UN WATERCOURSES CONVENTION

User's Guide

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A catalogue record for this book is available from the British Library.
ISBN Paperback 978-0-9572603-0-6

First published in 2012 by IHP-HELP Centre for Water Law, Policy and Science (under the auspices of UNESCO).
IHP-HELP Centre for Water Law, Policy and Science (under the auspices of UNESCO) is an interdisciplinary research centre. The Centre, which is part of the University of Dundee brings together research, teaching and consultancy expertise in water law, water science and water policy.
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Designed by Alice Moynihan
Printed in Great Britain by University of Dundee - Design, Print and Marketing
The User's Guide to the UN Watercourse Convention is a reference guide for lawyers and non-lawyers, explaining the content and implications of the Convention's provisions including case studies and commentary.

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Foreword

Water is a wonderful, vital substance. But we are running out of it. While the amount of water on Earth has been the same for billions of years and will remain so for a like amount of time in the future, the human population continues to grow. Not only can humans not exist without water, they also need it to realize the human right to an adequate standard of living as well as for economic development. When a constant supply is combined with a growing demand, the potential for conflict over water grows.

The other important element of this picture is that much of the world's fresh water is shared by two or more countries. Every African state, for example, is said to share fresh water with at least one other country, and many share it with multiple countries. Scientists predict that the globe's arid areas will only become drier due to climate change. This is in fact occurring already.

What does all of this add up to? The need for a governing normative framework within which states sharing freshwater can organize their relationships. Such a framework is provided by the 1997 Convention on the Law of the Non-navigational Uses of International Watercourses (UN Watercourses Convention or Convention). It is the purpose of the present volume to make the Convention broadly accessible by explaining its provisions and terms they employ in language that is understandable to lawyers and non-lawyers alike.

The General Assembly's adoption of the UN Watercourses Convention on 21st May 1997 marked the culmination of an extended process of treaty drafting and negotiation, which began in 1970. In that year, the UN General Assembly recommended that the International Law Commission (ILC) 'take up the study of the law of the non-navigational uses of international watercourses with a view to its progressive development and codification' (UN General Assembly Resolution 2669(XXV)).

The Assembly offered a number of reasons for its recommendation, including pressures on limited water resources due to population growth, as well as increasing and multiplying human demands. A brief perusal of recent global policy documents, such as the Ministerial Declaration of the 6thWorld Water Forum, would suggest that many of the challenges cited by Resolution 2669(XXV) in 1970 are still with us today.

The UN Watercourses Convention is intended to be a framework instrument of global applicability. As such, it complements the existing regional and watercourse-specific legal architecture in three important situations: where no treaty regime exists between co-riparian states; where not all co-riparians are parties to an existing agreement; or where a watercourse is the subject of an existing agreement but that agreement only partially covers matters addressed by the UN Watercourses Convention.

Even prior to its entry into force the Convention has played an important role, by informing the negotiation, adoption and interpretation of watercourse agreements at the regional or basin level, and informing the decisions of international courts. Two African instruments, the Revised Protocol on Shared Watercourses in the Southern African Development Community (SADC) and the Nile River Basin Cooperative Framework Agreement, closely follow the UN Watercourses Convention. As to international decisions, a mere four months after the Convention's adoption it was referred to by the International Court of Justice in support of the Court's judgment in the Gabcíkovo-Nagymaros Project case. The Convention's basic principles are generally regarded as reflecting customary international law.

Despite the significant influence the UN Watercourses Convention already has on state

practice, recent years have seen both an uptake in the Convention's ratification rate and increasing calls for it to enter into force. Such calls have come from diverse groups including the UN Secretary General's Advisory Board on Water and Sanitation, Decisions VIII/27 and IX/19 of the Convention on Biological Diversity and the 2011 Statement of the InterAction Council. Moreover, significant legal developments are likely to generate additional interest in the UN Watercourses Convention, most notably the future legal form and status of the 2008 ILC Draft Articles on the Law of Transboundary Aquifers which will again be considered by the General Assembly at its 68th session in 2013, and the initiative to amend the 1992 UNECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes to allow all UN Member States to become parties to it.

These developments show why it is important that governments as well as other stakeholders and interested parties be well-informed on the UN Watercourses Convention. The UN Watercourses Convention User's Guide complements such resources as the commentary of the ILC on its 1994 draft articles by including developments since that year, giving examples of how various provisions of the Convention might apply, and providing an online interactive and multimedia module. The User's Guide is thus a valuable resource that advances understanding of the Convention and expands its accessibility. In a world of shrinking availability of fresh water, this is an important service indeed.

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Winters, California

Preface

The UN Watercourses Convention is a global framework instrument that sets out rules and principles for governing international watercourses. As a global framework instrument its primary purpose is to supplement existing regional (multi-basin), basin and sub-basin agreements. The Convention can assist in this latter role by filling gaps where no basin agreement exists, where a basin agreement only partially covers aspects covered by the global Convention, and where not all states within a particular basin are parties to a basin agreement. The Convention therefore has great potential in addressing the existing legal architecture for international watercourses, which is often described as fragmented.

It was for the latter reasons that the UN General Assembly, when presented with the ILC's Draft Articles on the Law of the Non-navigational Uses of the International Watercourses, decided that it should negotiate a framework Convention on the basis of those Articles. However, while the UN Watercourses Convention was adopted in 1997, the process for entry into force has been slow. Numerous factors must be in place for the Convention to realise its full potential. Amongst those factors, ensuring that the Convention is adopted and ultimately implemented will be contingent on the text of this legal instrument being accessible to a range of legal and non-legal experts involved in water issues. It is therefore for the latter purpose that this User's Guide was conceived. The Guide will also be supplemented by an online resource that will develop the Article-by-Article explanations contained within.

A number of individuals and institutions assisted in ensuring that the User's Guide became a reality. The authors are extremely grateful to all the reviewers for their invaluable comments: Dr Bennett Bearden, Special Counsel on Water Law and Policy, Geological Survey of Alabama; Dr Mara Tignino, Senior Research, Platform for International Water Law, University of Geneva; Mr Sokhem Pech, Senior International Governance Specialist, Hatfield Consultants, Vancouver; Ms Raya Stephan, Water Law Specialist Consultant; Dr Sarah Hendry, Lecturer, and Dr Nicole Archer, Postdoctoral Researcher, IHP-HELP Centre for Water Law, Policy and Science (under the auspices of UNESCO), University of Dundee; and Ms Flavia Loures, Senior Program Officer WWF. The authors are also grateful to a number of individuals who assisted in the design and production of the Guide, including Ms Samantha McKay, Editor, Ms Alice Moynihan, cover design, layout and graphics, Mr Liam Crozier Type Editing and Ms Kaya Perez Viera, GIS graphics.

The Guide would not be possible without the generous financial support provided by the Norwegian Ministry of Foreign Affairs. Additionally, without the growing activities around and interest in the UN Watercourses Convention that have emerged within recent years, the Guide would not be justified. We are therefore thankful to the individuals and institutions that have participated in the global initiative to see the UN Watercourses Convention enter into force, led by Ms. Flavia Loures and WWF.

Ultimately, the contribution and success of international law in helping to address issues around international watercourses depends on experts (lawyers and non-lawyers) developing a common understanding of the applicable rules and principles. If the Guide can assist in fostering such understanding we believe it will have been of significant value.

Alistair Rieu-Clarke, Ruby Moynihan and Bjørn-Oliver Magsig

About the Authors

Alistair Rieu-Clarke is a Senior Lecturer at the IHP-HELP Centre for Water Law, Policy & Science (under the auspices of UNESCO), University of Dundee (Scotland). His research interests include international law, treaty effectiveness, international watercourses, climate change, stakeholder participation, and ecosystem services. In pursuing his research interests, Alistair is particularly interested in the interface between international law and other social and physical sciences that relate to water. He holds an LLB (Hons) in Scots and European Law, an LLM (Distinction) in Natural Resources Law and Policy, and a PhD in International Law and Sustainable Development. Alistair has acted as principal investigator for a number of multidisciplinary research projects related to water governance - these projects have involved work in Cambodia, Costa Rica, Ethiopia, India, Norway, Portugal, South Africa, Spain and Vietnam. In recent years, Alistair has also been actively involved in researching the role and relevance of the UN Watercourses Convention within different regions, and raising awareness of the Convention through various global, regional and national stakeholder workshops and other within forums. His research work has resulted in the publication of various books and articles related to international law and transboundary waters, including a monograph entitled International Law and Sustainable Development – Lessons from the Law of International Watercourses. Alistair also runs an annual postgraduate module and training workshop on International Law and Transboundary Freshwaters and supervises PhD students on topics related to international law and water resources.

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Bjørn-Oliver Magsig is a PhD candidate at the IHP-HELP Centre for Water Law, Policy and Science (under the auspices of UNESCO), University of Dundee (Scotland), focusing on how international law can contribute to global water security. His research critically assesses the current legal regime of transboundary watercourses against the backdrop of global security and instability, thus contributing to the evolving body of international water law. He holds a Diploma in Business & Environmental Law (University of Applied Sciences Trier, Umwelt-Campus Birkenfeld, Germany) and an LLM in Environmental Law & Policy with the Centre for Energy, Petroleum and Mineral Law and Policy (CEPMLP), University of Dundee. His research background is in international law and policy for natural resources and energy. Bjørn-Oliver has extensive project experience on law and transboundary river basins and recently took up the post as research fellow at the Helmholtz Centre for Environmental Research, Department of Environmental and Planning Law (Leipzig, Germany), focusing on issues of water, energy and climate change relating to internal environmental law.

