

BIBLIOGRAPHY

Robert W. **Alder**, Addressing Barriers to Watershed Protection, 25 *Envtl. L.* 973 (1995).

The author critiques watershed protection programs in the United States. He identifies several issues that are critical to the success of watershed programs: (a) scale, (b) boundary, (c) control, (d) mission, and (e) consistency. Watershed programs should encompass the whole river basin or other broadly defined hydrological region and be organized according to natural, not political, boundaries. The management of the watershed should be a balance between national and local controls (with the national authority having the authority to set uniform controls and overall environmental goals). There should also be participation from civil society, but there needs to be coordinating institutions to ensure proper watershed management.

Lewis M. **Alexander**, Large Marine Ecosystems: A New Focus for Marine Resources Management, 17 *Marine Policy* 186 (1993).

Andrew **Allan**, A Comparison between the Water Law Reforms in South Africa and Scotland: Can a Generic National Water Law Model Be Developed from These Examples, 43 *Nat. Resources J.* 419 (2003).

Andrew **Allan** & Ilse Steyl, Encouraging Stakeholder Participation in River Basin Management: a Case Study from the Nura River in Kazakhstan, 12 *U. Denv. Water L. Rev.* 209 (2008).

J.A. **Allan**, Nile Basin Water Management Strategies, in *The Nile: Sharing a Scarce Natural Resource: A Historical and Technical Review of Water Management and of Economic and Legal Issues* 313 (P.P. Howell & J.A. Allan eds. 1996).

Jeremy **Allouche**, International Water Treaties: Negotiation and Cooperation Along Transboundary Rivers, 9 *Global Environmental Politics* 142 (2009).

Dharshini **Amaratunga**, Maritime Boundary Delimitation: Building and Preparing a Negotiating Team, 24(1-2) *C.L.B.* 516 (1998).

Fasil **Amdetsion**, Scrutinizing the Scorpion Problematique: Arguments in Favor of the Continued Relevance of International Law and a Multidisciplinary Approach to Resolving the Nile Dispute, 44 *Tex. Int'l L.J.* 1 (2008).

Hussein **Amery** & Aaron Wolf eds., Water in the Middle East: A Geography of Peace, (2000).

Earle **Anton** and Malzbender Daniel eds., Stakeholder Participation in Transboundary Water Management, (2006).

David **Aubin**, Reflections on Water: New Approaches to Transboundary Conflicts and Cooperation, 11(2) *Environmental Politics* 205 (2002).

Reference and Training Manual

Heather L. **Beach**, Jesse Hamner, J. Joseph Hewitt, Edy Kaufman, Anja Kurki, Joe A. Oppenheimer & Aaron T. Wolf, Transboundary Freshwater Dispute Resolution: Theory, Practice and Annotated References, (2000).

Mimi Larsen **Becker**, The International Joint Commission and Public Participation: Past Experiences, Present Challenges, Future Tasks, 33(2) Nat. Resources J. 235 (1993).

Martin H. **Belsky**, Management of Large Marine Ecosystems: Developing a New Rule of Customary International Law, 22(4) San Diego Law Review 733 (1985).

M. Sherman **Belsky**, Legal Constraints and Options for Total Ecosystem Management of Large Marine Ecosystems in Variability and Management of Large Marine Ecosystems (K. & L. M. Alexander eds. 1986).

Eyal **Benvenisti**, Collective Action in the Utilization of Shared Freshwater: The Challenges of International Water Resources Law, 90 Am. J. Int'l. L. 384 (1996).

Thomas **Bernauer**, Explaining Success and Failure in International River Management, 64(1) Aquatic Sciences 1 (2002).

Asit K. **Biswas**, Management of International Waters: Problems and Perspectives, 9 Water Resources Development 161 (1993).

Asit K. **Biswas** ed., International Waters of the Middle East: From Euphrates-Tigris to Nile, (1994).

Asit K. **Biswas**, Management of International Waters: Opportunities and Constraints, 15 Water Resources Dev. 429 (1999).

Asit K. **Biswas**, From Mar del Plata to Kyoto: An Analysis of Global Water Policy Dialogue, 14 Global Environmental Change 81 (2004).

Gerald H. **Blake** ed., The Peaceful Management of Transboundary Resources, (1995).

Joachim **Blatter** & Helen Ingram eds., Reflections on Water: New Approach to Transboundary Conflict and Cooperation, (2001).

Joachim **Blatter** & Helen Ingram, States, Markets and Beyond: Governance of Transboundary Water Resources, 40 Nat. Resources J. 439 (2000).

The state-centric model for managing shared river basins and aquifers is failing. The market approach, as advocated by some scholars, also fails to incorporate institutions that foster intersectoral cooperation and communication. Instead, the effective governance of water resources requires the cooperative interrelationships of various institutions that represent the complementing functions within the transnational water arena.

Richard J. **Blaustein** (Douglas S. Kenney ed.), In Search of Sustainable Water Management: International Lessons for the American West and Beyond, 15(3) Rev.Eur.Community & Int'l Env'tl.L. 346 (2006).

Reference and Training Manual

Gunther **Bombaerts**, Identity, Conflict and cooperation in International River Systems, 28 International Journal of Environment & Pollution 216 (2006).

Ilke **Borowski** & Claudia Pahl-Wostl, Where Can Social Learning be Improved in International River Basin Management in Europe?, 18(4) European Environment: The Journal of European Environmental Policy 216 (2008).

Sabine **Brels**, David Coats & Flavia Loures, Transboundary Water Resources Management: The Role of International Watercourse Agreements in Implementation of the CBD, 40 CBD Technical Series (2008).

Freshwater ecosystems, and the biodiversity they support, need to be better managed in order to meet the challenges from climate change. Once implemented on a large scale, the UN Watercourses Convention will support inter-state cooperation at the basin level, improve global water governance, and enhance the legal regime under the Convention on Biological Diversity (CBD) for conserving and sustainably using inland water biodiversity. The UNECE Water Convention has made an important development by creating a consistent and detailed legal framework with high-level standards and stringency for transboundary water management. Using these types of regulatory frameworks to improve international cooperation and coordination regarding transboundary watercourses can also provide significant co-benefits for riparian states. The UN Watercourses Convention and the UNECE Water Convention help fill the regulatory gap in the CBD (which lacks specific rules and principles for cooperation).

Marit **Brochmann** & Nils Petter Gleditsch, Conflict, Cooperation and Good Governance in International River Basins, Presented at Governance and the Global Water System, Bonn (Jun. 20-23, 2006).

Greg **Browder** & Leonard Ortolano, The Evolution of International Water Resources Management Regime in the Mekong River Basin, 40 Nat. Resources J. 499 (2000).

Jutta **Brunneé** & Stephen J. Toope, The Changing Nile Basin Regime: Does Law Matter?, 43 Harv. Int'l L.J. 122 (2002).

Takele Soboka **Bulto**, Between Ambivalence and Necessity: Occlusions on the Path toward a Basin-Wide Treaty in the Nile Basin, Colo. J. Int'l Envtl. L. & Pol'y 291 (2009).

While the Nile riparian states are engaged in legal, political, and doctrinal wrangling pertaining to state sovereignty on the way to a basin-wide agreement over the equitable allocation of their common waters, each day brings a heavy but avertable cost on the lives, security, and economic and environmental well-being of the tenth of the African population that inhabits the Nile Basin. The riparian states of the Nile Basin do not have any significant alternatives to the joint management and equitable utilization of the Nile waters. This Article seeks to identify some of the obstacles that hinder the process of treaty formation over the allocation of the Nile waters among the riparian states. It examines the role of some riparian states' adherence to colonial treaties and the mindset created thereby, the culture of mistrust surrounding interstate interactions, doctrinal controversies, attitudes of the riparians toward the formation of a basin-wide treaty, and problems of good faith on the part of the riparian states. The Article argues that the success of the Nile Basin Initiative ("NBI"), and the resultant establishment of a legal and institutional mechanism for the eventual equitable and reasonable allocation of the Nile waters, hinges on the removal of these obstacles.

Reference and Training Manual

Dante A. **Caponera**, Patterns of Cooperation in International Water Law: Principles and Institutions, 25 Nat. Resources J. 563 (1985).

