development around Victoria Falls was prepared by The World Conservation Union (IUCN) under the overall control of a steering group of government officials from Zambia and Zimbabwe. *See infra* notes 320-325 and accompanying text.

[256] Before Belgium and the Netherlands signed a formal agreement on TEIA in 1994, the countries had informal, ad hoc contacts and exchanges of information regarding EIAs for projects along the border. *See, e.g.*, UNECE, *supra* note 126, at 19.

[257] Belgium and the Netherlands agreed on a specific ad hoc approach to a TEIA for the Border Meuse Project. The Meuse River forms the border between the Netherlands and Belgium and is the only gravel river in the Netherlands. A proposal was made by private companies to excavate and sell gravel from the river. This would also improve navigability of the river. Although the project was proposed by private companies, the TEIA was conducted jointly by the two governments in an ad hoc arrangement. The Border Meuse Project commenced in 1990, focusing on ecological development and gravel extraction. After floods in 1993 and 1995, these goals were extended to include flood mitigation. *See, e.g.*, UNECE, *supra* note 126, at 19; *see also* Press Release, Project Organisation De Maaswerken, Summary Border Meuse Project: Green for Gravel, a Fair Swap in the Dutch-Belgian Maas Valley ("[The project is] a fine result of international cooperation and public-private partnership.") (on file with the New York University Environmental Law Journal).

[258] Croatia undertook with Hungary a TEIA for the planned construction of a hydropower plant on the Drava River. As this was a joint investigation, individual EIAs were undertaken according to the national laws of each State and the remaining questions were dealt with through joint expert groups and meetings of relevant governmental authorities. UNECE, *supra* note 126, at 19.

of whether to include public participation in the screening stage to the discretion of the authority responsible for the EIA,[259] while Austria's EIA legislation provides that public participation commences not at the screening stage, but at the scoping stage, continuing throughout the rest of the EIA procedure.[260]

The term "screening" is not specifically mentioned in international TEIA agreements. Nevertheless, screening takes place in two ways. First, screening may entail the use of a list of activities with potentially significant effects. Such a list is often appended to the international agreement on TEIA.[261] The other screening method involves the discretionary application of criteria to determine whether the transboundary impacts are potentially significant and therefore require a TEIA. An evaluation of the effectiveness of the European Directive on EIA found that member States employed a variety of different approaches to screening, including different screening procedures for different project types.[262] This procedural variability highlights the discretionary and diverse approaches to screening in Europe. The diversity of approaches to screening across Europe is not necessarily a problem. As a practical matter, where national laws differ, individual States must negotiate an appropriate harmonization with their neighbors through bilateral agreements. Until the EU undertakes to standardize EIA (or TEIA) procedures to account for (or ignore) the diverse political, economic, and cultural contexts, such a bilateral or subregional process seems the most likely avenue.

Agreements such as the Espoo Convention,[263] the North American draft TEIAA[264], the East African MOU,[265] and others[266] specifically require TEIA to be conducted for activities that are

[259] Canadian Environmental Assessment Act, ch. 37, § 18(3) (1992) (Can.).

[260] UNECE, *supra* note 126, at 13.

[261] *See, e.g.*, Espoo Convention, *supra* note 109, app. I, at 321-22, 30 I.L.M. at 812-13; Draft TEIAA, *supra* note 151, app. I.

[262] EIA DIRECTIVE REPORT, *supra* note 90, at 3.

[263] *See* Espoo Convention, *supra* note 109, art. 2(1), at 312, 30 I.L.M. at 803.

[264] Draft TEIAA, *supra* note 151, arts. 2.1(b), 8.1, 8.4, 9.2.

[265] East African MOU, *supra* note 214, art. 14(1), at 11.

[266] These other agreements include numerous bilateral and multilateral agreements in Europe such as Albania-Macedonia, Belgium-Netherlands, Bulgaria-Greece-Turkey, France-Germany, France-Switzerland, Hungary-Ukraine, United Kingdom-Republic of Ireland, and others. *See* UNECE, *supra* note 126, at 20-21.

likely to have a "significant" impact on the environment. The definition of "significant" in these instruments varies, or is frequently vague or as-yet undetermined.[267] This lack of specificity is further complicated by the particular domestic legislative provisions of the individual States. In broad terms, "significant" may either be evaluated on a case-by-case basis[268] or may involve general pre-determined threshold values.[269] The list of "significant" impacts may vary according not only to national legislation, but also to administrative practices and environmental conditions and priorities.[270]

International instruments and national laws frequently prescribe a specific list of activities that require a TEIA. In some cases, the lists in international instruments have been adapted to suit national circumstances.[271] Practice also can vary. In reviewing practical experiences with TEIA in Europe, UNECE has found that such lists are most effective if there is a balance between strict, well-defined lists of activities and flexibility in applying such a list to adapt them to changing circumstances.[272]

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[267] The Espoo Convention incorporates in Appendix I a "List of activities." Espoo Convetion, *supra* note 109, app. I, at 321-22, 30 I.L.M. at 812-13. In Appendix III, the Convention lists "General criteria to assist in the determination of the environmental significance of activities not listed in Appendix I." *Id*. app. III, at 324, 30 I.L.M. at 814-15. The North American Draft TEIAA lists in Appendix III "Factors for determining significant adverse transboundary impacts." Draft TEIAA, *supra* note 151, app. III.

[268] *See, e.g.*, Estonia–Latvia Agreement, *supra* note 137, art. 5, at 118 (stating that the "Commission shall decide on procedural issues for conducting of transboundary EIA in each case separately").

[269] Pre-determined threshold values are included in the criteria for determining the significance of impacts in Poland, for example. In Poland, projects are deemed "exceptionally harmful to the environment and human health" if they meet the threshold level for emissions of pollutants that are related to the area's environmental sensitivity (e.g., air, water noise, radiation). The United Kingdom similarly gives general guidance via indicative thresholds and criteria for determining whether projects are likely to have a significant environmental impact. *See* UNECE, *supra* note 126, at 6-8.

[270] For example, nuclear considerations are listed by the Russian Federation, but not other European states such as Czech Republic, Finland, or Norway. *See id*. Annex I, at 30-33.