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Table of Figures

List of Acronyms and Abbreviations

ASB	Aral Sea Basin
CARU	Comisión Administradora del Río Uruguay (Management Committee of the River Uruguay)
ECOWAS	Economic Community Of West African States
EECCA	Eastern Europe, Caucasus and Central Asia
EIA	Environmental Impact Assessment
ENMOD	Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques (Environmental Modification Convention)
EU	European Union
GATT	General Agreement on Tariffs and Trade
GCI	Green Cross International
GDP	Gross domestic product
GHG	Greenhouse gas
GIS	Geographic Information System
GIWA	Global International Waters Assessment
GMSARN	Greater Mekong Sub-region Academic and Research Network
GPA	Global Programme of Action for the Protection of the Marine Environment from Land-based Activities
HELP	Hydrology for the Environment, Life and Policy
HR	Human rights

IAEA	International Atomic Energy Agency
IBWC	International Boundary Water Commission (US and Mexico)
ICESCR	International Covenant on Economic, Social and Cultural Rights
ICJ	International Court of Justice
ICRC	International Committee of the Red Cross
IHL	International Humanitarian Law
IHP	International Hydrological Programme
IIL	Institut de Droit International (Institute of International Law)
ILA	International Law Association
ILC	International Law Commission
ILM	International Legal Materials
ILR	International Law Reports
ISARM	Internationally Shared Aquifer Resources Management
IUCN	International Union for Conservation of Nature
KHEP	Kishenganga Hydroelectric Project
LAM	Legal Assessment Model
MEA	Millennium Ecosystem Assessment
Mercosur	Mercado Común del Sur (Common Southern Market)

MOU	Memorandum of Understanding
NHJEP	Neelum-Jhelum Hydroelectric Project
NRBCFA	Nile River Basin Cooperative Framework Agreement
OECD	Organisation for Economic Co-operation and Development
OHCHR	Office of the United Nations High Commissioner for Human Rights
PCA	Permanent Court of Arbitration
PCIJ	Permanent Court of International Justice (1922-1946)
PIC	Permanent Indus Commission
SADC	Southern African Development Community
TFDD	Transboundary Freshwater Dispute Database
UN	United Nations
UN Doc	UN Document
UN WWAP	United Nations World Water Assessment Programme
UNCLOS	United Nations Convention on the Law of the Sea
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNGA	United Nations General Assembly

UNGAOR	United Nations General Assembly Official Records
UNTS	United Nations Treaty Series
UNWC	1997 Convention on the Law of the Non-Navigational Uses of International Watercourses
US	United States (of America)
USGS	United States Geological Survey
USSR	Union of Soviet Socialist Republics (1922-1991)
WCED	World Commission on Environment and Development
WHO	World Health Organisation
WWF	World Wide Fund for Nature

Objectives, Overview, Origins & Terminology

A. Introduction to the User's Guide

A.1 Context and Objectives

The User's Guide to the UN Watercourses Convention was produced as part of the UN Watercourses Convention Global Initiative – a collaborative project to promote the UN Watercourses Convention with a view to securing additional state ratifications[1] and the instrument's eventual entry into force. The initiative has sought to mobilise governments and other stakeholders through efforts to raise awareness and build capacity on the use, management, and protection of international watercourses generally, and on the relevance of the UN Watercourses Convention in particular. The User's Guide is designed to support this effort by providing widespread accessibility and enhanced understanding of the text of the Convention; so as to ensure that when decisions are taken as to the relevance of the Convention, such decisions are fully informed. The User's Guide is therefore written for policymakers and decision makers, implementation agencies, and bodies responsible for transboundary water issues. It is hoped that the document will also be useful for managers and stakeholders of other sectors with a direct relevance to water, such as health, environment, agriculture, food, energy, fisheries and industrial water users. The guide is also intended to be used for educational purposes, thus raising awareness and capacity around the UN Watercourses Convention and its implementation. Moving forward it is intended that the contents of this Guide will be supplemented by an online educational tool to provide additional resources supporting the content and objectives of the Guide.

1Throughout the guide 'ratification' is used as a simplified term but may also include 'accession', 'approval' and 'acceptance' - for the legal differences between these terms see the Glossary of Terms.

A.2 How to use this Guide

The User's Guide includes an introduction outlining the key challenges in managing transboundary waters and current status of international law in the field, as well as analysis of the Convention's origins, evolution and purpose. This is followed by an Article-by-Article explanation of each provision, organised in seven major parts, mapping the structure of the Convention itself: Part I – Introduction and Scope; Part II – General Principles; Part III – Planned Measures; Part IV – Protection, Preservation and Management; Part V – Harmful Conditions and Emergency Situations; Part VI – Dispute Settlement, Conflict Management and Security; and Part VII – Final Clauses.

Each provision of the Convention is examined under two headings; Commentary and Application. A detailed explanation of the nature and extent of the legal rights and obligations of each article is provided under the Commentary section. These sections include issues likely to emerge in the interpretation and practical application of the articles, coupled with examples of good state practice where relevant. The commentaries are then followed by the Application sections, which provide hypothetical scenarios intended for users to gain a more extensive understanding of the practical application of each article. Finally, each article is accompanied by a list of further readings selected for those users who wish to gain deeper knowledge and understanding of specific issues.

Where there are ambiguities in the text, the authors have provided guidance on the basis of the principles and objectives of the Convention as found in the preamble and particularly guided by the fundamental principles that states are to use an international watercourse in a way that is 'equitable and reasonable' in relation to other states sharing the watercourse (Article 5) and take all 'appropriate measures' to prevent causing 'significant harm' to co-riparian states (Article 7).

Frequent reference is made to the preparatory work of the International Law Commission (ILC) under the United Nations General Assembly particularly the 1994 Draft Articles on the Law of the Non-navigational Uses of International Watercourses, coupled with interpretation from existing state practice, general principles of international law, judicial decisions, and leading publicists in the field. Naturally, the specific language of the Convention will evolve over time.

The authors have chosen an integrated interpretation to the Articles of the UN Convention, guided by the rules of interpretation of Treaties under Articles 31-33 of the 1969 Vienna Convention[2] and the fundamental principles that underlie the UN Convention itself.

While the UN Watercourses Convention was adopted in 1997, by the end of 2005 only 14 states had ratified the Convention, 21 short of the number required for its entry into force. A range of reasons have been suggested as to why the Convention has been slow to enter into force,[3] including treaty congestion at the time of its adoption, lack of awareness pertaining to the content and relevance of the Convention, an absence of leadership in promoting ratification, and a number of highly vocal - but not necessarily widely representative - opponents to this global instrument.[4]

2 Vienna Convention on the Law of Treaties (adopted 22 May 1969, entered into force 27 January 1980) (Vienna Convention) 1155 UNTS.

3 The contracting states in 2005 comprised Finland, Hungary, Iraq, Jordan, Lebanon, Libyan Arab Jamahiriya, Namibia, Netherlands, Norway, Portugal, Qatar, South Africa, Sweden, and the Syrian Arab Republic.

4 See A Rieu-Clarke and FR Loures, 'Still Not in Force: Should State Support the 1997 UN Watercourses Convention? (2009) 18(2) Review of European Community and International Environmental Law 185; SMA Salman, 'The United Nations Watercourses Convention Ten Years Later: Why Has its Entry into Force Proven Difficult?' (2007) 22 Water International 1; S Salman, A Rieu-Clarke and F Loures, 'Possible Reasons for Slowing Down the Ratification Process', in F Loures and A Rieu-Clarke, The UN Watercourses Convention in Force – Strengthening International Law for Transboundary Water Management (Earthscan 2012).

A.3 The UNWC Global Initiative

In early 2006, the World Wildlife Fund for Nature (WWF) therefore launched a global initiative to promote the UN Watercourses Convention and accelerate its ratification process (The UNWC Global Initiative). This initiative has mobilised a range of actors including governments, international organisations, academics and others in an effort to raise awareness, build capacity and support countries interested in ratifying the Convention. To date, the UN Global Initiative includes partners such as Green Cross, UN Secretary-General's Advisory Board on Water and Sanitation, the IHP-HELP Centre for Water Law, Policy and Science (under the auspices of UNESCO), the Global Nature Fund and many others. Activities of the UNWC Global Initiative have largely centred around addressing the barriers to ratification noted above. Partners of the UNWC Global Initiative have therefore sought to raise awareness of the Convention through symposia, presentations and special sessions at global, regional and country-specific conferences and other meetings. In order to deepen knowledge and understanding of the relevance of the Convention, the Initiative has conduct research studies related to the relevance of the UN Watercourses Convention in various regions, basins and countries, including Central America, South America, Europe, West Africa, Congo, Southern Africa, East Africa, Aral Sea and South East Asia.[5] Such research studies have formed a basis for conducting consultations and training workshops at the country level throughout the world.[6]

Activities of the UNWC Global Initiative have also involved developing a wide range of materials, including policy briefs, academic journal papers, an edited book, research reports, and this User's Guide.[7]

5 See <http://internationalwaterlaw.org/bibliography> accessed 8 December 2011.

6 See, for example, Addis Abba Workshop 29 May 2011, <http://www.dundee.ac.uk/water/projects/unwcglobalinitiative> accessed 8 December 2011.

7 For more details see UNWC Global Initiative, <http://www.dundee.ac.uk/water/projects/unwcglobalinitiative> accessed 8 December 2011.

Several trends and key factors are shaping our future at an ever increasing pace giving rise to a myriad of challenges the international community is struggling to deal with effectively. The water crisis is at the heart of this challenge, since a sustainable supply of adequate freshwater is the essential foundation of civilization as we know it. While water management is primarily a local issue, 40 per cent of the world's population depends on international freshwater resources.[8] It is this level which is heavily influenced by the complex geopolitical power games, making international water security even more multi-faceted and multi-layered. The increasing gap between the demand for quality freshwater and its declining supply, the uneven distribution of resources, and unilateral development of water projects, are becoming frequently disruptive factors in neighbouring country relations.[9]

Despite the fact that disputes over shared freshwater resources have not yet led to fully fledged wars between states, water is now more frequently used as a political tool and military target.[10] Population growth, shifting migration patterns and global environmental change have added unprecedented pressure and complexity to the task of sustainable water management. The evidence is clear – current water disputes are already having a severe socio-economic and environmental impact on numerous fragile states and the reverberating effects threaten local, national, regional and international stability and growth.