The biggest concern for successful cooperation in efficient water resources management is the political willingness of states to achieve institutionalized cooperation. Essential structural features of institutionalized cooperation include: government participation, principal and subsidiary organs, voting procedure, and functions and power of the agency. While similarities between organizations may develop into established patterns in the course of time, these practices should be adapted to local conditions as these detailed mechanisms and procedures are always the free choice of states.

Dante A. **Caponera**, Shared Waters and International Law, in *The Peaceful Management of Transboundary Resources* 121 (Gerald H. Blake ed. 1995).

Christina M. **Carrol**, Past and Future Legal Framework of the Nile River Basin, 12 Geo. Int'l Envtl. L. Rev. 269 (1999).

Ana Elisa **Cascao**, Use of Ambiguity in Transboundary River Basins Negotiations: The Case of the Nile River Basin, (Oct. 23 2010), www.inweb.gr/twm4/abs/CASCAO%20Ana.pdf.

Lucius **Caflich**, Regles Generales du Droit des Cours d'Eau Internationaux, 219 *The Hague Academy of International Law, Recueil des Cours* (1992).

Donald J. **Chenevert, Jr.**, Applications of the Draft Articles on the Non-navigational Uses of International Watercourses on the Water Disputes Involving the Nile River and the Jordan River, 6 *Emory Int'l L. Rev.* 495 (1992).

Thomas V. **Cech**, Principles of Water Resources: History, Development, Management and Policy, (2003).

Melanne Andromecca **Civic**, A New Conceptual Framework for Jordan River Basin Management: a Proposal for a Trusteeship Commission, 9.2 *Colo. J. Int'l Envtl. L. & Pol'y* 285 (1998).

Convention on the Protection and Use of Transboundary Watercourses and International Lakes, (Mar. 17, 1992), 95/308/EC.

There are more than 150 major rivers and 50 large lakes in the UNECE region that are shared between countries. This Convention has already been ratified by 34 UNECE countries and the European Community. It encourages cooperation between member countries and separate, specific agreements between countries bordering the same waters. Member countries are called upon to take all appropriate measures to prevent, control and reduce ant transboundary impact (such as from water pollution). Among its provisions, each party should define water-quality objectives and criteria.

Joseph W. **Dellapenna**, International Law's Lessons for the Law of the Lakes, 40 *U. Mich. J.L. Reform* 747 (2007).

Joseph W. **Dellapenna**, Rivers as Legal Structures: The Examples of the Jordan and the Nile, 36 *Nat. Resources J.* 217 (1996).

Reference and Training Manual

Ariel **Dinar**, Shlomi Dinar, Stephen McCaffrey & Daene McKinney, Bridges Over Water, Understanding Transboundary Water Conflict, Negotiation and Cooperation, 33(1) Natural Resources Forum 94 (2009).

Shlomi **Dinar**, International Water Treaties: Negotiation and Cooperation Along Transboundary Rivers, (2008).

Shlomi **Dinar** & Ariel Dinar, Negotiation in International Watercourses: Diplomacy, Conflict and Cooperation, 5 International Negotiation 193 (2000).

Shlomi **Dinar**, Power Asymmetry and Negotiations in International River Basins, 14 Int'l Negotiation 329 (2009).

Shlomi **Dinar** & Ariel Dinar, Recent Developments in the Literature on Conflict Negotiation and Cooperation Over Shared International Fresh Waters, 43 Nat. Resources J. 1217 (2003).

Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for the Community action in the field of water policy, (adopted 23 October, 2000), (June 12, 2008) <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32000L0060:EN:NOT>.

Hasjim **Djalal** & Ian Townsend-Gault, Preventive Diplomacy: Managing Potential Conflicts in the South China Sea, in Herding Cats: Multiparty Mediation in a Complex World 107 (Crocker, Hampson & Aall eds. 1999).

Stephen E. **Draper**, Model Water Sharing Agreements for the Twenty-First Century, (2002).

Alfred M. **Duda** & Kenneth Sherman, A New Imperative for Improving Management of Large Marine Ecosystems, 45 Ocean & Coastal Mgmt. 797 (2002).

Gabriel E. **Eckstein**, Water Scarcity, Conflict, and Security in a Climate Change World: Challenges and Opportunities for International Law and Policy 409 Wis. Int'l L.J. (2009).

Gabriel E. **Eckstein**, Commentary on the U.N. International Law Commission's Draft Articles on the Law of Transboundary Aquifers, Colo. J. Int'l Envtl. L. & Pol'y 538 (2007).

Yoram **Eckstein**, & Gabriel E. Eckstein, Transboundary Aquifers: Conceptual Models for Development of International Law, 43 Ground Water 679 (2005).

Arun **Elhance**, Hydropolitics in the Third World: Conflict and Cooperation in International River Basins (1999).

Lee **Failing**, Graham Horn & Paul Higgins, Using Expert Judgment and Stakeholder Values to Evaluate Adaptive Management Options, 9(1) Ecology & Society 13 (2004).

Maria Cecilia **Ferreira**, Developing Collaborative Advantage for Water Quality Protection in Agricultural Watersheds: A Policy Network Approach, (2006) (Ph.D. Thesis, University of Guelph) (On file with Library and Archives Canada).

Reference and Training Manual

Itay **Fischhendler**, Ambiguity in Transboundary Environmental Dispute Resolution: The Israeli-Jordanian Water Agreement, 45 J Peace Research (2008).

I. **Fox** & D. Le Marquand, International River Basin Cooperation, in Water Development and Management (1041 United Nations ed. 1978) Proceedings of the United Nations Water Conference, Mar del Plata.

Harald D. **Frederiksen**, Water Resources Institutions: Some Principles and Practices, World Bank Tech. Paper No. 191 (1992).

Water management and facilities maintenance currently dominate water development activities in the water sector. Large changes, such as a doubling of the population, will foster major new initiatives in the near future. For countries to succeed in facing these challenges, there needs to be adequate and appropriate institutions. Successful water management institutions follow similar paths and institutional principles (as adapted to the particular situation) - including the administration of resource allocation, organizational structure, long-term and real-time management, and the financing of essential activities.

Harald D. **Frederiksen**, Jeremy Berkoff & William Barber, Principles and Practices for Dealing with Water Resources Issues, World Bank Tech. Paper No. 233 (1994).

Every country is confronted with some problems in managing its water resources. Common issues include the allocation of resources, mechanisms for managing resources, social equity, regional stability, poverty alleviation, the responsibilities of government and the private sector, and ways to finance actions. There should be a detailed allocation of the objectives concerning the economic, social, and environmental terms that can be achieved through public and private actions. Water resource allocation mechanisms should be transparent and carefully tailored to obtain the stated objectives. These management bodies should be supported by comprehensive legislation on water and land rights since these areas affect water use and water quality. International water rights agreements should focus on long-term management and operations under normal and emergency conditions of flood, drought, and pollution spills.

Harald D. **Frederiksen**, Jeremy Berkoff & William Barber, Water Resources Management in Asia, World Bank Tech. Paper No. 212 (1993).

As populations in Asia continue to grow, the impacts of water shortages in many parts of the region will be exacerbated. The principal water resources problems and issues can be divided into four categories: institutional, long-term management and planning, real time management and operations, and financial. While successful resource management organizations throughout the world have identified basic principles and best practices that apply across a range of governmental structures and physical conditions, these fundamental policies should also be tailored to meet the requirements of the individual countries.

Jennifer A. **Fresque**, The Evolution, Experience and Drivers of Collaboration in Two Non-profit River Based Organizations in New Brunswick, Canada, (2008) (M.A. Thesis, Brock University) (On file with Library and Archives Canada).

Reference and Training Manual

Victor **Galaz**, et al., The Problem of Fit among Biophysical Systems, Environmental and Resource Regimes, and Broader Governance Systems: Insights and Emerging Challenges, in *Institutions and Environmental Change: Principal Findings, Applications and Research Frontiers* 147 (Oran R. Young, Leslie A. King & Heike Schroeder eds. 2008).

A.H. **Garretson**, R.D. Hayton & C.J. Olmstead eds., The Law of International Drainage Basins (1967).

Andrea K. **Gerlak**, The Global Environment Facility and Transboundary Water Resource Management: New Institutional Arrangements in the Danube River and Black Sea Region, 13(4) *Journal of Environment & Development* 400 (2004).