[271] For example, the list of activities listed in Appendix I of the Espoo Convention does not necessarily accord with listed activities in the domestic legislation of signatory States. For a comparison of listed provisions between Austria, Bulgaria, Canada, Croatia, Finland, France, Hungary, the Netherlands, Norway, Poland, the Republic of Moldova, the Russian Federation, Slovakia, Slovenia, Turkey, Ukraine, and the United Kingdom, see *id*. Annex I, at 26-35.

[272] *Id*. at 8.

As such, these lists are often complemented by provisions that allow for the application of TEIA to proposed activities not specifically included in the list, depending on the potential impact.[273]

The distance of a proposed project from the national border is sometimes considered when determining whether a TEIA will be required. Countries have divided over whether a TEIA should apply whenever there are potentially significant impacts to another State, or whether to prescribe a particular distance from the boundary, within which a TEIA is required. For example, the bilateral agreement between Estonia and Latvia requires a TEIA when certain listed activities take place within fifteen kilometers of the shared boundary [274] However, if the site for a planned activity is a considerable distance from the national border, distance alone does not necessarily mean that the activity does not need a TEIA, particularly in dynamic systems such as watercourses in which effects can well reach beyond normally prescribed distances. The UNECE considered this in assessing current policies and strategies for TEIA, stating that it is possible to consider "the existence of transfer mechanisms for the impact, such as transboundary watercourses and international lakes, coastlines or sea areas, prevailing winds and migration of organisms which may provide indications of the likely transboundary impact."[275]

3. *Scoping*

Scoping occurs once there has been a preliminary determination of the need for a TEIA but before the preparation of a draft TEIA. This stage includes a more in-depth assessment of factors that need to be considered in order to commence the TEIA process, a consideration of possible alternatives, and, in certain jurisdictions, public comment or participation.[276]

In Europe, there are a wide variety of approaches to scoping.[277] The European Council Directive, as amended in 1997,

[273] *See generally id*.

[274] Estonia–Latvia Agreement, *supra* note 137, Annex, at 122-123.

[275] UNECE, *supra* note 126, at 50.

[276] *See, e.g.*, 40 C.F.R. § 1501.7 (2002).

[277] Seven EU states have a mandatory scoping procedure. EIA DIRECTIVE REPORT, *supra* note 90, at 52. In France, there is a mandatory scoping procedure for certain types of projects, including industrial, quarrying, and certain agricultural projects. *Id*. Some regions in Italy have mandatory scoping,

introduces formal scoping procedures upon which member States may expand.[278] Recent analysis of European approaches to EIA revealed that in some member States, the consideration of alternatives is a central focus of the scoping stage; however in other States surveyed, the consideration of alternatives appears less complete.[279]

Similarly, consultation and public participation in scoping appears commonplace in many EIA systems, though it is a requirement in a relatively small number of EIA systems. While consultation and public participation at the scoping stage may be required by regulation (e.g., Netherlands, Canada, and Denmark) or recommended and widely practiced, though not required (e.g., the United States), many developing countries do not require or offer opportunities for consultation or public participation at the scoping stage.[280]

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although it is not a national requirement. *Id*.

[278] The Council Directive requires that Member States

> take the necessary measures to ensure that, if the developer so requests before submitting an application for development consent, the competent authority shall give an opinion on the information to be supplied by the developer in accordance with paragraph 1. The competent authority shall consult the developer and authorities referred to in Article 6 (1) before it gives its opinion. The fact that the authority has given an opinion under this paragraph shall not preclude it from subsequently requiring the developer to submit further information. *Member States may require the competent authorities to give such an opinion, irrespective of whether the developer so requests*.

Council Directive 97/11/EC, *supra* note 92, at 6-7 (emphasis added).

[279] EIA DIRECTIVE REPORT, *supra* note 90, at 4.

[280] EIA CENTRE, LEAFLET 10, CONSULTATION AND PUBLIC PARTICIPATION WITHIN EIA (1995) [hereinafter LEAFLET 10], http://www.art.man.ac.uk/EIA/lf10.htm#lf10 (last visited Dec. 4, 2003). The European Commission's Report on the European Directive states:

> [c]onsultation with the public during the scoping process takes place in half of the [EU] Member States. In some cases this is a legally required part of the process (Belgium—Brussels and Walloon regions, Denmark, Finland, Netherlands, Spain, and Sweden). In Austria, Germany, Ireland and the UK relevant environmental authorities or agencies are consulted but it is up to the competent authority to decide whether or not the public should be consulted on the scope. In Finland consultation with the public is based upon the publication of a draft scoping document. The scoping document is a work programme of how the assessment will be carried out and what issues it will deal with. The public have [sic] an opportunity to comment on the scoping document and make suggestions [regarding matters the EIA should examine].

EIA DIRECTIVE REPORT, *supra* note 90, at 51.

Experience with the Columbia River System Operation Review highlights some of the specific considerations that can arise in the TEIA process with respect to public participation, which would not normally present significant challenges in domestic EIA processes. For example, if public participation requirements are not harmonized and the domestic standards of one State are relied upon, it is necessary to consider whether there is an equal opportunity for citizens from both States to participate.

For example, the Columbia River originates in British Columbia and travels south through the States of Washington and Oregon in the United States. The Columbia River System Operation Review was initiated by U.S. governmental agencies, which recognized that multiple uses such as fish and wildlife habitation, recreation, navigation, irrigation, and hydroelectric power increasingly compete for the limited waters of the Columbia River Basin.[281] A draft EIA was prepared in 1994.[282] A review of stakeholders who participated in this process found that participation by private Canadian citizens was scant, and there was "no evidence of Canadian participation in the 14 scoping meetings held in August 1990."[283] Records of six roundtable discussions held in November 1991 did not have any Canadian involvement, and of 400 people attending mid-point meetings in the fall of 1992, only 10 signed with Canadian addresses.[284] Only one Canadian citizen participated in the final nine meetings during the draft EIA comment period in September 1994.[285] Nevertheless, the Columbia River System Operation Review was significant for allowing Canadian participation, however modest, in the process of a U.S. agency-led environmental review process. While this particular example took place a decade ago, and dramatic developments in the norms governing TEIA have since occurred, transboundary public participation nevertheless remains relatively limited in practice, particularly during the scoping stage.