While the need for strengthening water governance across all these levels has been widely acknowledged,[11] internationally the legal response remains a challenge. This is partly due to the physical and economic features of water which make its sustainable management costly and also because of the far reaching political implications surrounding water allocation and development. Given the global dimension of water insecurity and its interweaving with other crises, it is obvious that any solution to the water crisis has to look beyond the national level. Effective basin wide legal frameworks are necessary to develop, implement and enforce rules for managing water resources sustainably and addressing conflict of uses between states. Yet, the perceived threat of losing national sovereignty is increasing the political cost of adopting

8 SE Draper and JE Kundell, 'Impact of Climate Change on Transboundary Water Sharing' (2007) 133 Journal of Water Resources Planning and Management 405 at 405.

9 Ibid.

10 E.g. during the recent conflict in Libya; see Circle of Blue, 'Water as a Tool of War: Qaddafi Loyalists Turn Off Tap for Half of Libya' (30 August 2011) <http://www.circleofblue.org/waternews/2011/world/water-as-a-tool-of-war-qaddafi-loyalists-turn-off-tap-for-half-of-libya/> accessed 09 September 2011.

11 See United Nations World Water Assessment Programme, The United Nations World Water Development Report 3: Water in a Changing World (UNESCO 2009).

'Water links us to our neighbour in a way more profound and complex than any other.' - John Thorson

such frameworks, too often resulting in scattered international approaches which are only rarely implemented at the national level.

One of the main reasons for such a weak approach is the poor comprehension of the linkages between the various levels of water governance. In particular, the contribution that a global framework agreement, such as the UN Watercourses Convention, can make in levelling the playing field in transboundary water governance has not been fully explored. The evolution and current status of the UN Watercourses Convention is given further consideration below.

A.4 Additional Reading

Loures F and Rieu-Clarke A (eds), The UN Watercourses Convention in Force – Strengthening International Law for Transboundary Water Management (Earthscan 2012).

Loures F, Rieu-Clarke A and Vercambre, M-L, Everything You Need to Know About the UN Watercourses Convention (WWF 2009).

McCaffrey S and Sinjela M, 'The 1997 United Nations Convention on International Watercourses' (1998) 92 American Journal of International Law 97.

Rieu-Clarke A, 'Entry Into Force of the 1997 UN Watercourses Convention: Barriers, Benefits and Prospects' (2007) Water 21, 12.

Rieu-Clarke A and Loures FR, 'Still Not in Force: Should State Support the 1997 UN Watercourses Convention? (2009) 18(2) Review of European Community and International Environmental Law 185.

Salman, SMA 'The United Nations Watercourses Convention Ten Years Later: Why Has its Entry into Force Proven Difficult?' (2007) 22 Water International 1.

Tanzi A and Arcari M, The United Nations Convention on the Law of International Watercourses: A Framework for Sharing (Kluwer Law International 2001).

Wouters P, 'The Legal Response to International Water Conflicts: The UN Watercourses and Beyond' (1999) 42 German Yearbook of International Law 293.

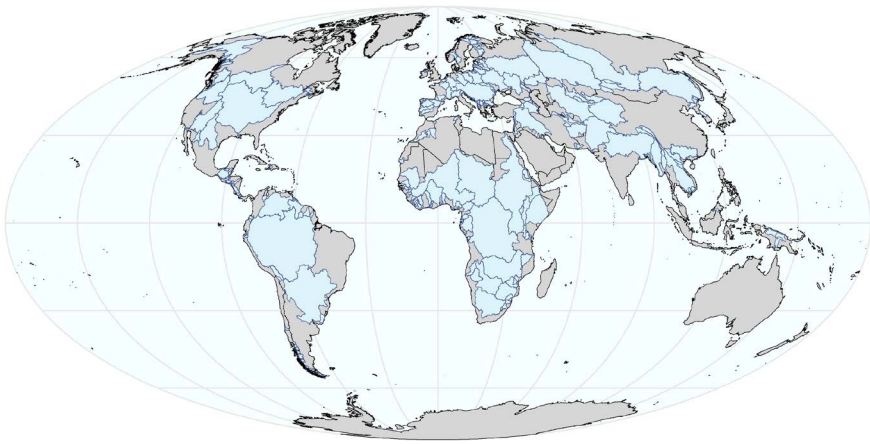


Figure B.1 | World Map of international Basins
(Source Transboundary Freshwater Dispute Database (TFDD),
Oregon State University, 1999)

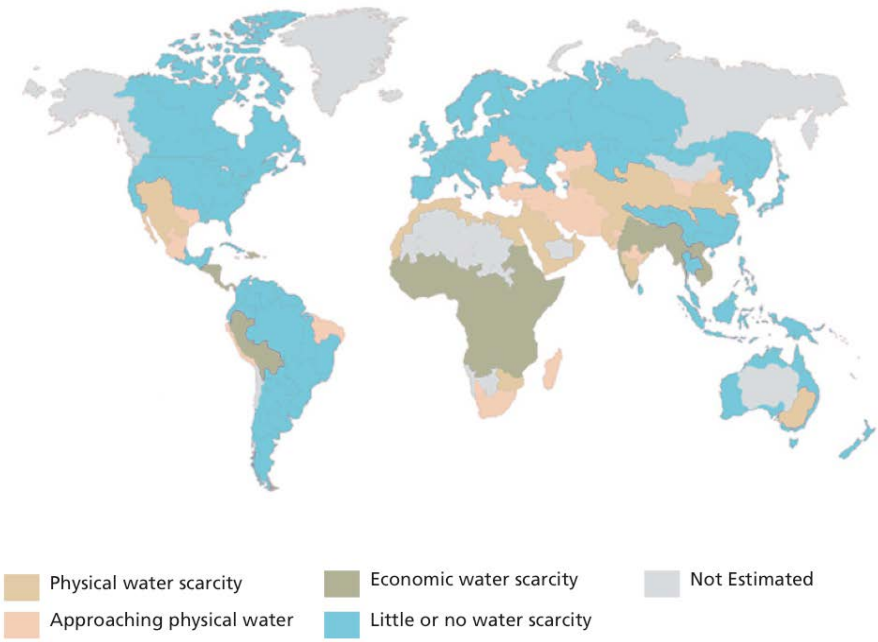


Figure B.2 | Physical and Economic Water Scarcity (Source Comprehensive Assessment of Water Management tn Agriculture, 2009)

B. Introduction to Key Challenges in Managing International Watercourses and International Law

B.1 Key challenges in managing transboundary waters

Water scarcity exists in many river basins around the world and comes in different forms. The map above shows different types of scarcity which are important for targeting the right solutions to the problems. Physical water scarcity (represented in orange) affects every continent and approximately one-fifth of the world population.

Some of the not so obvious issues and solutions surrounding water scarcity are virtual water and bulk water transfer. Virtual water is importing and exporting the virtual water embedded in water intensive commodities. Global trade in bulk water is also gaining momentum, including the shipping of water in tankers across the ocean. The figure below shows the global water footprint – the water footprint of a country is defined by the volume of water needed for the production of goods and services consumed by the inhabitants of that country. The map shows that even countries which do not share any significant transboundary water resources are still reliant on the goods and services produced in transboundary basins. For example, Malta does not share any transboundary resources, but imports 87% of its water. This scenario demonstrates that the sustainable management of international watercourses are vital to all nations of the world not just transboundary riparian nations.

Of course scarcity is only one of the key challenges in managing transboundary waters. States are also facing the challenge of mitigating and adapting to uncertain climate variability and the resulting impact on water management. Changes in flow patterns, affecting the sediment and morphology of upstream and downstream rivers, affecting land use productivity due to loss of natural sediment depositions, and loss of fish productivity due to fish migration and habitation destruction are some examples of this challenge, which states must address whilst balancing ever growing demand for development.