Andrea K. **Gerlak**, One Basin at a Time: The Global Environment Facility and Governance of Transboundary Waters, 4(4) *Global Environmental Politics* 108 (2004).

Bob **Gillett** & Gert van Santen, Optimizing Fisheries Benefits in the Pacific Islands: Major Issues and Constraints, *World Bank Discussion Papers* (2008).

Constraints affecting fisheries development (especially tuna) can be divided into two categories: (a) governance and (b) small countries or industries struggling with powerful countries and powerful economic interests. Many tuna fisheries suffer from poor national fisheries institutions, corruption within the sector, a lack of skilled fishery managers, lack of regional solidarity, poor government policies for tuna industry development, weak governance in the inshore fisheries subsector, and market access issues.

Patrick **Gilman**, Víctor Pochat & Ariel Dinar, Whither La Plata? Assessing the State of Transboundary Water Resource Cooperation in the Basin, 32(3) *Natural Resources Forum* 203 (2008).

Meredith A. **Giordano**, Managing the Quality of International Rivers: Global Principles and Basin Practice, 43 *Nat. Resources J.* 111 (2003).

While water supply and allocation are frequently cited as major problems, there are also significant vulnerabilities in terms of water quality management. To foster greater cooperation between riparian states, the international community has only concentrated on the development of generalized, global principles of water quality management. But, more attention needs to be paid to specific institution building at the basin level as the vast majority of the world's international basins are without any type of water quality institutions. Even where water quality institutions do exist, there is a general lack of substantive language and full basin participation.

Meredith A. **Giordano** & Aaron T. Wolf, Sharing Waters: Post-Rio International Water Management, 27 *Natural Resources Forum* 163 (2003).

In the past decade, the international community has adopted conventions, declarations, and legal statements concerning the management of international waters and riparian states have established numerous new basin institutions. But significant vulnerabilities remain as many international basins still lack any type of joint management structure. Institutions are essential for effective transboundary water management. These institutions should incorporate: (a) adaptable management structures; (b) clear and flexible criteria for water allocations and water quality

Reference and Training Manual

management; (c) equitable distribution of benefits; (d) concrete mechanisms to enforce treaty provisions; and (e) detailed conflict resolution mechanisms.

N. P. **Gleditsch**, T. Owen, K. Furlong & B. Lancina, Conflicts over Shared Rivers: Resource Wars of Fuzzy Boundaries, in 45th Annual Convention of the International Studies Association Montreal 1545 (2004).

Bonaya Adhi **Godana**, Africa's Shared Water Resources: Legal and Institutional Aspects of the Nile, Niger and Senegal River Systems (1985).

Geoffrey D. **Gooch** & Per Stalnacke eds., Integrated Transboundary Water Management in Theory and Practice (2006).

The book focuses on the need to follow an integrated approach to water management in Europe. The various contributors to the study analyze the physical environment (with a case study of Lake Peipsi), the administrative and political environment (with a case study of the Baltic states), qualitative scenarios, quantitative scenarios and modeling, and communications with stakeholders and the public.

Bryan A. **Green**, The Guarani Aquifer & International Groundwater Law: Advancing Towards A Legal Framework For The Management Of A Transboundary, 13 U. Denv. Water L. Rev. 361 (2011).

Robin **Gregory**, Tim McDaniels, & Daryl Fields, Decision Aiding, Not Dispute Resolution: Creating Insights through Structured Environmental Decisions, 20(3) J.Pol'y Analysis & Mgmt. (2001).

Robin **Gregory** & Lee Failing, Using decision analysis to encourage sound deliberation: Water use planning in British Columbia, Canada, 21 J.Pol'y Analysis & Mgmt. 492 (2002).

Alex **Grzybowski**, Stephen C. McCaffrey, & Richard K. Paisley, Beyond International Water Law: Successfully Negotiating Mutual Gains Agreements for International Watercourses, Pac. McGeorge Global Bus. & Dev. L.J. 139 (2010).

Joyeeta **Gupta**, Integrated River Basin Governance: Learning from International Experience - by Bruce Hooper, 16(1) Review of European Community & International Environmental Law 115 (2007).

John S. **Hammond**, Ralph L. Keeney, & Howard Raiffa, Smart Choices: A Practical Guide to Making Better Decisions, (1999).

Jesse H. **Hamner** & Aaron T. Wolf, Patterns in International Water Resource Treaties: The Transboundary Freshwater Dispute Database, 9 Colo. J. Int'l Env'tl. L. & Pol'y 157 (1998).

While water conflicts can exacerbate tensions between countries, water much more often tends to serve as a catalyst for cooperation and deserves to be more thoroughly studied. Oregon State University has created a database which qualitatively and quantitatively assesses international water resource treaties regarding the following criteria: (a) basin involved; (b) principal focus; (c) number of signatories; (d) non-water linkages (such as money, land, or concessions in exchange for water supply or access to water); (e) provisions for monitoring, enforcement, and conflict resolution; (f) method and amount of water division, if any; and (g) the date signed.

Reference and Training Manual

Rognvaldu **Hannesson**, The Development of Economic Institutions in World Fisheries, World Development Report (2003).

As fish stocks move between waters that are in the jurisdiction of more than one country, the international dimension is inherent in any regulation of the fisheries. As the fisheries are common property, they need to be managed in order to maximize material benefits in the long run. As making fish stocks private property is not feasible, there needs to be an appropriate definition of use rights that divides tasks between the private sector and the government. While the private sector's role is to maximize economic returns, the private sector also needs to have a stake in preserving the productivity of the fish stocks and in supporting the government's efforts in this regard.

Robert D. **Hayton** & Albert D. Utton, Transboundary Groundwaters: The Bellagio Draft Treaty, 29 Nat. Resources J. 663 (1989).

As international law and treaty practice concerning transboundary groundwaters was only in its beginning stage, a multi-disciplinary group of specialists developed a draft international groundwater treaty. The draft treaty addresses contamination, depletion, drought, transboundary transfers, withdrawal, and recharge issues. While only a limited amount of substantive discretion would be given to the joint agency, the agency would be instructed to take the initiative to confront the full range of problems concerning transboundary groundwater.

Keith **Hayward**, Supporting Basin-Wide Reforms with an Independent Assessment Applying International Water Law: Case Study of the Dnieper River, 18 Colo. J. Int'l Envtl. L. & Pol'y 633 (2007).

Acknowledgement of the requirements of international law can be helpful to states in shaping international water treaties. Using the Dnieper River in Eastern Europe as an example, the author identifies how an independent assessment can identify potential improvements in ongoing reforms of the legal regime governing a river basin. An assessment and the subsequent recommendations for the river basin characteristics, uses, and issues were done by the author according to a structured methodology.

Glen S. **Hearns**, Analysis of Process Mechanisms Promoting Cooperation in Transboundary Waters, (2009) (Ph.D. Dissertation, University of British Columbia) (On file with author).

Glen S. **Hearns** & William G. Stormont, Managing Potential Conflicts in the South China Sea, 20(2) Marine Policy 177 (1996).

B. Timothy **Heinmiller**, Partners and Competitors: Intergovernmental Relations and the Governance of Transboundary Common Pools, (2004) (Ph.D. Thesis, McMaster University) (On file with Library and Archives Canada and online at <http://www.collectionscanada.gc.ca/obj/thesescanada/vol2/002/nq97777.pdf>).

The **Helsinki Rules** (Campioni Consolidation) and the Commentary to the Helsinki Rules on the Uses of the Waters of International Rivers, Arts. J- XI 4, ILA Report of the Fifty-Second Conference 484 (1966, 1987).

Reference and Training Manual

Ellen **Hey**, Sustainable Use of Shared Water Resources: The Need for a Paradigmatic Shift in International Watercourses Law, in The Peaceful Management of Transboundary Resources 127 (Gerald H. Blake, et al. eds. 1995).

B.F. **Hobbs** & Peter Meier, Energy Decisions and the Environment: A Guide to the Use of Multicriteria Methods, (2000).

A. **Hoekstra**, Global Dimension of Water Governance, Presented at Governance and the Global Water System, Bonn (Jun. 20-25, 2006).

James L. **Huffman**, Comprehensive River Basin Management: The Limits of Collaborative, Stakeholder-based, Water Governance, 49(1) Nat. Resources J 117 (2009).