4. *Preparation of a Draft TEIA*

Preparing and publishing a draft TEIA raise several issues,

[281] Jones et al., *supra* note 168, at 82.
[282] *Id*.
[283] *Id*. at 87.
[284] Two of the ten Canadians represented BC Hydro. *Id*. at 87-88.
[285] *Id*.

including how the TEIA is prepared, who is responsible for the notification of relevant parties, where the TEIA is to be published, and what mechanisms are available for public participation.

Public consultation and participation may occur during the preparation of a draft TEIA.[286] More commonly, however, meaningful participation is reserved for comments on a draft TEIA after it has been prepared. For example, the World Bank approach requires public consultation during the EA process; for Category A projects, there are two stages at which public consultation should occur: shortly after the environmental screening and before the terms of reference are finalized (the scoping phase), and then again once a draft report is prepared.[287] The World Bank takes a discretionary approach to public participation during the implementation of the EA, stating that project-affected groups, local governments, and NGOs should be consulted "as necessary."[288]

The Espoo Convention contains detailed provisions on preparing a TEIA,[289] outlining in Appendix II the specific steps to be carried out.[290] On preparation of a TEIA, the North American draft TEIAA is less specific. However, there is an emphasis on ensuring that potentially affected States have a meaningful opportunity to participate in the TEIA process, and that relevant

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[286] In South Africa, public participation is mandatory in the preparation of the scoping report and in carrying out the full study. *See* Clive George, *EA Past, Present and Future: EA in Sub-Saharan Africa*, *in* EIA NEWSLETTER 17, at 7 (Manchester EIA Centre 1998), *at* http://www.art.man.ac.uk/EIA/n17.pdf.

[287] WORLD BANK OP 4.01, *supra* note 21, para. 15.

[288] *Id.*

[289] Espoo Convention, *supra* note 109, art. 4, at 314, 30 I.L.M. at 806. Article 4 provides that:

> 1.The environmental impact assessment documentation to be submitted to the competent authority of the Party of origin shall contain, as a minimum, the information described in Appendix II.
>
> 2.The Party of origin shall furnish the affected Party, as appropriate through a joint body where one exists, with the environmental impact assessment documentation. The concerned Parties shall arrange for distribution of the documentation to the authorities and the public of the affected Party in the areas likely to be affected and for the submission of comments to the competent authority of the Party of origin, either directly to this authority or, where appropriate, through the Party of origin within a reasonable time before the final decision is taken on the proposed activity.

Id.

[290] *Id.* app. II, at 323, 30 I.L.M. at 814.

information submitted by the potentially affected State is considered so long as it is received in a timely fashion.[291]

5. *Publication and Public Review of a Draft TEIA*

Public review of the draft assessment is a formal requirement in most domestic and international instruments relating to TEIA. The key issues at this stage relate to the specifics of when and how a draft TEIA is published, where it will be made available, and in what language or languages it is published.

In order to allow for meaningful public review and comment of the draft TEIA, both the Espoo Convention[292] and the World Bank Operational Policy[293] require timely notification of publication of the draft TEIA and opportunity for comment. There is a certain amount of discretion in determining what is "timely," and such a determination may depend on the domestic provisions of the State preparing the TEIA. For example, the Espoo Convention states that notification of any affected party should take place "as early as possible and no later than when informing its own public."[294] This approach does not provide a specific timeframe, but rather it applies a nondiscriminatory approach.

National law and practice can vary greatly in the manner and degree to which a draft TEIA is made accessible to the public and how equal that access is. For example, the forum for participation may be a public meeting in the source State or accessibility of a draft TEIA in a public place that is open to comment.[295] One challenge of implementing TEIA is determining the means by which to allow participation from neighboring State institutions

[291] Draft TEIAA, *supra* note 151, art. 11.

[292] Espoo Convention, *supra* note 109, art. 3(1), at 313, 30 I.L.M. at 804.

[293] World Bank OP 4.01 states that public consultation shall be initiated "as early as possible." For Category A projects this occurs both shortly after environmental screening and before the terms of reference for the EA are finalized, as well as once a draft EA report is prepared. WORLD BANK OP 4.01, *supra* note 21, para. 15. The Policy also states that a borrower shall make disclosure of all relevant material in "a timely manner prior to consultation." *Id*. para. 16.

[294] Espoo Convention, *supra* note 109, art. 3(1), at 313, 30 I.L.M. at 804.

[295] Methods of public participation may include questionnaires and surveys, advertisements, leafleting, use of the media, displays and exhibitions, open houses, telephone "hot lines", personal contact, community liaison staff, community advisory committees, group presentations, workshops, public meetings, and public hearings and inquiries. LEAFLET 10, *supra* note 280.

and publics.[296] The experience with the All-American Canal, discussed below, drew attention to the challenges of developing and publicly reviewing a TEIA.[297] While the people in Mexico would be affected by the proposed project, the United States Bureau of Reclamation asserted that the United States had an absolute right to line the canal, as the project involved U.S. water within U.S. boundaries, and it was only required to list "possible impacts" in Mexico and not engage in any meaningful consultation.[298]

In order to ensure effective public participation in TEIA, a source State may also need to consider economic circumstances. For example, members of a potentially affected community may not have the financial means to participate in reviewing and commenting on the draft TEIA. In such a case, whether and how the source State accounts for this could affect the equity of participation across the border. Accordingly, the bilateral agreement between Latvia and Estonia, for example, considers financing arrangements to ensure equitable public participation.[299]

The timing and length of the public comment period usually is a domestic requirement, varying among States. For example, in the United States, public comments are accepted for ninety days after publication of a notice in the *Federal Register*.[300] In Austria, the public has an opportunity to submit comments over a four-week period.[301] In Finland, the relevant authorities accept public

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[296] *See* UNECE, *supra* note 126, at 43-44.

[297] *See infra* Part III.B.2.

[298] *See* Jones et al., *supra* note 168, at 80 (noting that the assertion was based on the Bureau's interpretation of Executive Order 12,114).