The Global Water Footprint

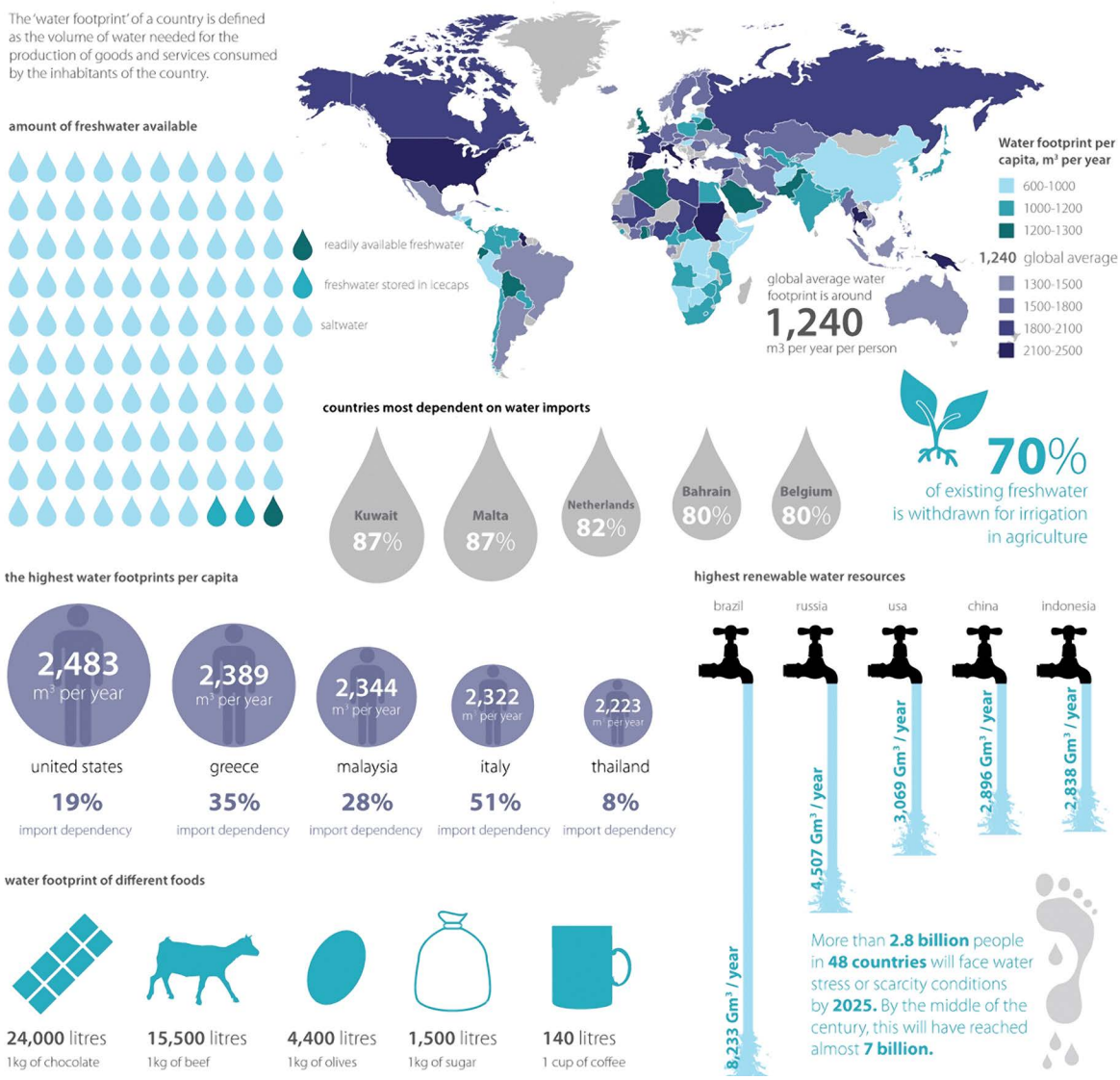


Figure B.3 | Global Water Footprint (Source US Infrastructure/ WWF, 2010)[12]

12 For more information see WWF 'Water Footprint' <http://wwf.panda.org/about_our_earth/about_freshwater/freshwater_resources/?171861/Water-Footprinting> accessed 11 November 2011.

B.2 The legal architecture for transboundary waters

The Atlas of International Freshwater Agreements identifies 400 water agreements adopted since 1820.[13] In terms of adoption rates, Conca, Wu and Mei observe that a few agreements per year were adopted throughout the 1980s, then there was a significant increase in treaty adoption activity following the 1992 UN Conference on Environment and Development, followed by a drop off in the number of agreements adopted towards the turnof the century.[14]

Despite these legal developments over the past four decades the international legal architecture regulating international watercourses remains fragmented.[15] The majority of basin-specific agreements are found in multilateral river basins, however most of these agreements are in fact bilateral agreements.[16] Additionally 158 of the world's 263 international basins lack any type of cooperative framework; and of the 106 basins covered by agreements approximately two-thirds do not include all basin states.[17]

While such statistics do not account for global and regional treaty regimes, rules and principles of customary international law, or the quality of the agreements, they do demonstrate that governance frameworks at the basin level are often lacking or inadequate.However, it should be noted that the legal architecture within different regions varies.

13 United Nations Environment Programme and others, Atlas of International Freshwater Agreements.

14 K Conca, F Wu and C Mei, 'Global Regime Formation or Complex Institution Building? The Principled Content of International River Agreements' (2006) 50 International Studies Quarterly 263, at 270-271.

15 NA Zawahri and SM Mitchell, 'Fragmented Governance of International Rivers: Negotiating Bilateral Versus Multilateral Treaties' (2011) 55 International Studies Quarterly 835.

16 Ibid at 835.

17 M Giordano and AT Wolf, 'The World's International Freshwater Agreements: Historical Developments and Future Opportunities', in UNEP and others, Atlas of International Freshwater Agreements, at 7.

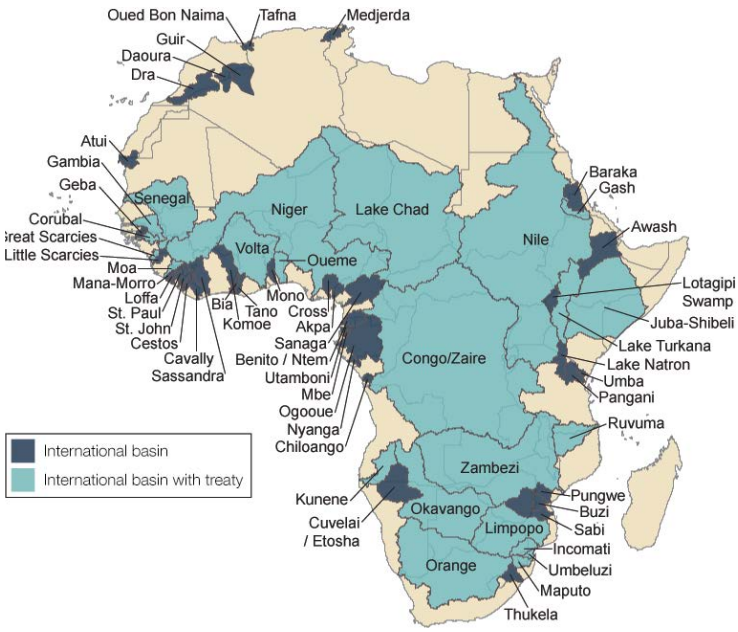


Figure B.4 |
International River Basins of Africa
(Source adapted by Authors (2012) from TFDD, Oregon State University, 2009)

Throughout Africa there are 59 transboundary river basins, which make up 62 percent of the continent's land surface.[18] Of these transboundary river basins, 16 are covered by basin-wide agreements, three are partially covered by agreements, and 40 have no basin-specific agreements in place.[19] Additionally, Angola, Botswana, Congo, Lesotho, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe have ratified the Revised SADC Protocol on Shared Watercourses Systems, which is applicable to the 15 international watercourses across the Southern African region and embodies much of the content of the UNWC.[20]

18 Wolf AT, 'International Rivers of the World' (1999) 15 International Journal of Water Resources Development 387, at 395-399. For more in-depth analysis of the legal architecture for Africa, see chapters 7 and 9 of this book.

19 United Nations Environment Programme and others, Atlas of International Freshwater Agreements, at 27-50.

20 Revised Protocol on Shared Watercourse Systems in the Southern African Development Region (adopted 7 August 2000, entered into force 22 September 2003) (2001) 40 ILM 317.

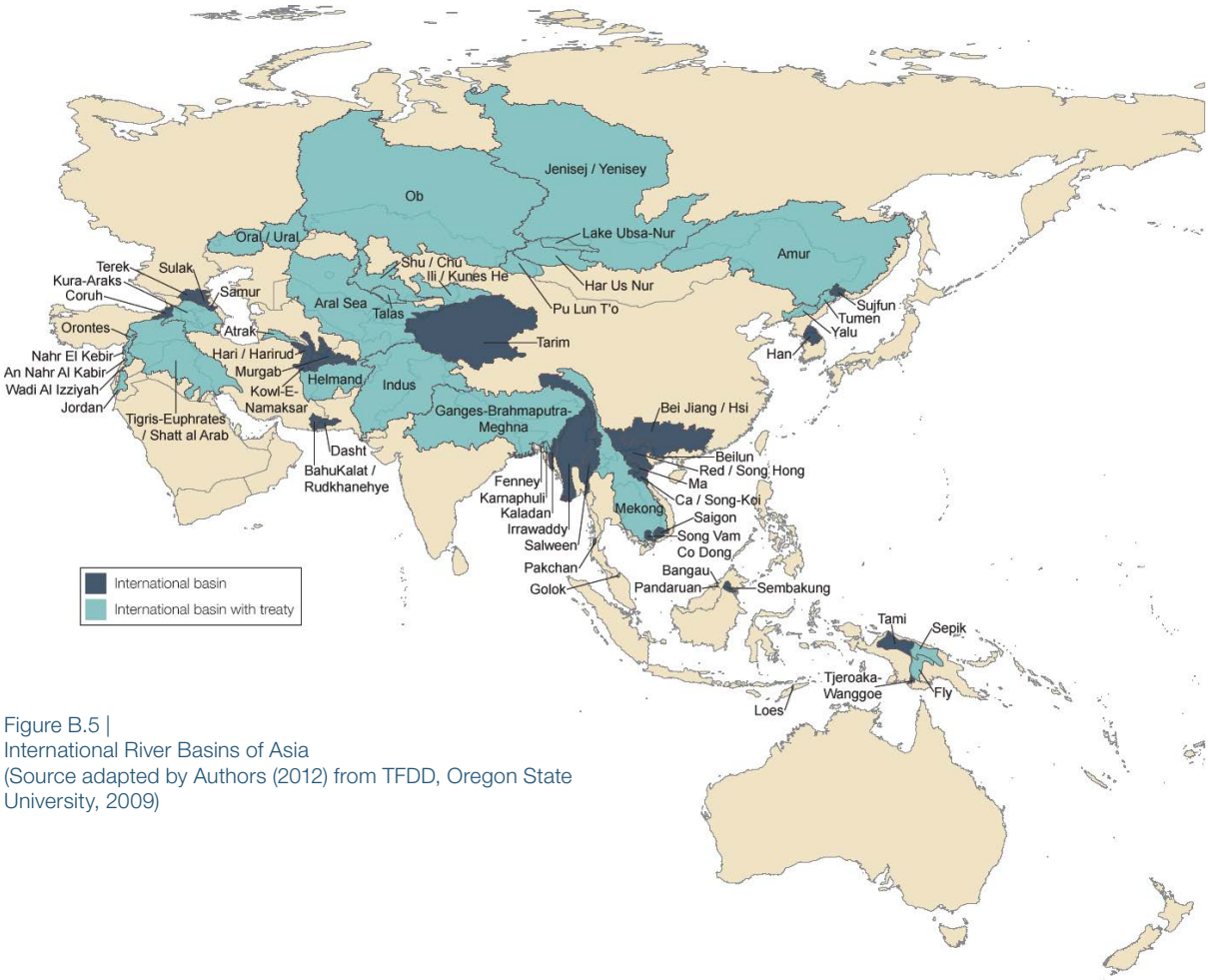


Figure B.5 |
International River Basins of Asia
(Source adapted by Authors (2012) from TFDD, Oregon State University, 2009)

Asia is home to 57 transboundary river basins, which account for 39 percent of the continent's land surface.[21] Ten river basins, constituting 3,270,600 km2 of the land mass, are covered by basin wide agreements. 15 river bas-ins, representing 12,584,400 km2, are partially covered by basin agreements,[22] and 32 river basins repres-enting 1,933,060 km2 are not covered by any basin agreement.