Implementing a New Paradigm for Transboundary Basins, The International Watersheds Initiative (Oct. 25, 2010)

<http://www.wilsoncenter.org/ondemand/index.cfm?fuseaction=home.play&mediaid=BDBA4F94-A0B6-5E75-56E8750378665434>.

International Development Association, Regional Cooperation and Benefit Sharing in the Senegal River Basin, World Bank (Oct. 25, 2010)

http://siteresources.worldbank.org/EXTWAT/Resources/Senegal_River_Bain_Feature_Story.pdf.

International Waters Learning Exchange and Resource Network, (Oct. 25, 2010)

<http://www.iwlearn.net/publications/II>.

The GEF (Global Environment Facility) produces documents, reports, and project case studies concerning international waters focal areas in order to publicize relevant experiences around the world. Covered transboundary waters include: the Danube River Basin, the Aral Sea, the western Indian Ocean, the Kariba Reservoir, Lake Chad, Lake Naivasha, Lake Victoria, the South China Sea, and Lake Titicaca among many others. In addition, the reports establish guidelines for such topics as enhancing public participation, adapting to climate change, and measuring societal impact.

Internationally Shared Aquifer Resource Management, (ISARM) Programme, (Oct. 25, 2010)

<http://www.isarm.net/>.

ISARM is a joint initiative led by UNESCO and IAH (International Association of Hydrogeologists). It is a multi-agency effort to improve knowledge of the scientific, socio-economic, legal, institutional, and environmental aspects of the management of transboundary aquifers. The scope of ISARM's activities includes: (a) publication of the inventories of internationally shared aquifers; (b) improvement of standard monitoring procedures; (c) organizational of regional workshops and international conferences; (d) cooperating on the implementation of the UNECE guidelines for the monitoring and assessment of transboundary groundwaters; and (e) preparation of a bibliography and database on internationally shared aquifers.

Lisa M. **Jacobs**, Sharing the Gifts of the Nile: Establishment of a Legal Regime for Nile Waters Management, 7(1) Temp. Int'l & Comp. L.J. 95 (1993).

Reference and Training Manual

Libor **Jansky**, Nevelina I. Pachova, & Masahiro Murakami, The Danube: A Case Study of Sharing International Waters, 14 *Global Environmental Change Part A: Human & Policy Dimensions* 39 (2004).

Frank G.W. **Jaspers**, Institutional Arrangements for Integrated River Basin Management, 5 *Water Policy* 77 (2003).

Christopher C. **Joyner**, Rethinking International Environmental Regimes: What Role for Partnership Coalitions?, 89 *J. Int'l L. & Int'l Rel.* (2005).

Governments create international agreements to deal with environmental, economic, technological, and legal problems that they cannot solve by themselves. In the absence of a supranational government, governments of states realize that they need new rules, multilateral institutions, and governance structures to promote cooperation, prevent and resolve conflicts, and facilitate information sharing between like-minded parties. This strategy is particularly evident in the establishment over the past four decades of several international regulatory regimes for the protection and management of certain environmental conditions of worldwide concern.

The direction and success of that strategy warrants rethinking early in the twenty-first century. A number of questions are now apparent: Is the creation of multilateral protection regimes, while unquestionably necessary, really sufficient to control environmental problems on a global basis? Has the tide shifted from mega-conference diplomacy and reliance on multilateral environmental agreements towards implementing more localized, domestic initiatives of environmental regulation, in particular, the resort to forming like-minded group coalitions (such as partnerships) to work in concert on remedies for environmental problems affecting an area or a region? If such considerations are lacking, has the time arrived for a shift in international strategy that aims to enhance the prospects for implementing more effective management of the environment at the local level? While today salient, these thoughts seem to remain more political contemplation than legal fact, more theoretical rumination than actual conduct.

This article addresses these queries by clarifying the nature of partnership coalitions within the mix of solutions that special regimes might use for managing the global environment. The second section sets out the nature of the regimes that are available as multilateral regulatory mechanisms for effecting environmental protection and management. In this regard, Section III addresses the notion of partnerships--or like-minded coalitions of groups--as instruments for implementing these regimes at the sub-national level. In doing so, the analysis treats both the advantages of resorting to partnerships for regime implementation at the local level, as well as the encumbrances they bring as pieces of the global regulatory puzzle. Finally, the article concludes by assessing the place of partnerships as a practical means for implementing those regimes already in place.

Lawrence **Juda** & Timothy Hennessey, Governance Profiles and the Management and Use of Large Marine Ecosystems, 32 *Ocean Dev. & Int'l L.* 43 (2001).

Bradley **Karkkainen**, Marine Ecosystem Management & a Post-Sovereign Transboundary Governance, 6 *San Diego Int'l L.J.* 113 (2004).

Ralph L. **Keeney** & Howard Raiffa, Decisions with Multiple Objectives: Preferences and Value Trade-offs, (1976).

Ralph L. **Keeney**, Value-focused Thinking: A Path to Creative Decision Making, (1992).

Reference and Training Manual

Aysegul **Kibaroglu**, Building a Regime for the Waters of the Euphrates-Tigris River Basin, (2002).

Joseph Aseka **Kitakarugire**, Managing Shared Aquifer Resources in Africa—Uganda Case, in Internationally Shared (Transboundary) Aquifer Resources Management: Their Significance and Sustainable Management 171 (Shammy Puri ed. 2001).

Part of a United Nations Educational, Scientific and Cultural Organization framework document, this case study provides an overview of Uganda's geography, geology, and hydrogeology, followed by a summary of groundwater monitoring and assessment activities. Study results point to a clear need for detailed assessment and monitoring of potential transboundary aquifers in Uganda and neighboring countries.

Nurit **Kliot**, Deborah Shmueli, & Uri Shami, Development of Institutional Frameworks for the Management of Transboundary Water Resources, Int. J. Global Env'tl. Issues 306 (2001).

The authors studied nine river basins and divided them into three categories – highly committed (Colorado, Niger, Rio Grande and Senegal), mid-level cooperation (Danube, Elbe and Mekong), and least cooperative (Ganges-Brahmaputra and Indus). The authors describe the ideal institutional model for transborder water resources as a basin-wide multipurpose institution. But very few of the investigated rivers satisfied this ideal. Instead, competition among various water users and users is growing rapidly.

Johan G. **Lammers**, Pollution of International Watercourses: A Search for Substantive Rules and Principles of Law, (1984).

Jakub **Landovsky**, Institutional Assessment of Transboundary Water Resources Management, Human Development Report (2006).

The author adopts the Complex Adaptive System (CAS) theory as a theoretical framework for the institutional assessment of transboundary water resources management models and to differentiate between resilient and vulnerable water institutions. The main reasons for choosing this framework are: (a) the complexity of relations in each watershed; (b) the non-linear relation between causes and effects; and (c) the prevailing uncertainty. The CAS focuses on geopolitical stressors, socio-economical stressors, and biophysical stressors. Under this measure, the number of resilient water institutions will decrease with the growth of stressor intensity.

Coalter G. **Lathrop**, Finding the Right Fit: One Design Element in the International Groundwater Resource Regime, 19(3) Duke J. Comp. & Int'l L. 413 (2009).

Coalter G. **Lathrop**, Finding The Right Fit: One Design Element In The International Groundwater Resource Regime, 19 Duke J. Comp. & Int'l L. 413 (2009).

Lee A. **Laudicina**, International Water Disputes: How to Prevent a War Over The Nile River, 4 Loy. U. Chi. Int'l L. Rev. 235 (2007).

Jonathan **Lautze** & Mark Giordano, Equity in Transboundary Water Law: Valuable Paradigm or Merely Semantics?, 17 Colo. J. Int'l Env'tl. L. & Pol'y 89 (2006).

Reference and Training Manual

The author developed a quantitative methodology to measure equity in transboundary water allocations and used it to compare water allocation agreements in Africa that purport to consider equity with those agreements that do not. This comparison showed that agreements referring to equity differ substantively from those that do not and do divide water in a more equitable manner.

Jonathan **Lautze** & Mark Giordano, Transboundary Water Law in Africa: Development, Nature, and Geography, 45 Nat. Resources J. 1053 (2005).

The authors analyze and categorize the African transboundary water agreements in order to provide insight into the evolution and geography of transboundary water law in Africa and give guidance for future institutional development. There is a historical trend in Africa, which mirrors the global trend, towards increasing robustness in water agreements. But, water agreements vary based on the degree and type of water scarcity in the relevant basins.