[299] Estonia-Latvia Agreement, *supra* note 137, art. 16, at 120. Article 16 states:

> The Party of origin shall be responsible for bearing of the cost of the EIA procedure according to national legislation and this Agreement.
>
> Local authorities of the affected Party shall organize and the Party of origin shall finance the public participation procedure according to national legislation in respective countries.
>
> The Party of origin is responsible for providing the affected Party with the information and documentation to be evaluated in mutually agreed language.
>
> Parties shall finance the expenses of their members of *ad hoc* working groups, financing of additional costs shall be taken by the Party which asked for it.

Id.

[300] 40 C.F.R. § 1506.10(b)(1) (2002).

[301] *See* UNECE, *supra* note 126, at 10.

comments for thirty to sixty days.[302] In Hungary, the public review period is fifteen days.[303]

In order to ensure that people who may be affected by a proposed project or activity have an equal opportunity to voice their concerns, international instruments usually promote either harmonization (of procedures between States) or nondiscrimination, which essentially is a equitable safeguard ensuring that all affected people have equal opportunity to participate in environmental decision-making. The East African MOU, for example, promotes harmonization of EIA.[304] The Espoo Convention, on the other hand, provides that participation must be nondiscriminatory by prohibiting a State of origin from discriminating against neighboring States and by mandating a domestic EIA system that complies with the Convention's minimum requirements—thereby facilitating harmonization.[305]

Publication of the draft TEIA in the languages of both the source State and the potentially affected State can facilitate equal participation in the TEIA process, particularly where there is not a common language. There is some regional disparity in the way that this issue has been approached. For example, the draft North American TEIAA would not require the United States to translate a TEIA into Spanish (for projects potentially affecting Mexico) or French (for projects potentially affecting Quebec).[306] Rather, the draft TEIAA adopts a discretionary approach, "encourag[ing]" translation into a language other than the language of the source State "where practicable."[307] The World Bank Operational Policy, on the other hand, addresses translation and requires availability of information in all relevant languages.[308]

6. *Final TEIA and Formal Approval/Denial*

Following submission of public comments, a final version of

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[302] *See id*. at 11.

[303] *See id*. at 11-12.

[304] East African MOU, *supra* note 214, art. 14(4), at 12.

[305] Espoo Convention, *supra* note 109, arts. 2(2), 3(1), at 312, 313, 30 I.L.M. at 803, 804; *see also* Jaap de Boer, *supra* note 112, at 90-91.

[306] *See supra* notes 163-164 and accompanying text.

[307] Draft TEIAA, *supra* note 151, art. 6.2.

[308] WORLD BANK OP 4.01, *supra* note 21, para. 16 (requiring relevant material to be "in a form and language that are understandable and accessible to the groups being consulted.").

the TIEA is prepared. Based on the findings of the final TEIA, the proposed project or activity will be approved or denied. Owing to its international character, a TEIA process inevitably involves multiple governmental agencies, national interests, and community priorities. To facilitate the process, States sometimes have charged an independent advisory or mediating body with overseeing the process. In addition to improving administration, this fosters the perception that the process is objective and nondiscriminatory. These independent bodies may be an existing river basin organization,[309] an NGO,[310] or some another institution such as the World Bank or the United Nations Development Programme.[311] Other States, some of which have forged specific bilateral agreements on this issue, have set up a specific body for this role.[312]

7. *Monitoring and Appeals*

Once the TEIA has been issued and a decision regarding the project made, there may be additional steps in the TEIA process. For example, the TEIA may require the project proponent to monitor the environmental and other impacts, as appropriate.[313] Citizens, NGOs, and communities may also have the opportunity to appeal decisions that affect them. For instance, the World Bank and a growing number of regional development banks allow affected members of the public to appeal to an inspection panel if there is an alleged failure to comply with the institution's own

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[309] For a discussion of the MRC and its facilitation of the Upper Mekong Navigation Improvement Project, see *infra* Part III.B.3.

[310] For a discussion of how the IUCN took the lead in the Victoria Falls TEIA between Zimbabwe and Zambia, see *infra* Part III.B.1.

[311] *See, e.g.*, 1 WORLD BANK/LAKE CHAD BASIN COMM'N, APPRAISAL OF THE SAFETY OF MAGA DAM, CAMEROON, Doc. E563 (2002), http://www.worldbank.org; 2 WORLD BANK/LAKE CHAD BASIN COMM'N, APPRAISAL OF THE SAFETY OF THE TIGA AND CHALLAWA GORGE DAMS, NIGERIA, Doc. E563 (2002) [hereinafter TIGA AND CHALLAWA GORGE DAMS APPRAISAL], http://www.worldbank.org.

[312] For example, in 1992, Armenia, Belarus, Kazakhstan, Kyrgyzstan, the Russian Federation, Tajikstan, and Uzbekistan concluded the Agreement on Cooperation Concerning Environmental Protection and Improvement. UNECE, *supra* note 126, at 21. The parties to the Agreement agreed to set up an Intergovernmental Ecological Council to conduct environmental reviews of programs and projects that could affect the environment of two or more of the parties. UNECE, *supra* note 126, at 21.

[313] *See, e.g.*, TIGA AND CHALLAWA GORGE DAMS APPRAISAL, *supra* note 311, § 6.3.1

procedures and policies, including those governing EIA and/or TEIA.[314] Similarly, there are appeals and dispute resolution mechanisms to varying degrees in the Espoo Convention[315] and NAAEC.[316]

B. *Case Studies*[317]

Compared to domestic EIA, TEIA experiences are not as common. As such, TEIA processes tends to be ad hoc, with cooperation driven by the issues that are the most economically, socially, environmentally, and politically important to the States involved. In the absence of legally binding requirements, the particular circumstances have shaped whether TEIA is necessary.