21 Wolf, 'International Rivers of the World', at 399-403.
22 United Nations Environment Programme and others, Atlas of International Freshwater Agreements, at 51-76.

Figure B.6 |
International River Basins of Europe
(Source adapted by Authors (2012) from TFDD, Oregon State University, 2009)

Across Europe there are 64 transboundary river basins covering 54 percent of the continent's land surface.[23] 35 rivers are covered by basin-wide agreements, whereas ten are partially covered, and 19 have no basin-specific agreements in place.[24] However, most European states are also obligated to implement two relatively stringent regional agreements, namely the EU Water Framework Directive and the 1992 UN ECE Water Convention.[25] These two regional instruments include commitments that go beyond the requirements of the UNWC.[26]

23 Wolf, 'International Rivers of the World', at 404-408.

24 United Nations Environment Programme and others, Atlas of International Freshwater Agreements, at 77-132.

25 See generally, A Rieu-Clarke, 'Major Trends in Conflict and Cooperation', in United Nations Environment Programme, University of Dundee, and Oregon State University, Hydropolitical Vulnerability and Resilience along International Waters (UNEP 2009).

26 The UN ECE Water Convention is to be opened up shortly for global signature and the alignment between the UNWC and UN ECE Water Convention is discussed in the following article by A Rieu-Clarke, 'The Role and Relevance of the UN Convention on the Law of the Non-navigational Uses of International Watercourses to the EU and its Member States' (2008) 78 British Yearbook of International Law 389.

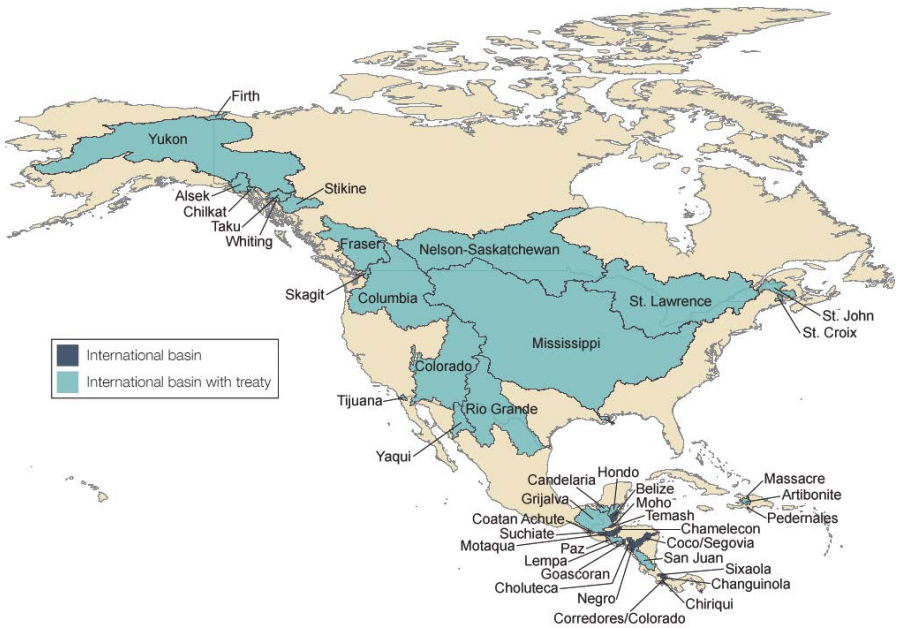


Figure B.7 |
International River Basins of North America
(Source adapted by Authors (2012) from TFDD,
Oregon State University, 2009)

In North America, there are 41 transboundary river basins that cover 35 percent of the continent's land surface.[27] There are 28 basin-wide agreements, and a further four river basins are partially covered by agreements.[28] Only nine river basins therefore have no basin-specific agreements in place, representing 76,000 km2.[29]

27 Wolf, 'International Rivers of the World', at 408-410.

28 United Nations Environment Programme and others, Atlas of International Freshwater Agreements, at 133-162.

29 Wolf, 'International Rivers of the World', at 410-416.

Figure B.8 |
International River Basins of South America
(Source adapted by Authors (2012) from TFDD, Oregon State University, 2009)

Last but not least, South America is home to 38 transboundary river basins, which make up 60 percent of the continent's land surface.[30] Of these river basins, 23 are covered by basin-wide agreements, whereas 15 basins are not subject to any basin agreements.[31] An analysis of the legal architecture would not be complete without recognition that in addition to the UNWC there are numerous global conventions that, at least in part, relate to transboundary watercourses. For instance, the Ramsar Convention was adopted in 1971, and currently has 158 contracting parties who are obliged to promote the wise use of wetlands within their territory.[32] In relation to international watercourses, the Ramsar Convention stipulates that, 'contracting parties shall consult with each other about implementing obligations arising from the Convention especially in the case of a wetland extending over the territories of more than one contracting party or where a water system is shared by contracting parties'.[33] Around 30 percent of Ramsar sites are located in international river basins. Similarly, the Biodiversity Convention, ratified by 191 parties, aims to promote the sustainable use of the world's biodiversity.[34] In relation to international watercourses, states are obliged to notify, exchange information and enter into consultations on activities in one state's jurisdiction or control that are likely to significantly adversely affect the biodiversity of other states.[35] Pursuant to the Climate Change Convention, ratified by 192 contracting parties, parties are obliged to, 'develop and elaborate appropriate and integrated plans for coastal zone management, water resources and agriculture, and for the protection and rehabilitation

30 Ibid.

31 UNEP and others, Atlas of International Freshwater Agreements, at 163-170.

32 Convention on Wetlands of International Importance especially as Waterfowl Habitat (adopted 2 February 1971, entered into force 21 December 1975), 996 UNTS 245.

33 Ibid, Art. 5.

34 UN Convention on Biological Diversity (adopted 5 June 1992, entered into force 29 December 1992), (1992) 31 ILM 822.

35 Ibid Art. 14.

of areas, particularly in Africa, affected by drought and desertification, as well as floods'.[36]

Drought and desertification is also covered in the Desertification Convention, ratified by 193 contracting parties.[37] In relation to international watercourses, contracting parties are obliged to develop, 'long-term integrated strategies that focus simultaneously, in affected areas, on improved productivity of land, and the rehabilitation, conservation and sustainable management of land and water resources'.[38] Burgeoning agricultural production due to greater demand for food within an ever increasing globalised world will also mean that trade and investment regimes, such as GATT [39] will have a growing impact on legal arrangements concerning international watercourses.[40] In assessing the current legal architecture for transboundary waters, it is also important to reflect not only on the number and coverage of international agreements related to water, but also the quality of those agreements.

In this regard, UN-Water – a body comprised of all UN agencies with a competence in water-related activities – observed that:

'Existing agreements are sometimes not sufficiently effective to promote integrated water resources management due to problems at the national and local levels such as inadequate water management structures and weak capacity in countries to implement the agreements as well as shortcomings in the agreements themselves (for example, inadequate integration of aspects such as the environment, the lack of enforcement mechanisms, limited – sectoral – scope and non-inclusion of important riparian States).'[41]

Interestingly, the UN Watercourses Convention was first conceived back in 1959 in order to address some of these on-going challenges identified almost half a century later by UN Water.

36 UN Framework Convention on Climate Change (adopted 9 May 1992, entered into force 24 march 1994), Art. 4(1) (e).

37 Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa (adopted 14 October 1994, entered into force 26 December 1996), (1994) 1954 UNTS 3.

38 Ibid Art. 2(2).

39 Agreement Establishing the World Trade Organisation (adopted 15 April 1994, entered into force 1 January 1995) (1994) 33 ILM 1144.

40 E Brown-Weiss, L Boisson de Charzones and N Bernasconi-Osterwalder, Fresh Water and International Economic Law (Oxford University Press 2005).

41 UN-Water, Transboundary Waters: Sharing Benefits, Sharing Responsibilities (UN 2008), at 6.

B.3 Evolution of the UN Watercourses Convention

In 1959 Bolivia proposed to the UN General Assembly that the UN Secretary-General examine the legal problems relating to the utilisation and use of international rivers.[42] Following a report by the UN Secretary-General in 1963, the UN General Assembly recommended that the ILC, 'take up the study of the law of the non-navigational uses of international watercourses with a view to its progressive development and codification'.[43] Following 20 years work, and 15 reports by eminent international jurists acting as Special Rapporteurs, the Draft Articles on the Law of the Non-navigational Uses of International Watercourses (1994 ILC Draft Articles) were adopted.[44] Upon receipt of the 1994 ILC Draft Articles, the UN General Assembly took the decision to convene a working group to negotiate a Convention on the basis of the draft articles.[45] The working group met on two occasions, in 1996 and 1997, prior to the UN Watercourses Convention being adopted on 21st May 1997 by 103 votes in favour, 26 abstentions, and three votes against.[46] It is also important to recognise the role of two other non-governmental expert bodies - the International Law Association (ILA), and the Institute of International Law (IIL) - played in the evolution of the law of international watercourses. The IIL's work constituted the first attempt by an independent expert group to codify rules relating to international watercourses at the global level. This work resulted in the Salzburg Resolution of 1961, which recognised the concept of limited territory sovereignty over international watercourses.[47] The early work by the ILA culminated in the Helsinki Rules on the Uses of the Waters of International Rivers in 1966.[48] The Helsinki Rules played an important role in shaping subsequent treaty practice, particularly in Africa, and many of the rules and principles found in the Helsinki Rules are reflected in the later UN Watercourses Convention.[49] In addition to the Helsinki Rules, the ILA has examined treaty practice in a number of sub-areas of the law relating to international watercourses.[50] More recently, the ILA has sought to develop its work on the codification and progressive development of the law of international watercourses through the 2004 Berlin Rules on Water Resources.[51] However, the degree to which the latter instrument accurately reflects customary international law is hotly debated.[52]

42 E Brown-Weiss, L Boisson de Charzones and N Bernasconi-Osterwalder, Fresh Water and International Economic Law (Oxford University Press 2005).