David J. **Lazerwitz**, The Flow of International Water Law: The International Law Commission's Law of the Non-Navigational Uses of International Watercourses, 1 Ind. J. Global Legal Stud. 247 (1994).

The recognition of the importance of water in international relations and the need for cooperation in protecting international rivers led the International Law Commission to develop a treaty structure for the non-navigational uses of international watercourses. In addition to incorporating traditional international law principles, the draft treaty provides for a wider scope of ecosystem protection and equitable utilization standards designed to balance the development of water resources among riparian states. The author analyzes the strengths and weaknesses of the draft provisions and recommends some changes to the draft treaty.

David G. **Le Marquand**, International Rivers: The Politics of Cooperation, (1977).

Guy **Le Moigne**, Ashok Subramanian, Mei Xie & Sandra Giltner eds., A Guide to the Formulation of Water Resources Strategy, World Bank Tech. Paper No. 263 (1994).

This paper outlines comprehensive processes for a country to follow in developing a successful resources management strategy. This includes: (a) institutional and human resources issues (including laws, regulations, and organization); (b) the development of adequate information systems; (c) the participation of those concerned with or having an interest in water resources ("stakeholders") in the strategy formulation process; (d) the use of economic principles (including cost-recovery) in water resources management; (e) consideration of the environmental and public health aspects of water resources management; and (f) working with other countries or regions to manage international resources successfully.

Guy **LeMoigne**, Shawki Berghouti, Lisa Garbus, Mei Xie & Gershon Feder eds., Country Experiences with Water Resources Management: Economic, Institutional, Technological & Environmental Issues, World Bank Technical Paper Number 175 (1992).

Joanne **Linnerooth**, The Danube River Basin: Negotiating Settlements to Transboundary Environmental Issues, 30 Nat. Resources J. 629 (1990).

Reference and Training Manual

S. **Levesque**, The Yellowstone to Yukon Conservation Initiative: Reconstructing Boundaries, Biodiversity, and Beliefs, in Reflections on Water: New Approach to Transboundary Conflict and Cooperation 123 (Joachim Blatter & Helen Ingram eds. 2001).

C.M. **Lorenz**, A.J. Gilbert & P. Vellinga, Sustainable Management of Transboundary River Basins: A Line of Reasoning, 2(1) Regional Environmental Change 38 (2001).

Chris M. **Maduabuchi**, Case Studies on Transboundary Aquifers in Nigeria, in Internationally Shared (Transboundary) Aquifer Resources Management: Their Significance and Sustainable Management 135 (Shammy Puri ed. 2001).

Part of a United Nations Educational, Scientific and Cultural Organization framework document, this case study examines the three major Nigerian sedimentary aquifer systems extending beyond her boundary: the Chad Basin, Sokoto Basin (part of the larger Iullemeden Basin), and Dahomeyan Basin. These multilayered aquifer systems are described as under sustainable exploitation with isolated cases of progressive decline. The author discusses activities and issues in the formulation of an effective management plan for sustainable development.

F. **Marty**, International River Management: Problems Politics and Institutions, (2001).

J. **Mbalwa**, Causes and possible solutions to water resource conflicts in the Okavongo River Basin: The case of Angola, Namibia and Botswana. 29 (15-18) Physica and Chemistry of the Earth 1319 (2004).

Stephen C. **McCaffrey**, The Evolution of the Law of International Watercourses, 45 Austrian J Public and Int'l L. 88 (1993).

Stephen C. **McCaffrey**, The Contribution of the UN Convention on the Law of the Non-Navigational Uses of International Watercourses, 1(3-4) International Journal of Global Environmental Issues 250 (2001).

Stephen C. **McCaffrey**, Water Disputes Defined: Characteristics and Trends for Resolving Them, in The Resolution of International Water Disputes (International Bureau of the Permanent Court of Arbitration eds.) The Sixth International Law Seminar, The Hague (2002).

Stephen C. **McCaffrey**, The International Law Commission Adopts Draft Articles On Transboundary Aquifers, Am. J. Int'l. L., 272 (2009).

Matthew **McKinney**, Managing Transboundary Natural Resources: An Assessment of the Need to Revise and Update the Columbia River Treaty, Hastings W. Nw. J. Env'tl. L. & Pol'y (2010).

Kerstin **Mechem**, International Law Commission Adopts Draft Articles of a Transboundary Aquifers Convention, American Society of International Law (Aug. 27, 2008), <http://www.asil.org/insights080827.cfm>.

In August 2008, the International Law Commission adopted landmark draft articles for an international framework convention on transboundary aquifers. Prior to this effort, few treaties or other legal instruments exclusively addressed groundwater. These draft articles cover: (a) the utilization of transboundary aquifers; (b) other activities that have or are likely to have an impact upon those aquifers; and (c) measures for the protection, preservation, and management of transboundary

Reference and Training Manual

aquifers. The draft articles also encompass customary international law on water resources – equitable and reasonable utilization, the obligation not to cause significant harm, and the obligation to cooperate.

Kerstin **Mechlem**, Moving Ahead in Protecting Freshwater Resources: The International Law Commission's Draft Articles on Transboundary Aquifers, L.J.I.L., 801 (2009).

Martin F. **Medeiros**, Transboundary Water Rights: A Valuation for Efficient Allocation, 1 Tulsa J. Comp. & Int'l L. 157 (1993-1994).

Existing water regimes distort efficient allocation of water resources and create waste. Various treaties, cases, and codes related to water management demonstrate the problems inherent in transboundary water dispute resolution. Instead of the current approach of administratively determined allocations of water, a market-based approach grounded on the initial equitable apportionment threshold would be the best method for water management.

Dereje Zeleke **Mekonnen**, The Nile Basin Cooperative Framework Agreement Negotiations and the Adoption of a 'Water Security' Paradigm: Flight into Obscurity or a Logical Cul-De-Sac?, 21 Eur. J. Int'l L. 421 (2010).

Kefyalew **Mekonnen**, The Defects and Effects of Past Treaties and Agreements on the Nile River Waters: Whose Faults Were They?, MediaEthiopia.com (Oct.23, 2010), <http://www.ethiopians.com/abay/engin.html>.

Michela **Miletto** & Roberto Kirchheim, The Invisible Resource - Transboundary Aquifers: An Opportunity for International Cooperation, Organization of American States: Policy Series Number 3 August 2004 (Oct. 23, 2010) http://www.oas.org/dsd/policy_series/3_eng.pdf.

This Organization of American States, Unit for Sustainable Development & Environment (OAS/USDE), policy brief summarizes the role and involvement of the OAS in promoting integrated water resources management (IWRM) principles and schemes, which encompasses transboundary aquifers. The authors describe various OAS/USDE IWRM projects in different stages of planning or completion, serving as examples of regional collaboration. Combined with a preview of future plans and opportunities, this policy brief reflects OAS/USDE's commitment "to the full integration of groundwater into land-water resources management and to advancing the sustainable use of America's numerous transboundary aquifers.

Lenard **Milich** & Robert G. Varady, Openness, Sustainability and Public Participation: New Designs for Transboundary River Basin Institutions, 8(3) Journal of Environment and Development 258 (1999).

Amy K. **Miller**, Blue Rush: Is an International Privatization Agreement a Viable Solution for Developing Countries in the Face of an Impending World Water Crisis?, 16 Ind. Int'l & Comp. L. Rev. 217 (2005).

Ziad A. **Mimi** & Bassam I. Sawalhi, A Decision Tool for Allocating the Waters of the Jordan River Basin between all Riparian Parties, 17 Water Resources Management 447 (2003).

François **Molle**, & Chu Thai Hoanh, Implementing Integrated River Basin Management: Lessons from the Red River Basin, Vietnam, Int'l Water Mgmt. Inst. Research Report No. 131 (2009).

Reference and Training Manual

Monitoring and Evaluation Guidelines for World Bank-GEF International Water Projects, World Bank Global Environment Division (1996).