1. *Victoria Falls*

The 1995 TEIA for Victoria Falls is an example of a successfully implemented TEIA in terms of procedure. Victoria Falls is located on the border of Zambia and Zimbabwe on the Zambezi River. At the joint request of both governments, Victoria Falls was declared a World Heritage Site in 1989 by the United Nations Educational, Scientific, and Cultural Organization (UNESCO).[318] There is a long history of these governments cooperating to obtain the mutual benefits that Victoria Falls provide, particularly the economic benefits associated with tourism.[319] However, concern over the potentially adverse socio-

[314] *See The World Bank Inspection Panel*, Res. No. 93-10/Res. No. IDA 93-6, para. 12, Int'l Bank for Reconstruction and Dev. & Int'l Dev. Ass'n, (Sept. 22, 1993), *reprinted in* 34 I.L.M. 520 (1995). *See also* Bernasconi-Osterwalder & Hunter, *supra* note 238, at 159-62; Bruch, *supra* note 33, at 11,389, 11,410-11.

[315] Espoo Convention, *supra* note 109, art. 15, at 318, 30 I.L.M. at 810.

[316] Bruch, *supra* note 33, at 11,411-13.

[317] While the previous section outlined the basic elements of TEIA, this summary represents a compilation of norms and practices. However, TEIA is still evolving, and in practice a particular TEIA may emphasize certain elements more than others depending on the specific project, countries involved, and environmental context. This section examines experiences in conducting TEIAs in three specific examples from three different continents.

[318] *Report of the World Heritage Committee*, U.N. Educational, Scientific and Cultural Organization, 13th Sess. at 13, U.N. Doc. SC-89/CONF.004/12 (1989).

[319] *See* MITULO SILENGO, DEP'T OF URBAN STAFF, *SEA of Developments Around Victoria Falls, Zambia*, *in* CANADIAN ENVTL. ASSESSMENT AGENCY & INTL. ASSOC. FOR IMPACT ASSESSMENT, INTERNATIONAL STUDY OF THE EFFECTIVENESS OF ENVIRONMENTAL ASSESSMENT [hereinafter VICTORIA FALLS SEA], http://ea.gov.au/assessments/eianet/eastudy/casestudies/studies/cs78.html

economic impacts associated with increased tourism spurred the governments to assess the impacts and options for protecting Victoria Falls. A four-fold increase in visitors during the period 1985-1995 in Zimbabwe, an increase in adventure tourism, and the need for additional infrastructure such as hotels and lodgings contributed to the joint governmental concern and action.[320] Both governments were particularly concerned about effects from the rapid development near Victoria Falls.

In the spirit of cooperation, the Zimbabwean and Zambian governments agreed to prepare a Master Plan for sustainable development in the Victoria Falls area to be implemented by the two governments.[321] To assist in implementing this plan, they decided that a TEIA should be conducted to predict the cumulative environmental impacts of current and expected developments up to the year 2005, for an area within a thirty kilometer radius of Victoria Falls.[322]

The governments of Zambia and Zimbabwe engaged IUCN—a neutral third-party—to coordinate, direct, and manage the TEIA.[323] The governments contributed through a steering committee consisting of senior government officials from both States, namely the National Heritage Conservation Commission of Zambia and the Department of Natural Resources of Zimbabwe.[324] The impartiality and neutrality of IUCN provided "common ground"—that is, IUCN, as a non-governmental body, provided a neutral forum for negotiation without preconceived political perception on either side—and a facilitating role between the States. The Canadian International Development Agency (CIDA) provided funding for the study, and the findings were utilized to prepare a Skeleton Management Plan for the area as a contribution to the overall Master Plan.[325]

2. *Mexico and the United States: From Political Struggle To Committed Cooperation*

Historically, managers of watercourses along the United

(last updated Dec. 11, 2003).

[320] *Id.*

[321] *Id.*

[322] *Id.*

[323] *Id.*

[324] *Id.*

[325] *Id.*

States-Mexico border have not enjoyed particularly open communication or cooperation.[326] However, there are recent indications that this may be improving. Two cases are considered here, the older All-American Canal lining project and the more recent Tijuana and Playas de Rosarito Potable Water and Wastewater Master Plan.

The All-American Canal was completed in 1941 to divert water from the Colorado River at Imperial Dam for use by the Imperial Irrigation District, servicing over one million acres of southern California.[327] The canal has transboundary hydrological impacts on the water supply of the Colorado River flowing into Mexico, resulting from withdrawals in the United States.[328]

A proposal was made in 1978 to line the canal in order to prevent excess leakage and increase the transfer efficiency of the canal, thereby allowing greater water consumption.[329] The EIA process involved primarily United States consultation through the International Boundary and Water Commission (IBWC).[330] The United States did not seek Mexican participation in the EIA process.[331] The proposal was approved.

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[326] *See* Robert D. Hayton & Albert E. Utton, *Transboundary Groundwaters: The Bellagio Draft Treaty*, 29 NAT. RESOURCES J. 663, 711 (1989) (discussing the historical exclusion of local border authorities form the formal decision making process). *See also infra* note 331.

[327] Jones et al., *supra* note 168, at 76.

[328] IMPERIAL IRRIGATION DIST. & U.S. BUREAU OF RECLAMATION, IMPERIAL IRRIGATION DISTRICT WATER CONSERVATION AND TRANSFER PROJECT DRAFT HABITAT CONSERVATION PLAN: DRAFT ENVIRONMENTAL IMPACT REPORT/ ENVIRONMENTAL IMPACT STATEMENT (2002), http://www.waterrights.ca.gov/ IID/IIDHearingData/LocalPublish/Section_3.16.pdf.

[329] *See* Jones et al., *supra* note 168, at 76. Each year, "[Imperial Irrigation District] canals . . . leak tens of thousands of acre-feet of water that could be put to [constructive use]." *Id*.

[330] IBWC has two national sections, one in Mexico and the other in the United States. It operates as a mediatory body between Mexico and the United States, having successfully negotiated some difficult issues, including a salinity crisis. *Id*. at 78.

[331] Mexico was informed of the project rather than consulted about it. The U.S. Bureau of Reclamation maintained that it needed only to have informed the U.S. section of IBWC of its plans. In addition to a general lack of transparency, the international boundary prevented the scheduling of public meetings in Mexico. NEPA regulations require the lead agency to "[r]equest comments from the public, affirmatively soliciting comments from those persons or organizations who may be interested or affected." 40 C.F.R. § 1503.1(a)(4) (2002). While the Mexican public would be affected by the project, the Bureau's interpretation of CEQ regulations meant that their comments were not solicited.