43 Progressive development and codification of the rules of international law relating to international watercourses, UN General Assembly Resolution 2669(XXV), <http://daccess-dds-ny.un.org/doc/RESOLUTION/GEN/NR0/349/34/IMG/NR034934.pdf?OpenElement> accessed 21 September 2011).

44 Draft Articles on the Law of the Non-navigational Uses of International Watercourses, in (1994) Yearbook of the International Law Commission (Vol. II, part II), <http://untreaty.un.org/ilc/documentation/english/a_cn4_l493.pdf> accessed 21 September 2011).

45 Draft Articles on the Law of the Non-navigational Uses of International Watercourses, UN General Assembly Resolution A/RES/49/52, 17 February 1995, <http://untreaty.un.org/cod/avl/ha/clnuiw/clnuiw.html> accessed 8 December 2011.

46 Convention on the Law of the Non-navigational Uses of International Watercourses, UN General Assembly Resolution A/RES/51/229, 8 July 1997, <http://www.un.org/ga/search/view_doc.asp?symbol=A/res/51/229> accessed 8 December 2011; and UN General Assembly Official Records, 99th Plenary Meeting, 21 May 1997, UN Doc. A/51/PV.99, <http://www.un.org/ga/search/view_doc.asp?symbol=A/51/PV.99> accessed 8 December 2011.

47 S Salman, 'The Helsinki Rules, the UN Watercourses Convention and the Berlin Rules: perspectives on international water law', (2007) 23(4) Water Resources Development 625-640.

48 The Helsinki Rules on the Uses of Waters of International Rivers, in S Bogdanovic, International law of water resources (Kluwer Law International 2001) at 147—387.

49 S Salman, 'The Helsinki Rules, the UN Watercourses Convention and the Berlin Rules: perspectives on international water law' at 630.

50 See S Bogdanovic, International Law of Water Resources, 147—387.

51 Berlin Rules on Water Resources, in Report of the Seventy-first Conference of the International Law Association 2004, <http://www.ila-hq.org/en/committees/index.cfm/cid/32> accessed 8 December 2011.

52 ILA Berlin Conference 2004 – Water Resources Committee Report Dissenting Opinion, 9 August 2004, <http://www.internationalwaterlaw.org/documents/intldocs/ila_berlin_rules_dissent.html> accessed 21 September 2011. See also Salman, 'The Helsinki Rules, the UN Watercourses Convention and the Berlin Rules: perspectives on international water law' at 636.

UN Watercourses Convention Voting Records

Sponsors (38)

Antigua and Barbuda
Bangladesh
Bhutan
Brazil
Cambodia
Cameroon
Canada
Chile
Denmark
Finland
Germany
Greece
Grenada
Honduras
Hungary
Italy
Japan
Jordan
Lao People's Democratic Republic
Latvia
Liechtenstein
Malaysia
Mexico
Nepal
Netherlands
Norway
Portugal
Republic of Korea
Romania
Sudan
Sweden
Syrian Arab Republic
Tunisia
United Kingdom of Great Britain and Northern Ireland
United States of America
Uruguay
Venezuela
Vietnam

In Favour (106)

Albania
Algeria
Angola
Antigua and Barbuda
Armenia
Australia
Austria,
Bahrain
Bangladesh
Belarus
Belgium*
Botswana
Brazil
Brunei Darussalam
Burkina Faso
Cambodia
Cameroon
Canada
Chile
Costa Rica
Côte d'Ivoire
Croatia
Cyprus
Czech Republic,
Denmark
Djibouti
Estonia
Fiji*
Finland
Gabon
Georgia
Germany
Greece
Guyana
Haiti
Honduras
Hungary
Iceland
Indonesia
Iran (Islamic Republic of) Ireland
Italy
Jamaica
Japan
Jordan
Kazakhstan
Kenya
Kuwait
Lao People's Democratic Republic
Latvia
Lesotho
Liberia
Libyan Arab Jamahiriya
Liechtenstein
Lithuania
Luxembourg
Madagascar
Malawi
Malaysia
Maldives
Malta
Marshall Islands
Mauritius
Mexico
Micronesia (Federated States of)
Morocco
Mozambique
Namibia
Nepal
Netherlands
New Zealand
Nigeria*
Norway
Oman
Papua New Guinea
Philippines
Poland
Portugal
Qatar
Republic of Korea
Romania
Russian Federation
Samoa
San Marino
Saudi Arabia
Sierra Leone
Singapore
Slovakia
Slovenia
South Africa
Sudan
Suriname
Sweden
Syrian Arab Republic
Thailand
Trinidad and Tobago
Tunisia
Ukraine
United Arab Emirates
United Kingdom of Great Britain and Northern Ireland
United States of America
Uruguay
Venezuela
Vietnam
Yemen
Zambia

Abstentions (26)

Andorra
Argentina
Azerbaijan
Bolivia
Bulgaria
Colombia
Cuba
Ecuador
Egypt
Ethiopia
France
Ghana
Guatemala
India
Israel
Mali
Monaco
Mongolia
Pakistan
Panama
Paraguay
Peru
Rwanda
Spain
United Republic of Tanzania
Uzbekistan

Absent (31)

Afghanistan
Bahamas
Barbados
Belize
Benin
Bhutan
Cape Verde
Comoros
Democratic People's Republic of Korea
Dominican Republic
El Salvador
Eritrea
Guinea
Lebanon
Mauritania
Myanmar
Niger
Palau
Saint Kitts & Nevis
Saint Lucia
Saint Vincent and the Grenadines
Senegal
Solomon Islands,
Sri Lanka
Swaziland
Tajikistan
The former Yugoslav Republic of Macedonia
Turkmenistan
Uganda
Zaire
Zimbabwe

Against (3)

Burundi
China
Turkey

*The official vote recorded 103 votes in favour. Subsequently, Belgium, Fiji and Nigeria stated they intended to vote in favour.

Figure B.9 | UN Watercourses Convention Voting Records

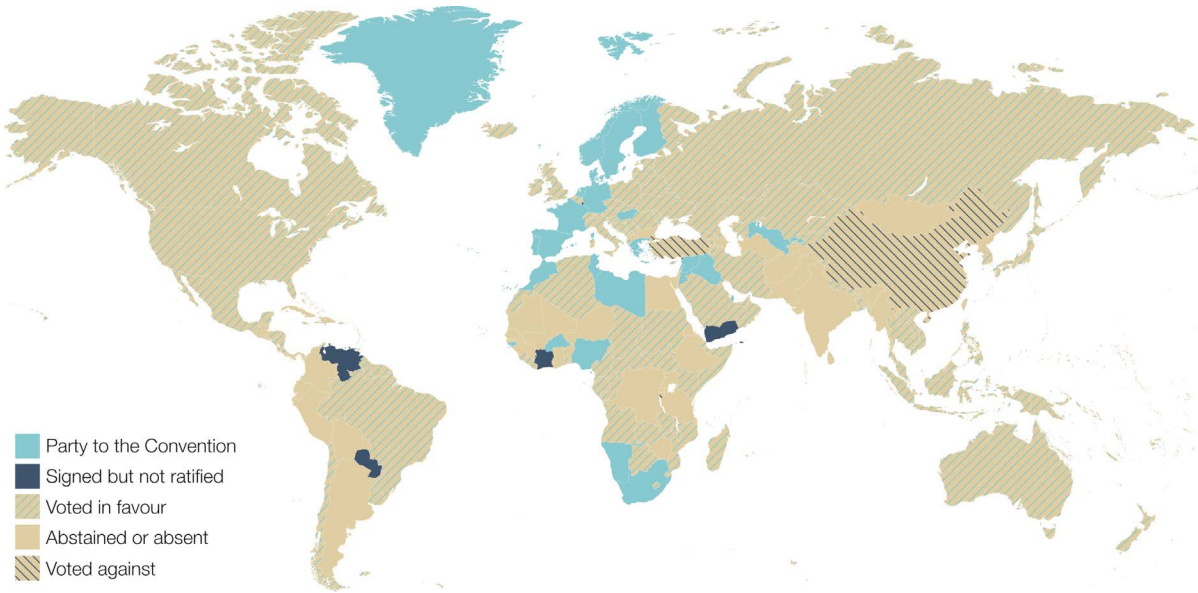


Figure B.10 |
UN General Assembly Vote
and Status of Convention
(Source Authors)

Finally, the most significant recent development in the law of international watercourses has been the work of the ILC on transboundary aquifers.[53] In 2008 the ILC presented draft articles on the law of transboundary aquifers to the UN General Assembly with the suggestion that it 'recommend to states concerned to make appropriate bilateral or regional arrangements for the proper management of their transboundary aquifers on the basis of the principles enunciated in the articles';[54] and, 'consider, at a later stage, and in view of the importance of the topic, the elaboration of a convention on the basis of the draft articles'.