These guidelines are designed to assist World Bank task managers with the monitoring and evaluation of international waters projects (including coastal zone and large marine ecosystems, freshwater basin ecosystems, and transboundary groundwater ecosystems). Effective management of transboundary water systems relies on coordinated national and regional institutional arrangements for monitoring and evaluation. First, there must be an initial assessment consisting of existing information concerning the project and its regulatory framework. There are also project performance indicators designed to measure efforts to curtail environmental degradation or improve environmental quality. Environmental performance indicators measure the project's specific contributions to the solution of specific environmental problems. Pressure indicators measure the underlying forces driving environmental degradation. Response indicators measure the policies and actions adopted in response to environmental problems (such as tracking the progress of treaty agreements, budget commitments, research, regulatory compliance, changes in the incentive framework, or voluntary modifications in resource use or management practices).

Eric **Mosert**, Conflict and Co-Operation in International Freshwater Management: A Global Review, 1(3) International Journal of River Basin Management 1 (2003).

Stephen P. **Mumme**, Advancing Binational Cooperation in Transboundary Aquifer Management on the U.S.-Mexico Border, 16(1) Colo. J. Int'l Env'tl. L. & Pol'y 77 (2005).

Stephen P. **Mumme**, Developing Treaty Compatible Watershed Management Reforms for the U.S.-Mexico Border: the Case for Strengthening the International Boundary and Water Commission, 30(4) N.C. J. Int'l L. & Com. Reg. 929 (2005).

Mikiyasu **Nakayama**, Successes and Failures of International Organizations in Dealing with International Waters, 13(3) Water Resources Development 367 (1997).

Deepa **Narayan**, Participatory Evaluation: Tools for Managing Change in Water and Sanitation, World Bank Tech. Paper No. 207 (1993).

Participatory development (which involves users and communities in all stages of the development process) is critical for achieving sustained benefits in water and sanitation. But, participatory development requires major institutional reorientation on the part of the governments to ensure responsiveness to local demands and to empower communities to act. There needs to be mechanisms that allow for learning, correction, and adjustment. This requires a clear set of objectives and indicators of success which promote accountability and participation and that can be monitored and evaluated.

NOAA, The Large Marine Ecosystem Approach to the Assessment and Management of Coastal Ocean Waters: Introduction to the LME Portal, Large Marine Ecosystems of the World (2004), http://www.lme.noaa.gov/index.php?option=com_content&view=article&id=47&Itemid=41.

Susanna **Nilsson** & Sindre Langaas, International River Basin Management under the EU Water Framework Directive: An Assessment of Cooperation and Water Quality in the Baltic Sea Drainage Basin, 35(6) AMBIO - A Journal of the Human Environment 304 (2006).

Reference and Training Manual

A. **Nollkaemper**, The Contribution of the International Law Commission to International Water Law: Does it Reverse the Flight from Substance?, 27 Netherlands Yrbk Int'l L 44 (1996).

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 Env'tl. L. & Pol'y 331 (1998).

C.O. **Okidi**, The State and the Management of International Drainage Basins in Africa, 28(4) Nat. Resources J. 645 (1988).

Stephen B. **Olsen**, Jon G. Sutinen, Lawrence Juda, Timothy M. Hennessey & Thomas A. Grigalunas, A Handbook on Governance and Socioeconomics of Large Marine Ecosystems, Coastal Resources Center, University of Rhode Island (2006).

Richard K. **Paisley** & Timothy L. McDaniels, International Water Law, Pollution Risk and the Tatshenshini River, 35 Nat. Res. J. 111 (1995).

Richard K. **Paisley**, Adversaries Into Partners: International Water Law and the Equitable Sharing of Downstream Benefits, 3 Melbourne Journal of International Law 280 (2002).

Richard K. **Paisley**, International Water Law, Transboundary Water Resources and Development Aid Effectiveness, 1 Indian Jurid. Review 67 (2004).

Richard K. **Paisley**, Cuauhtémoc León, Boris Graizbord & Eugene Bricklemeyer, Jr., Transboundary Water Management: An Institutional Comparison among Canada, the United States and Mexico, 9(2) Ocean & Coastal L.J. 177 (2004).

Richard K. **Paisley** & Glen Hearn, Some Observations from Recent Experiences with the Governance of International Drainage Basins, in Precious, Worthless or Immeasurable: the Value and Ethics of Water 103 (A.C. Corrêa and Gabriel Eckstien eds. 2006).

David **Phillips**, Marwa Daudy, Stephen McCaffrey, Joakim Ojendal & Anthony Turton, Trans-boundary Water Cooperation as a Tool for Conflict Prevention and for Broader Benefit-Sharing, Ministry of Foreign Affairs, Government of Sweden (2006).

Halla **Qaddumi**, Practical Approaches to Transboundary Water Benefit Sharing, Overseas Development Institute Working Paper 292 (2008).

The rising demands associated with rapid population growth and economic growth are placing increasing pressure on fragile and finite water resources. Under a benefit sharing regime, the focus would be switched from physical volumes of water to various values derived from water use (such as benefits in the economic, social, political, and environmental spheres). Various mechanisms need to be put in place foster this transboundary benefit sharing in order to operationalize this framework so riparian states will come to view water management issues as one of positive-sum outcomes (as opposed to zero-sum outcomes).

Reference and Training Manual

G. T. Raadgever, Erik Mostert, Nicole Kranz, Eduard Interwies & Jos G. Timmerman, Assessing Management Regimes in Transboundary River Basins: Do They Support Adaptive Management?, 13(1) *Ecology & Society* 1 (2008).

Muhammad Mizanur **Rahaman**, Integrated Water Resources Management in the Ganges Basin: Constraints and Opportunities, (2005) (Ph.D. Dissertation, Helsinki University of Technology), (On file online at <http://www.water.tkk.fi/wr/tutkimus/thesis/Rahaman2005.pdf>).

Robert **Rangeley**, Bocar M. Thiam, Randolph A. Andersen & Colin A. Lyle, International River Basin Organizations in Sub-Saharan Africa, World Bank Tech. Paper No. 250 (1994).

The paper reviews eleven regional and River Basin Organizations (RBOs) whose role is to promote studies and construction of works that lead to an integrated, economically and environmental sustainable and technically sound development of river basin resources. The paper finds that RBO performance varies considerably. Of the RBO functions, planning has been the least successful except where assigned to international consultants. The paper stresses a need to develop greater planning capacity if projects are to be “objectively and well prepared for financing and implementation.” RBO data collection and processing has met with mixed success, except where sub-contracted to specialist national agencies. RBOs in sub-Saharan Africa rely largely on assistance of external support agencies, but there is a better need for collaboration, especially with regard to “focused” objectives to avoid donor fatigue.

Alistair **Rieu-Clarke**, An Overview of Stakeholder Participation - What Current Practice and Future Challenges? Case study of the Danube Basin. 18(3) *Colo. J. Int'l Envtl. L. & Pol'y* 611 (2007).

Daniel J. **Rohlf**, Lessons from the Columbia River Basin: Follow the Blueprint but Avoid the Barriers, 19(1) *Pac. McGeorge Global Bus. & Dev. L.J.* 195 (2006).

Barry **Sadler**, Shared Resources, Common Future: Sustainable Management of Canada-United States Border Waters, 33(2) *Nat. Resources J.* 375 (1993).

Claudia **Sadoff** & David Grey, Beyond the River: the Benefits of Cooperation on International Rivers, 4(5) *Water Policy* 389 (2002).

Claudia **Sadoff** & David Grey, Cooperation on International Rivers: A Continuum for Securing and Sharing Benefits, 30 *Water Int'l* 4, 1 (December 2005).

R. Maria **Saleth**, & Ariel Dinar, Water Challenge and Institutional Response (A Cross-Country Perspective), World Bank Policy Working Paper No. 2045 (1999).

This study looks at common trends and patterns changing water institutions, informal water law, water policy, and water administration and asks whether it is possible to use cross-country experience to derive an international agenda for encouraging institutional change within the water sector. The study relies on a combination of field-based appraisal technique and judgmental perception of water sector experts obtained via survey and comparatively evaluates water institutions in Mexico, Chile, Brazil, Spain, Morocco, Israel, South Africa, Sri Lanka, Australia, China and India. The authors' preliminary evaluation is that key issues of resource development and water quantity have been replaced by resource allocation and water quality rooted in decentralized allocation, economic

Reference and Training Manual

instruments and stakeholder participation. The authors recommend, *inter alia*, an integrated approach to water sector reform as well as the modernization and strengthening of the legal, policy and administrative arrangements governing water sectors.