More recently, there has been improved cooperation and participation in TEIA between Mexico and the United States. The Estuaries and Clean Waters Act of 2000 directs the United States Environmental Protection Agency (EPA) to develop a comprehensive plan, with stakeholder involvement, to address transboundary sanitation problems in the San Diego-Tijuana border region.[332] More specifically, the proposed Tijuana and Playas de Rosarito Potable Water and Wastewater Master Plan seeks to address the burgeoning population growth in the San Diego-Tijuana border region.[333] A significant component of this plan involves assessing the water and sanitation systems in the region, including the Colorado River, which flows across the border. Three alternatives were formulated for the water system, and four alternatives were formulated for the sanitation system. The alternatives for the water system were devised to enhance future water supplies, including such activities as desalination of seawater, indirect potable water reuse, and provision of additional water from the Colorado River.[334] Alternatives related to the sanitation system included various combinations of constructing new wastewater treatment plants and expanding or improving existing treatment plants.[335]

The San Diego-Tijuana border project in many ways exemplifies a commitment to a more participatory TEIA process between the United States and Mexico. The proposed Master Plan was followed by an EA, which was completed in February 2003 in compliance with NEPA and its implementing regulations.[336] The EA analyzed the potential environmental impacts, both local and transboundary, of the activities proposed in the draft master

Jones et al., *supra* note 168, at 80-81.

[332] Tijuana River Valley Estuary and Beach Sewage Cleanup Act of 2000, Pub. L. No. 106-457, §§ 801-06, 114 Stat. 1957, 1977-81 (2000).

[333] 1 COMISIÓN ESTATAL DE SERVICIOS PÚBLICOS DE TIJUANA, POTABLE WATER AND WASTEWATER MASTER PLAN FOR TIJUANA AND PLAYAS DE ROSARITO, sec. 1, at 1-1 (2003) (Mex.), http://www.epa.gov/region09/water/tijuana/index.html.

[334] EPA, ENVIRONMENTAL ASSESSMENT: TIJUANA AND PLAYAS DE ROSARITO POTABLE WATER AND WASTEWATER MASTER PLAN sec. 2.1, at 2-1 (2003) [hereinafter TIJUANA EA], http://www.epa.gov/region09/water/tijuana/masterplan/ea.pdf.

[335] *Id.*

[336] *See* 40 C.F.R. §§ 6.100, 6.1500-.1508 (2002).

plan.[337] The Mexican EA also reviewed potential environmental impacts in Mexico.[338] Transboundary effects were considered and analyzed throughout the study. This EA was subject to a 30-day public review period, during which the public and interested agencies from both nations were encouraged to submit comments. EPA will consider all comments, including Mexican comments, on the EA as it finalizes a master plan.[339]

3. *Upper Mekong Navigation Improvement Project*

In order to promote transportation along the Upper Mekong River, the PRC, Myanmar, Lao PDR, and Thailand have proposed the Mekong River Navigation Improvement Project.[340] By removing eleven major rapids and ten scattered reefs and shoals by "dredging and blasting," this project would "permit the passage of ships of 100-150 tonnes" for ninety-five percent of the year.[341] A TEIA was prepared for MRC in September 2001.[342] A TEIA team consisting of experts from the PRC, Lao PDR, Myanmar, and Thailand initially went to eleven of the twenty-one working sites in order to collect and produce a survey of hydrological data.[343] The TEIA team found that there would be minimal impacts on the fisheries and fishing-based livelihoods of communities along the Mekong River.[344]

This TEIA has been widely criticized as inadequate.

[337] Assessments were conducted for, among other things: air quality, surface water, groundwater, biological resources, cultural resources, and noise. TIJUANA EA, *supra* note 334, at 4-1 to 4-11.

[338] *Id*. at 1-1.

[339] *Id*.

[340] BRIAN FINLAYSON, UNIV. OF MELBOURNE, REPORT TO THE MEKONG RIVER COMMISSION ON THE "REPORT ON ENVIRONMENTAL IMPACT ASSESSMENT: THE NAVIGATION IMPROVEMENT PROJECT OF THE LANCANG-MEKONG RIVER FROM CHINA-MYANMAR BOUNDARY MARKER 243 TO BAN HOUEI SAI OF LAOS" 2 (2002), http://www.irn.org/programs/mekong/021018.critiquehydrology.pdf.

[341] *Id*.

[342] CHRIS COCKLIN & MONIQUE HAIN, MRC, EVALUATION OF THE EIA FOR THE PROPOSED UPPER MEKONG NAVIGATION IMPROVEMENT PROJECT 2 (2001), http://www.irn.org/programs/mekong/021018.socialimpacts.pdf. (citing JOINT EXPERTS GROUP ON EIA OF CHINA, LAOS, MYANMAR, AND THAILAND, REPORT ON ENVIRONMENTAL IMPACT ASSESSMENT THE NAVIGATION CHANNEL IMPROVEMENT PROJECT OF THE LANCANG-MEKONG RIVER FROM CHINA-MYANMAR BOUNDARY MARKER 243 TO BAN HOUEI SAI OF LAOS (2001)).

[343] *See* FINLAYSON, *supra* note 340, at 2.

[344] See COCKLIN & HAIN, *supra* note 342, at 6-7.

Independent evaluations of the TEIA, commissioned by MRC, have disputed the original assessment, stating that the proposed physical manipulations—intended to open the river to more traffic by larger ships and expand economic activities—may themselves introduce new pressures. Consequently, the additional pressures on the resources of the river and riparian lands could seriously affect water quality.[345] The original TEIA, according to these independent analyses, is "*substantively inadequate* and in many places *fundamentally flawed*."[346]

This case study highlights the desirability of objective, independent assessments in TEIA, which may be advanced through regional institutions such as MRC (which sought the independent expert evaluations) or through other organizations such as NGOs. Transparency and external review are essential in ensuring that the underlying assessments are conducted with sufficient rigor.

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[345] FINLAYSON, *supra* note 340, at 2.