53 An 'aquifer' is defined within the Draft Articles as being, 'a permeable water bearing geological formation underlain by a less permeable layer and the water contained in the saturated zone of the formation.' See generally, C Yamada, 'Codification of the Law of Transboundary Aquifers (Groundwater) by the United Nations', (2011) 36(5) Water International 557-565.

54 The law of transboundary aquifers, UN General Assembly Resolution 63/124, 15 January 2009, available at <http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N08/478/23/PDF/N0847823.pdf?OpenElement> accessed 21 September 2011.

B.4 The UNECE Water Convention as a global instrument

The UNECE Water Convention was adopted in 17 March 1992 and entered into force on the 6 October 1996. The Convention requires states to, 'prevent, control and reduce transboundary impact, use transboundary waters in a reasonable and equitable way, and ensure their sustainable management'. Significant analysis has shown that the UNECE Water Convention and the UN Watercourses Convention do not contradict each other.[55]However, as would be expected from a regional vis-à-vis a global instrument, the UNECE Water Convention on the whole provides more detail than the UN Water Convention. In particular, the obligation to establish joint agreements and related institutional arrangements is more pronounced in the UNECE Water Convention. The similarities between the Conventions are explored further throughout this User's Guide.

A further difference between the two instruments is that the UNECE Water Convention provides for an institutional framework to promote its implementation. Such a framework includes a secretariat, working groups, meeting of the parties, and so forth. Over the course of the last twenty years, these institutional arrangements have proven highly effective in constantly assessing and strengthening the implementation of this framework instrument at the basin and national levels.[56] In 2003, an amendment to the UNECE Water Convention was proposed to allow states situated outside the UNECE region to become parties to the Convention.[57] This approval requires to be ratified by two thirds of the parties to the Convention.[58] Given that both these framework instruments are complementary, there is the prospect of having both Conventions in force at the global level within the foreseeable future, offers significant opportunities to strengthen the legal architecture around international watercourses.

55 See for example, Tanzi A, 'The UN Watercourses Convention and the UNECE Water Convention', Wouters P and Moynihan R 'International Law and Water Security', In Rieu-Clarke A and Loures F (eds.), The UN Watercourses Convention in Force: Strengthening International Law for Transboundary Water Management (Earthscan Publishers 2012). Report of the UN/ECE Task Force on Legal and Administrative Aspects, The Relationship between the 1992 UNECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes and the 1997 UN Convention on the Law of the Non-navigational Uses of International Watercourses, February 2000, available at <http://www.unece.org/fileadmin/DAM/env/water/publications/documents/conventiontotal_Eng_final.pdfaccessed 30 April 2012; A Rieu-Clarke, 'The Role and Relevance of the UN Convention on the Law of the Non-navigational Uses of International Watercourses to the EU and its Member States' (2008) 78 British Yearbook of International Law 389.

56 Wouters P and Vinogradov S, 'Analysing the ECE Water Convention: What Lessons for the Regional Management of Transboundary Water Resources?' in Stokke OS and Thommessen ØB (eds.), Yearbook of International Co-operation on Environment and Development 2003/2004 (Earthscan Publications 2003)

57 UN ECE, Amendment to Articles 25 and 26 of the Convention, UN Doc. UNECE/MP.WAT/14, 12 January 2004, available at <http://www.unece.org/fileadmin/DAM/env/documents/2004/wat/ece.mp.wat.14.e.pdf> accessed 30 April 2012. See also, UNECE, Opening the Convention Beyond the Region: Why the Amendments to Articles 25 and 26 Should Enter Into Force Soon, UN Doc. UNECE/MP.WAT/2009/1, 11 August 2009, available at <http://www.unece.org/fileadmin/DAM/env/documents/2009/Wat/mp_wat/ECE_MP_WAT_2009_1_e.pdf> accessed 30 April 2012.

58 Currently there are 38 parties to the Convention, see <http://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-5&chapter=27&lang=en>, and the amendment has been ratified by 21 parties.

B.5 The international legal system

An introduction to the UN Watercourses Convention would not be complete without providing an overview of the international legal system in which this global instrument operates. While more extensive discussion of the international legal system can be found elsewhere, some key points are worth noting here.

Horizontal nature | While the legal structure within national legal systems is vertical,[59] the international system is horizontal, consisting of over 190 independent states which are all equal in legal theory (in that they all possess the characteristics of sovereignty) and where no state has authority over another.[60] There is no supreme law-making or law-enforcement authority, it is states which create the law and can choose whether or not to obey it.

Subjects of international law | The subjects of international law means those 'persons' or 'entities' to which international law applies. International legal personality essentially means the right to conclude international treaties and to bring international claims.[61] Traditionally the subjects of international law were limited to states and the Holy See.[62] States remain the major subjects of international law. Their legal personality derives from the nature and structure of the international system and Statehood will arise as a result of the satisfaction of a set of legal criteria.[63] As such the state is said to have an 'objective' personality; it is subject to a wide range of international rights and duties and will be accepted as an international person by any other international person in international relations.[64] There are also now an increasing range of non-state actors and entities in the international legal system, including international organisations, natural persons (individuals), and private companies. These legal persons are said to have 'qualified' personality, as subjects possessing qualified rights and responsibilities, which are given to them by the necessary subjects of international law.[65] For example, the question of whether an organisation possesses personality in international law will depend upon its constitutional status, its actual powers and practice, its capacity to enter into relations with states and other organisations and conclude treaties with them, and the status it has been given under domestic law.[66] The concepts and categorisations above are not absolute and there are diverging views from legal scholars as to the varying degrees of international legal personality attached to different subjects.

International law-making | In international law there is no one law-making body able to create laws which are internationally binding upon everyone, or a proper system of courts with compulsory jurisdiction to interpret and progress the law.[67] Article 38(1) of the Statute of the International Court of Justice is the most authoritative statement of the sources of international law and includes: (a) international conventions, whether general or particular, establishing rules expressly recognised by the contesting states; (b) international custom, as evidence of a general practice accepted as law; (c) the general principles of law recognised by civilised nations; (d) subject to the provisions of Article 59, judicial decisions and the teachings of the most highly qualified publicists of the various nations, as subsidiary means for the determination of rules of

59 In domestic systems, the law is 'vertical' which means authority is vertical and above individuals who must obey it. In a domestic system institutions create the law not individuals. MN Shaw, International Law (6th edn, Cambridge University Press 2008) at 6.

60 Ibid.

61 Aust A, Modern Treaty Law and Practice (Cambridge University Press 2005) at 13.

62 Shaw, International Law, at 197.

63 For widely used criteria of statehood see Article 1 of the 1933 Montevideo Convention on Rights and Duties of States,165 LNTS 19. Under this Convention a state as an international person should possess the following qualifications: '(a) a permanent population; (b) a defined territory; (c) government; and (d) capacity to enter into relations with other states'. For commentary see Shaw, International Law, at 197-211.

64 Shaw, International Law, at 260.

65 Ibid.

66 Ibid.

67 Ibid 70.

law.[68] The first two sources (treaties and international custom) are considered primary sources of international law whereas generally accepted principles of law, judicial and arbitral decisions, and legal doctrine are considered to be secondary sources of international law.

Codification and Progressive Development, and the ILC | The objective of the ILC, pursuant to its founding statute, is the 'promotion of the progressive development of international law and its codification'.[69] The ILC thus supports one of the key requirements of the UN General Assembly, pursuant to Article 13 of the UN Charter, namely, to initiate studies and make recommendations for the purpose of 'encouraging the progressive development of international law and its codification'.[70] Pursuant to the Statute of the ILC, 'progressive development of international law' is defined as 'the preparation of draft conventions on subjects which have not yet been regulated by international law or in regard to which the law has not yet been sufficiently developed in the practice of states.'[71] The 'codification of international law' is defined within the statute as, 'the more precise formulation and systematization of rules of international law in fields where there already has been extensive State practice, precedent and doctrine.'[72] Generally, and as was the case with the law of international watercourses, the ILC's work tends to include elements of both codification and progressive development.

In terms of working arrangements, the ILC is made up of 34 experts in international law nominated by member states of the UN, operating in their individual capacity, and elected by the General Assembly. The ILC may be requested by the UN General Assembly to address questions on the codification of principles of international law, or as was the case with the law of non-navigational uses of international watercourses, draft proposals for international conventions. In both cases the ILC appoints a Special Rapporteur from within its membership and develops a plan of work. The rapporteur then writes a report, or series of reports on the subject, which must then be approved by the Commission, UN Secretary-General and UN General Assembly.

State responsibility | State responsibility is a fundamental principle of international law, providing that whenever one state commits an internationally unlawful act against another state, international responsibility is established between the two.[73]Article 1 of the ILC's Draft Articles on State Responsibility provides that 'every internationally wrongful act of a state entails responsibility'.[74] Article 2 stipulates that there is an internationally wrongful act of a state when: (a) conduct consisting of an action or omission is attributable to the state under international law; and (b) that conduct constitutes a breach of an international obligation of the state.[75] The state responsible for the internationally wrongful act is under an obligation to cease that act and to offer a guarantee that it will not be repeated (Article 30) and a breach of international obligation gives rise to a requirement for reparation (Article 31).[76] There is a substantial body of international case law

68 Article 38(1) Statute of the International Court of Justice is annexed to the UN Charter and is available online at the International Court of Justice <http://www.icj-cij.org/documents/index.php?p1=4&p2=2&p3=0> accessed 21 December 2011.

69 Statute of the International Law Commission, UN General Assembly Resolution 174(ii), 21 November 1947, available at <http://untreaty.un.org/ilc/texts/instruments/english/statute/statute_e.pdf> accessed 30 April 2012.

70 Article 13 of the UN Charter (adopted 26 June 1945, entered into force 24 October 1945), available at <http://treaties.un.org/doc/Publication/CTC/uncharter.pdf> accessed 30 April 2012.