Salman M.A. **Salman** & Laurence Boisson de Chazournes eds., International Watercourses: Enhancing Cooperation and Managing Conflict, World Bank Technical Paper No. 414. (1998).

Salman M.A. **Salman**, Groundwater: Legal and Policy Perspectives, World Bank Technical Paper No. 456. (1999).

Philippe **Sands**, Watercourses, Environment and the International Court of Justice: The Gabčíkovo-Nagymaros Case, in International Watercourses: Enhancing Cooperation and Managing Conflict, Proc. of a World Bank Seminar 121 (Salman M. A. Salman & Laurence Boisson de Chazournes, eds. 1998).

Saving Fish and Fisheries: Towards Sustainable and Equitable Governance of the Global Fishing Sector, World Bank Report No. 29090-GLB (2004).

Absent a coordinated effort by the global community to improve fisheries management, some of the world's main fisheries are under an imminent threat of collapse as fisheries are overfished, catches are declining, and fishers' livelihoods are degrading along with the natural ecosystem they exploit. Some countries have already pioneered proven good practices to support sustainable fisheries management. These practices are: (a) strengthening co-management between the fishers and governments; (b) establishment of Marine Protected Areas; (c) changing exploitation patterns; (d) restocking and stock enhancement programs; (e) fishing capacity reduction; (f) aquaculture; (g) certification and food safety programs for fish products; and (h) promotion of alternative livelihoods.

John T. **Scholz** & Bruce Stiftel eds., Adaptive Governance and Water Conflict: New Institutions for Collaborative Planning, (2005).

Anna **Schulz**, Creating a Legal Framework for Good Transboundary Water Governance in the Zambezi and Incomati River Basins, 19 Geo. Int'l Env'tl. L. Rev. 117 (2006-2007).

The author evaluates the role of legal frameworks in achieving good transboundary water governance within the Zambezi and Incomati River Basins. The author also examines the characteristics of good governance and the relationship between legal and governance systems. She concludes that the basic elements of sound legal frameworks to promote good water governance exist within these two African basins, despite weakness within their legal systems.

Shirley V. **Scott**, The Problem of Unequal Treaties in Contemporary International Law: How the Powerful have Reneged on the Political Compacts within which Five Cornerstone Treaties of Global Governance are Situated, Int'l L. & Int'l Rel. 101 (2008).

This article considers a phenomenon common to five cornerstone treaty regimes of global governance: those founded on the Charter of the United Nations (UN Charter), the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), the Third United Nations Convention on the Law of the Sea (LOSC), the General Agreement on Tariffs and Trade and Marrakesh Agreement establishing the World Trade Organization (GATT/WTO), and the United Nations Framework Convention on Climate Change

Reference and Training Manual

(UNFCCC). The vast majority of States have given their consent to these treaties, begging the question as to why the less powerful have agreed to treaties that in several instances appear to have favoured the interests of the most powerful. It will be seen that in each case the less powerful States agreed to the terms of the treaty as part of what they perceived to be a broader political compact with the most powerful States in that treaty regime. In each case the most powerful have reneged on their side of that compact. Viewing five of the cornerstone treaties of global governance as each situated within a political compact on which the most powerful have reneged can help us better to understand the depth of disappointment which has underpinned accusations of non-compliance in some of these regimes and the difficulty of reaching fresh political accommodations between powerful and less powerful being experienced within other regimes. The article concludes that the dissatisfaction emanating from a perception that the most powerful have consistently reneged on compacts made during the negotiation of treaties central to the emergent system of global governance may well have contributed to a diminishing association of international law with justice and to the 'legitimacy deficit' from which the contemporary system of international law is said to suffer.

James M. **Sebastian**, From Procedure to Regulations: A Look at the Mekong River Regime (2008) (M.A. Thesis, University of Regina) (On file with Library and Archives Canada).

Kenneth **Sherman**, Large Marine Ecosystems: A Case Study, Proceedings of the Annual Conference of the Law of the Sea Institute, 97 (1989).

Kenneth **Sherman**, Marie Christine Aquarone and Sara Adams eds., Sustaining the World's Large Marine Ecosystems, International Union for Conservation of Nature and Natural Resources (2009).

Waltina **Sheumann** & Manuel Schiffler eds., Water in the Middle East: Potential for Conflicts and Prospects for Cooperation, (1998).

Shantarene **Shungur**, Cooperation Among Adversaries: Managing Transboundary Water Disputes in Conflict Settings (2005) (Ph.D. Dissertation, McGill University) (On file with Library and Archives Canada).

Jennifer Dianne **Skilbred**, Management Analysis of an Internationally Shared Waterbody: The Yellow Sea Large Marine Ecosystem (May 5, 2006) (M.A. Thesis, Duke University) (On file with University).

Internationally shared waterbodies face a difficult set of management challenges, and many are being exploited at unsustainable rates. This report looks at the United Nations Environment Program's Regional Seas Program and the Large Marine Ecosystem (LME) concept, which have been developed as management tools for improving the sustainability of transboundary marine ecosystems. The Yellow Sea LME is possibly the most intensively exploited and degraded LME worldwide. Six management options were reviewed using criteria developed to discover the best path towards sustainable marine resource use. The most promising option is to combine an expanded version of the current programs with a community-based management component to ensure quicker implementation of programs and to increase community involvement. International management plans of shared areas are extremely difficult to put in place in a way that satisfies all constituents as well as meets all goals, combining the use of tools such as ecosystem and community based management may be most effective at achieving project goals.

Reference and Training Manual

E. **Somers**, Legal Constraints and Options for Total Ecosystem Management of Large Marine Ecosystems, in *Large Marine Ecosystems of the Indian Ocean: Assessment, Sustainability, and Management* (Kenneth Sherman, Ezekiel N. Okemwa & Micheni J. Ntiba eds. 1998).

Bertram I. **Spector**, Motivating Water Diplomacy: Finding the Situational Incentives to Negotiate, 5 *International Negotiation* 223 (2004).

Stephens Consulting, Strengthening Management and Administrative Arrangements of the Nile Basin Initiative Secretariat 3 (April 2006).

Amy Lauren **Suker**, Managing Transboundary Water Resources: An Analysis of Canadian-American Interlocal Cooperation (2001) (Ph.D. Thesis, University of Texas) (On file with University Microfilms International).

Attila **Tanzi** & Maurizio Arcari, The United Nations Convention on the Law of International Watercourses: A Framework for Sharing, 5 *International and National Water Law and Policy Series* 142 (2001).

A. Dan **Tarlock**, Four Challenges For International Water Law, 23 *Tul. Env'tl. L.J.* 369 (2010).

A. Dan **Tarlock** & Patricia Wouters, Are Shared Benefits of International Waters an Equitable Apportionment?, 18 *Colo. J. of Int'l Env'tl. L. & Pol'y* 523 (2007).

A. Dan **Tarlock**, Safeguarding International River Ecosystems in Times of Scarcity, 3 *U. Denv. Water L. Rev.* 231 (2000).

This article concludes that international water law is shifting from “multiple-use” to environmentally sustainable development and management to promote aquatic biodiversity. While historically environmental problems have been addressed by damages or mitigation efforts post hoc, increasingly international environmental law is approaching pollution and destruction through precautionary or preventive principles and States are encouraged to present problems before, not after, development occurs through “cooperative, ongoing management regimes.” Although this shift was partially reflected in the 1997 United Nations Convention on the Law of the Non-Navigational Uses of International Watercourses and the ICJ Gabčíkovo-Nagymaros Dam decision, the law in this area needs further development.

Ludwik A. **Teclaff**, Experiences in the Development and Management of International River and Lake Basins, 79(3) *Am.J.Int'l.L.* 811 (1985).

Jos G.**Timmerman** & Sindre Langaas, Water Information: What is it Good For? The Use of Information in Transboundary Water Management, 5 *Reg. Environ Change* 177 (2005).

Consistent and relevant information on the status of water systems is indispensable for efficient transboundary water management as information is used to support decision-making and to evaluate the effects of decisions. Information production needs to move beyond just ecological components of water bodies and include socio-economic data on human activities in the river basin. Furthermore, organizational structures are insufficiently tuned to the needs of the external environment.

Reference and Training Manual

Transboundary Freshwater Dispute Database, Oregon State University (2002), www.transboundarywaters.orst.edu.