[346] COCKLIN & HAIN, *supra* note 342, at 2. Cocklin and Hain argue that the EIA was methodologically inadequate in that it was "not based on assessments of the full range of potential impacts." *Id*. In general, it did not assess "long-term impacts associated with the operation of the waterway following the proposed works," such as "long-term impacts on the hydrology of the river, impacts on the river and riparian ecosystems, and impacts associated with the actual use of the waterway." *Id*. Neither were the ongoing, post-project affects of freight and passenger movements assessed. The EIA also overlooked the possible ongoing economic costs to the riparian nations that would likely be associated with channel maintenance (i.e., dredging) and the cumulative and secondary impacts, such as those stemming from increased economic activity to which the EIA repeatedly referred. For example, there was no "discussion of secondary pollution impacts that might occur as a result of industrial developments arising from the improved navigability." *Id*. The EIA paid "scant attention to the downstream environmental, social, and economic impacts," or the likely significant changes arising from increased tourism and natural resource exploitation." *Id*.

Substantively, Finlayson notes that the report did not include certain content required by Article 12 of the Science, Technology and Environment Agency Assessment Regulation of the Lao PDR. In particular, Item (2) of Article 12 requires an EIA to "identify and describe the environmental impacts of the project *and compare them to the impacts of one or more reasonable alternatives to the project*." FINLAYSON, *supra* note 341, at 3.

IV
FUTURE DEVELOPMENT OF TEIA IN INTERNATIONAL WATERCOURSES

Just as each international river is unique yet shares characteristics with other rivers, the circumstances under which a TEIA is undertaken and how it may be conducted are also both unique and shared. A range of issues need to be considered, including varying legal and regulatory structures, political systems, and specific socio-economic and environmental contexts. It is difficult to generalize a one-size-fits-all process of TEIA that is universally applicable. However, the general framework is usually similar, and the various experiences highlighted in this Article showcase some of the options for addressing the issues in particular contexts.

One broad question is whether the obligation to conduct a TEIA is legally binding. The examples in this Article tend to be overwhelmingly procedural, guiding, and non-binding. There are a number of possible reasons why this may be the case. First, the principles of TEIA are still evolving, and reaching binding consensus regionally (let alone globally) has proven to be challenging.[347] Second, a non-binding process may facilitate cooperation and dialogue, advancing and refining approaches to TEIA more rapidly and more specifically than would a legally binding treaty-making process. A non-binding approach is more flexible in granting discretion to States with respect to when and how to conduct a TEIA and therefore is perhaps more likely to be adopted. Legally binding arrangements, on the other hand, are stricter in form and mandate principles to which States are legally bound.[348] The next steps in developing and implementing TEIA are discussed below.

A. *Specificity and Clarity of Terms of Agreement*

The specific examples referred to throughout this Article seem to indicate that the most effectively implemented TEIAs have clear and specific terms of reference that States follow throughout the TEIA process, such as the bilateral agreement

[347] *See, e.g.*, *supra* Part II.A.

[348] *See* Gray, *supra* note 8, at 120.

between Latvia and Estonia.[349] With this clarity and specificity, States are more likely to agree what specific elements relating to TEIA in practice are necessary, and they more likely to implement these specific elements during the TEIA process. Specific requirements—addressing, for example, timing of notification or public participation as well as the precise methodologies for how it will be carried out—help to avoid disputes and increase transparency. TEIA processes that have incorporated a clear statement of terms have been able to operate more effectively and efficiently.[350] In particular, it may help to establish, prior to initiating a TEIA, more rigorous planning and formalized, specified requirements for participation than is currently the practice. At present, there are a range of international approaches, regulations, standards, and efforts to protect against discrimination across borders worldwide. The most efficient way to forge ahead in interpreting and implementing TEIA principles in such diverse circumstances is to embrace this diversity and tailor the TEIA arrangement in question to the specific circumstances that are faced.

B. *Harmonization and Nondiscrimination*

One theme throughout this Article has been the value of harmonizing EIA procedures between States, highlighting the imperative of nondiscrimination to ensure that all affected people have the opportunity to participate equally.[351] From the approaches taken worldwide, there appears to be a consensus that, at a minimum, the State conducting a TEIA should accord the same protections and access to information to the public of neighboring States as to individuals within its own borders.[352]

The process of harmonizing TEIA procedures often takes place either bilaterally, where there is a shared interest, or regionally. For example, the European Council Directive, which was amended to incorporate the Helsinki and Espoo Conventions,

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[349] Estonia-Latvia Agreement, *supra* note 137.

[350] *See supra* Part II.B.

[351] *See* Knox, *supra* note 29, at 300-01.

[352] *See* Espoo Convention, *supra* note 109, app. VI(2)(b), at 328, 30 I.L.M. at 817 (suggesting that parties, in pursuing bilateral or multilateral cooperation, include "[i]nstitutional, administrative and other arrangements, to be made on a reciprocal and equivalent basis."); *see also* East African MOU, *supra* note 214, art. 16(2)(d), at 13; Aarhus Convention, *supra* note 103, art. 3(9).

requires all EU member States and States that would join the EU to adopt new laws or modify existing laws to ensure that the States provide for the minimum standards set forth in the Directive.[353] Such an approach ensures that TEIA procedures that have a base commonality are in place throughout the EU. Although countries may modify or expand upon the core standards, for example, by adding to the list of projects for which an EIA is required, all share a common approach to EIA. The common standards and institutional practices help to facilitate EIA in a transboundary context, in which government agencies and the public from another country are involved in the process.

Yet, harmonization can be challenging. For example, a 2003 assessment of compliance with the European Directive on EIA found that up to half of the EIAs studied did not fully meet the basic requirements of the Directive.[354] Moreover, the analysis noted that to the extent that countries did comply with the Directive, vagueness in certain provisions, such as review of information provided to the government by a project proponent, results in great variety in the ways EIAs are conducted in practice—there is "no harmonised approach to the matter."[355]

Another unresolved issue is how to ensure that TEIA and relevant information are functionally accessible to all potentially affected people. In particular, mechanisms and funding for translation need to be further developed.

C. *Political Will*

It is increasingly important to be able to reach political consensus on the use and management of water resources. Many activities and measures in recent years have raised awareness of the importance of water management, particularly across borders. These include the growth of integrated water resources management, the increasing number of river basin organizations with ever-widening mandates,[356] the outcomes of the WSSD,[357]

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[353] Council Directive 85/337/EEC, *supra* note 90, art. 12, at 43.