Juha I **Uitto** & Alfred M Duda, Management of Transboundary Water Resources: Lessons From International Cooperation for Conflict Prevention, 168 *The Geographic Journal* 365 (2002).

Institutional structures can enhance cooperation and reduce the possibility of conflict concerning the sustainable development of transboundary freshwater bodies and contributing basins. Experiences in Africa, Central Asia, and Latin America show the need to bring together all sectors and actors whose actions affect the transboundary water body at local, regional, and national levels. Science-based diagnostic analysis can identify the threats to the transboundary ecosystem and break down the issue into parts in order to develop a strategic action program. Political commitment is also necessary to bring about the needed institutional, policy, and legal reforms.

UN Water, Water: A Shared Responsibility, the United Nations World Water Development Report 2, (2006).

United Nations Convention on the Law of the Non-navigational Uses of International Watercourses, (May 21, 1997), A/RES/51/229.

The UN Watercourses Convention would impose an obligation not to cause significant harm in utilizing international watercourses in their territories. If a use is perceived to be harmful, member states would have to negotiate a mutually acceptable solution – with options for arbitration for arbitration before uninvolved states or the International Court of Justice. There are also requirements for information sharing, emergency use, damage control from pollution or non-native species, and managing damages from drought or erosion. The UN Watercourses Convention is based on the ILC draft articles on international watercourses. The UN Watercourses Convention has not yet entered into force.

United Nations Convention on the Law of the Sea, (Dec. 10, 1982), 1833 U.N.T.S. 397.

The UN Convention on the Law of the Sea enumerates the rights and responsibilities of countries in their use of the world's oceans. In addition, the UN Convention establishes guidelines for the environment, businesses, and the management of marine resources. The UN Convention entered into force in 1994, and is now regarded as customary international law for water resources.

Albert E. **Utton**, Which Rule Should Prevail in International Water Disputes: That of Reasonableness or That of No Harm, 36 *Nat. Resources J.* (1996).

Sergei **Vinogradov**, Patricia Wouters & Patricia Jones, Transforming Potential Conflict into Cooperation Potential: The Role of International Water Law, 12 (2003).

Yehenew Tsegaye **Walilegne**, The Nile Basin: From Confrontation to Cooperation, 27 *Dalhousie L.J.* 503 (2004).

Gregg B. **Walker**, International Water Treaties: Negotiation and Cooperation along Transboundary Rivers - By Shlomi Dinar, 33(1) *Natural Resources Forum* 91 (2009).

Reference and Training Manual

Hanling **Wang**, Ecosystem Management and Its Application to Large Marine Ecosystems: Science, Law, and Politics, 35 Ocean Dev. & Int'l L., 41 (2004).

John **Waterbury**, Between Unilateralism and Comprehensive Accords: Modest Steps toward Cooperation in International River Basins, 13(3) Water Resources Development 279 (1997).

Jason S. **Wells**, Managing the Elbe River Basin: Will a Renewed Era of Development Frustrate Historical Attempts to Employ a Watershed Approach? 6(1) U. Denv. Water L. Rev. 1 (2002).

Paul R. **Williams**, International Environmental Dispute Resolution: The Dispute Between Slovakia and Hungary Concerning Construction of the Gabčíkovo and Nagymaros Dams, 19(1) Colum. J. Envtl. L. 1-57 (1994).

Aaron T. **Wolf**, International Water Conflict Resolution: Lessons from Comparative Analysis, 13(3) Water Resources Development 333 (1997).

Aaron T. **Wolf**, Conflict and Cooperation along International Waterways, 1(2) Water Policy. 251 (1998).

Aaron T. **Wolf** & Jesse H. Hammer, Trends in Transboundary Water Disputes and Dispute Resolution, in Environment and Security: Discourses and Practices 123 (Miriam R. Lowi & Brian R. Shaw eds. 2000).

Aaron T. **Wolf**, ed., Conflict Prevention and Resolution in Water Systems (2001).

Aaron T. **Wolf**, Shira B. Yoffe & Mark Giordano, International Waters: Identifying Basins at Risk 5(1) Water Policy 29 (2003).

Aaron T. **Wolf**, Shira B. Yoffe & Mark Giordano, International Waters: Indicators for Identifying Basins at Risk, UNESCO PCCP Series no. 20 (2003).

Aaron T. **Wolf**, Kerstin Stahl & Marcia F. Macomber, Conflict and Cooperation within International River Basins: The Importance of Institutional Capacity, 125 Water Resources Update 31 (2003).

World Bank, Stakeholder Involvement in Options Assessment: Promoting Dialogue in Meeting Water and Energy Needs: A Sourcebook, ESMAP, Report 264/03 (2003).

World Bank Operational Policies (OP 7.50): Projects on International Waterways and Bank Procedures (BP 7.50).

World Commission on Dams, Dams and Development: A New Framework for Decision-Making – Overview of the Report by the World Commission on Dams, (2001).

Patricia **Wouters**, Sergei Vinogradov, Andrew Allan, Patricia Jones & Alistair Rieu-Clarke, Sharing Transboundary Waters - An Integrated Assessment of Equitable Entitlement: The Legal Assessment Model, UNESCO Technical Documents in Hydrology No. 74 (2005).

Graham **Wright**, Devilish Straits: Re-Interpreting the Source of Boundary Waters Treaty Success, (2008) (M.A. Thesis, University of British Columbia) (On file online at <http://www.collectionscanada.ca/obj/s4/f2/dsk3/BVAU/TC-BVAU-317.pdf>).

Reference and Training Manual

Yosef **Yacob**, Equitable Utilization in the Blue Nile River Sub-Basin: Context, Problems, and Prospects (2003) (D.Jur. Thesis, York University) (On file at the National Library of Canada, and online at <http://www.collectionscanada.gc.ca/obj/s4/f2/dsk4/etd/NQ82835.PDF>).

The goal of this study is to facilitate negotiations for a comprehensive agreement for the equitable and peaceful utilization of the waters of the Blue Nile Sub-basin by contributing to the understanding of conditions, which impede negotiations. The central argument is that the status quo or a “no agreement” alternative is viewed by Egypt as the lower riparian's best alternative to a negotiated agreement with Ethiopia, thereby making negotiations unnecessary.

Chusei **Yamada**, UNILC Special Rapporteur, Shared Natural Resources: First Report on Outlines, (2003) U.N. Doc. A/CN.4/533/.

Chusei **Yamada**, UNILC Special Rapporteur, Addendum to Shared Natural Resources: First Report on Outlines, (2003) U.N. Doc. A/CN.4/533/Add.1.

Shira B. **Yoffe**, Basins at Risk: Conflict and Cooperation Over International Freshwater Resources (Oct. 12, 2001) (Ph.D. Dissertation, Oregon State University).

The author empirically identified historical indicators of international freshwater conflict and cooperation and created a framework to identify and evaluate international river basins at potential risk for future conflict. Although conflicts over water have occurred, international relations over shared freshwater resources are overwhelmingly cooperative. The tendency towards conflict was associated with rapid or extreme changes in physical or institutional systems, but was mitigated by the presence of institutional mechanisms (such as treaties).

Shira **Yoffe**, Aaron T. Wolf & Mark Giordano, Conflict and Cooperation Over International Freshwater Resources: Indicators of Basins at Risk, *Journal of American Water Resources Association* 1109 (2003).

Neda A. **Zawahri**, Capturing the Nature of Cooperation, Unstable Cooperation and Conflict Over International Rivers: The Story of the Indus, Yarmouk, Euphrates and Tigris Rivers, 8(3) *International Journal of Global Environmental* 286 (2008).

Neda A. **Zawahri**, & Andrea K. Gerlak, Navigating International River Disputes to Avert Conflict, 14 *Int'l Negotiation* 211 (2009).

Mark **Zeitoun** & Jeroen Warner, Hydro-Hegemony - A Framework for Analysis of Trans-boundary Water Conflicts, 8(5) *Water Policy* 435 (2006).

Mark **Zeitoun** & Naho Mirumachi, Transboundary Water Interaction I: Reconsidering Conflict and Cooperation, 8(4) *International Environmental Agreements: Politics, Law & Economics* 297 (2008).

D. **Zelege**, Equitable Utilization of Transboundary Watercourses: The Nile Basin and Ethiopia's Rights under International Law (2005) (Ph.D. Dissertation, University of Vienna).