[354] *See* EIA DIRECTIVE REPORT, *supra* note 90, at 4.

[355] *Id*. ("Whilst the elements listed in Annex IV underlie requirements for adequate assessments, this rather basic information has been built upon (e.g. with checklists) in only some Member States.").

[356] The International Network of Basin Organizations presently has 133 member organizations in fifty countries. *See* International Network of Basin Organizations, List of Member Organizations, *at* http://www.riob.org/

and the United Nations' declaration of 2003 as the "International Year of Freshwater."[358]

Regardless of whether there is a legally binding agreement or procedural approach in place for TEIA, the most successful TEIAs have occurred when there is a meeting of the minds on an issue considered mutually important. For example, the common cultural, social, and economic importance of Victoria Falls enabled consensus regarding the TEIA to be reached relatively easily, notwithstanding the absence of a relevant legally binding arrangement.[359]

Existing regional associations such as EU, MRC, and CEC have also facilitated cooperation, enabling a common institutional structure to operate within the region. Such regional associations which have experience with cooperation and coordination can often facilitate consensus. NGOs also have an increasing role to play in improving political will by providing an objective or impartial voice, depending on the particular NGO. As such, they can act as mediators or facilitators, as well as credible sources of information.

D. *Financial Resources*

In a developing country context there is often a lack of funding available to conduct a comprehensive TEIA. The World Bank, the regional development banks, and bilateral institutions (such as CIDA in the Victoria Falls TEIA) can be essential. They can supply much needed funding and expertise, as well as help to ensure that certain TEIA procedures are followed. Moreover, this exchange of funding, experience, and expertise can be crucial—and has proved to be so—in developing and implementing TEIA.

E. *Dispute Resolution*

Following publication of a final TEIA, citizens, governments, institutions, and organizations may seek an avenue through which to appeal an unsatisfactory analysis or decision. In most cases, these avenues are lacking or limited. To the extent that there is

anglais/list_org.htm (last visited Dec. 4, 2003).

[357] *See generally* WSSD REPORT, *supra* note 5.

[358] *International Year of Freshwater, 2003*, G.A. Res. 55/196, U.N. GAOR, 55th Sess., Agenda Item 95, at 1, U.N. Doc. A/RES/55/196 (2001).

[359] *See* VICTORIA FALLS SEA, *supra* note 320.

public access to dispute resolution, it is usually through national courts, although constitutional or legal impediments may preclude members of the public from the potentially affected State from bringing an action in the State of origin.

International organizations such as the World Bank and other regional development banks increasingly provide internal administrative mechanisms for dispute resolution, such as inspection panels.[360] Access to these quasi-judicial mechanisms is usually predicated on an alleged failure to follow the institution's internal policies or procedures, such as those governing EA. There remain significant opportunities for regional organizations (such as river basin organizations) or NGOs to mediate disputes, especially in an informal way.[361] The Upper Mekong Navigation Improvement Project described above demonstrates the important role that MRC played in providing such an avenue of appeal for aggrieved States.[362] It was, after all, the PRC who took on board Lao PDR's complaints that the initial EIA conducted for the Upper Mekong Navigation Improvement Project was inadequate. The result was referring the original EIA to independent experts. Still, much remains to be done to ensure effective dispute resolution between States in the management of international watercourses, let alone to guarantee public access to such mechanisms.

CONCLUSION

TEIA represents a further step in the development of EIA principles and practice from its domestic beginnings in the United States in 1969 to an emerging international concept. TEIA, due to its prospective analysis, is one of the few areas of environmental management and regulation that has the potential to successfully incorporate some significant, yet practically difficult, elements of international law, including the precautionary principle. TEIA is also a practical mechanism through which regional cooperation can be facilitated. It is often at the project level, where achievable goals and outcomes are outlined, that interstate cooperation can be advanced.

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[360] *See* Bernasconi-Osterwalder & Hunter, *supra* note 238, at 159-161.

[361] *See* Juan Miguel Picolotti, *Access to Justice in Latin American Watercourses*, *in* PUBLIC PARTICIPATION AND GOVERNANCE IN INTERNATIONAL WATERSHED MANAGEMENT, *supra* note 210.

[362] *See supra* Part III.B.3.

Through its emphasis on access to information, public participation, harmonization, and non-discrimination, TEIA is also a practical vehicle for implementing Principle 10 of the Rio Declaration. Overall, if developed appropriately, TEIA has the potential to be a significant driver of the practical implementation of some of the more established principles that have emerged over the past three decades in international environmental law—including access to information, public participation, harmonization, and non-discrimination—but which to date have not fully been implemented at the domestic and regional levels.

TEIA is particularly important to international watercourses, an almost global environmental management consideration. Water is likely to become an increasingly critical issue in coming decades, and TEIA, as a useful planning tool, has the potential to significantly mitigate the management difficulties associated with managing increasing water scarcity. Transboundary rivers and lakes pose a particularly difficult challenge due to the political, economic, and cultural coordination that is required to adequately manage water among States.

This Article has traced the evolution of TEIA from its roots in EIA to its inclusion in international agreements, customary law, and other instruments. The Article has illustrated the divergent development of TEIA in different regions. The development of TEIA is still in the formative stages, though the beginnings of trends toward future development can be discerned. TEIA instruments vary from formalized legally binding instruments to ad hoc arrangements, to anywhere in between, such as informal mechanisms facilitated through regional bodies, river basin organizations, or international organizations. There are, however, some consistencies in the general approaches taken by countries and regions. Drawing on practical examples worldwide, we have distilled some of the components of successful TEIA processes. For example, successful TEIA implementation comes as a result of adequate political will, common concern over or value of the shared watercourse, principles of non-discrimination, and sometimes with provisions enabling harmonization of the application of the TEIA process reciprocally across borders.

The future development of TEIA will most likely be driven by example. As more TEIAs are undertaken, experience in implementing these will increase. The development of TEIA requirements and processes is undergoing an evolution—

individual approaches are being developed regionally to account for regional specificity—that hopefully will incorporate components from the successful TEIA regimes identified in this Article, thereby enabling more effective and equitable environmental management of shared watercourses.