71 Statute of the International Law Commission, Article 15.

72 Ibid

73 Shaw, International Law, at 778.

74 ILC 2001 Draft Articles on Responsibility of States for internationally wrongful acts, Report of the International Law Commission on the work of its 53rd session (2001) UN Doc A/56/10, at 43-365.

75 Ibid.

76 Ibid.

in line with the ILC Draft Articles, some of which is discussed briefly under Part VI of this Guide.

Compliance, disputes and enforcement | Why do states comply or fail to comply with international law? There are numerous internal and external motivations for state compliance and contrary to popular belief states do observe international law most of the time, with violations being comparatively rare.[77] It is in a nation's self-interest to obey, if a state is seen to ignore international law, other states may do the same and the resulting chaos would not be in the interest of any state.[78] States recognise this necessity because it imports an element of stability and predictability into international relations.[79] Where countries are involved in a disagreement or a dispute, international law provides a common frame of reference with a common language where one state will be aware of how the other state will develop its argument.[80] Essentially, the need for reciprocity encourages compliance.

However, where states fail to comply with international law, possible reasons include ambiguity and indeterminacy of language or lack of capacity and less commonly where a state makes a conscious decision to violate it on an issue regarded as vital to their interests.[81] The traditional response to ensuring compliance was to invoke state responsibility. New approaches to ensure compliance have moved away from a pure focus on dispute settlement to dispute avoidance and state responsibility towards compliance verification and assistance, including utilising positive incentives and disincentives for non-compliance.

77 Aust, Modern Treaty Law and Practice at 3.
78 Ibid at 4.
79 Shaw, International Law at 7.
80 Ibid at 8.
81 Black's Law Dictionary (4th edn West 1951).

What is an international dispute and how do states resolve their disputes? And a related question – what is the distinction between and international justiciable dispute and non-justiciable dispute, and why does the distinction matter? The term 'dispute' has been defined as a 'conflict or controversy; a conflict of claims or rights'.[82] The Permanent Court of International Justice in the Mavrommatis case defines a dispute as a, 'disagreement on a point of law or fact, a conflict of legal views or of interests between two persons'.[83] The distinction is often drawn between legal disputes (primarily involving legal issues) and any other kind of dispute. Whether a disagreement in international law is considered to be a 'dispute' or not has legal implications for the type of dispute settlement response. Only disputes which are 'justiciable' are suitable for resolution by legal dispute settlement methods. A dispute is justiciable if, 'first, a specific disagreement exists, and secondly, that disagreement is of a kind which can be resolved by the application of rules of law by judicial (including arbitral) processes', otherwise it is non-justiciable.[84] Where disputes are non-justiciable they must be resolved through other methods of peaceful settlement. The methods of dispute resolution will be discussed in Part VI of this Guide.

82 (1924) PCIJ Ser. A, No. 2, 11.
83 J Collier and V Lowe, Settlement of Disputes in International Law: Institutions and Procedures (Oxford University Press 1999) at 10.
84 Ibid.

B.6 Additional reading

Aguilar G and Iza A, Governance of Shared Waters – Legal and Institutional Issues (IUCN 2011).

Aust A, Modern Treaty Law and Practice (Cambridge University Press 2005).

Benevisti E, Sharing Transboundary Resources: International Law and Optimal Resource Use (Cambridge University Press 2002).

Berber FJ, Rivers in International Law (Stevens & Sons Ltd 1959).

Boisson de Charzournes L, Freshwater and International Law: The Interplay between Universal, Regional and Basin Perspectives (UNESCO WWAP 2009).

Bourne C., 'The Right to Utilise the Water of International Rivers' (1965) 3 Canadian Yearbook of International Law 187.

Bruhacs J, The Law of Non-navigational Uses of International Watercourses (Marginus Nijhoff Publishers 1993).

Caflish L and Zacklin R, The Legal Regime of International Rivers and Lakes (Nijhoff 1981).

Caponera DA, Principles of Water Law and Administration – National and International: Selected Writings (2nd edn, Taylor and Francis Group 2007).

Dellapenna JW, 'The Customary International Law of Transboundary Fresh Waters' (2001) 1 International Journal of Global Environmental Issues 264.

Delli Priscoli J and Wolf AT, Managing and Transforming Water Conflicts (Cambridge University Press 2009).

Dinar A, Dinar S, McCaffrey SC and McKinney, Bridges over Water – Understanding transboundary water conflict, negotiation and cooperation (World Scientific 2007).

Earle A, Jägerskog A and Öjendal J, Transboundary Water Management – Principles and practice (Earthscan 2010).

Garretson AH, The Law of International Drainage Basins (Oceana Publications Inc. 1967).

Grzybowski A, McCaffrey S and Paisley R, 'Beyond International Water Law: Successfully negotiating mutual gains agreements in international watercourses' (2010) 22 Pacific McGeorge Global Business and Development Law Journal 139.

Helal MS, 'Sharing Blue Gold: the 1997 UN Convention on the Law of the Non-navigational Uses of International Watercourses Ten Years On' (2007) 18 Colorado Journal of International Environmental Law and Policy 337.

Iza A and Stein R, eds, Rule – Reforming Water Governance (IUCN 2009).

Paisely RK, International Watercourses/ River basins Including Law, Negotiation, Conflict Resolution and Simulation Training Exercises (FAO 2008).

Magsig, B-O, 'Overcoming State-centrism in International Water Law: 'Regional Common Concern' as the normative Foundation of Water Security' (2011) 3 Göttingen Journal of International Law 317.

McCaffrey SC, The Law of International Watercourses (2nd edn. Oxford University Press 2007).

McCaffrey SC and Weber GS, Guidebook for Policy and Legislative Development on Conservation and Sustainable Use of Freshwater Resources (UNEP 2005).

Rieu-Clarke A, 'The Role of Treaties in Building International Watercourse Regimes: A legal perspective of existing knowledge' (2010) 12(6) Water Policy 822.

Rieu-Clarke A, 'The Role and Relevance of the UN Convention on the Law of the Non-navigational Uses of International Watercourses to the EU and its Member States' (2008) 78 British Yearbook of International Law 389 (2008).

Sadoff C, Greiber T, Smith M and Bergkamp G, Share – managing water across boundaries (IUCN 2008).

Salman SMA, 'The Helsinki Rules, The UN Watercourses Convention and the Berlin Rules: perspective on international water law' (2007) 23(4) International Journal of Water Resources Development 625.

Schroeder-Wildberg E, The 1997 International Watercourses Convention – Background and negotiations (Working Paper on Management in Environmental Planning 2002).

Shaw MN, International Law (6th edn, Cambridge University Press 2008).

Tarlock D, 'Water Security, Fear Mitigation and International Water Law' (2008) 31 Hamline Law Review 704.

United Nations Environment Programme, The Greening of Water Law: Managing Freshwater Resources for People and the Environment (UNEP 2010).

Vinogradov S, 'Regime Building for Transboundary Waters: The Evolution of Regional and Institutional Frameworks in the EECCA Region' (2007) 16 Journal of Water Law 77.

Vinogradov S, Wouters P and Jones P, Transforming Potential Conflict into Cooperation Potential: The Role of International Water Law (UNESCO 2003).

Wouters P, Vinogradov S and Magsig, B-O, 'Water Security, Hydrosolidarity and International Law: A River runs through it' (2009) 19 Yearbook of International Environmental Law 97.

Wouters P and Moynihan R 'International Law and Water Security', In Alistair Rieu-Clarke and Flavia Loures (eds.), The UN Watercourses Convention in Force: Strengthening International Law for Transboundary Water Management (Earthscan Publishers 2012).

Wouters P and Ziganshina D, 'Tackling the Global Water Crisis: Unlocking International Law as Fundamental to the Peaceful Management of the World's Shared Transboundary Waters – Introducing the H20 paradigm', in Grafton Q and Hussy K (eds.), Water Resources Planning and Management: Challenges and Solutions (Cambridge University Press 2011).

Wouters P, 'International Watercourses' in Carty T. (ed), Oxford Bibliographies Online: International Law (Oxford University Press 2012).

Wouters P, The International Law of Watercourses: New Dimensions (Xiamen Academy Of International Law Lecture) (Brill 2011).

Ziganshina D., 'International Water Law in Central Asia: Commitments, Compliance and Beyond' (2009) 20 Journal of Water Law 96.

Text of the 1997 UN Watercourses Convention

C. Convention on the Law of the Non-Navigational Uses of International Watercourses

PART I - INTRODUCTION

Article 1 - Scope of the present Convention

1. The present Convention applies to uses of international watercourses and of their waters for purposes other than navigation and to measures of protection, preservation and management related to the uses of those watercourses and their waters.
2. The uses of international watercourses for navigation is not within the scope of the present Convention except insofar as other uses affect navigation or are affected by navigation.

Refer to pages 67-74

Article 2 - Use of terms

For the purposes of the present Convention:

(a) "Watercourse" means a system of surface waters and groundwaters constituting by virtue of their physical relationship a unitary whole and normally flowing into a common terminus;

(b) "International watercourse" means a watercourse, parts of which are situated in different States;

(c) "Watercourse State" means a State Party to the present Convention in whose territory part of an international watercourse is situated, or a Party that is a regional economic integration organization, in the territory of one or more of whose Member States part of an international watercourse is situated;

(d) "Regional economic integration organization" means an organization constituted by sovereign States of a given region, to which its member States have transferred competence in respect of matters governed by this Convention and which has been duly authorized in accordance with its internal procedures, to sign, ratify, accept, approve or accede to it.

Refer to pages 75-87

Article 3 - Watercourse agreements

1. In the absence of an agreement to the contrary, nothing in the present Convention shall affect the rights or obligations of a watercourse State arising from agreements in force for it on the date on which it became a party to the present Convention.
2. Notwithstanding the provisions of paragraph 1, parties to agreements referred to in paragraph 1 may, where necessary, consider harmonizing such agreements with the basic principles of the present Convention.
3. Watercourse States may enter into one or more agreements, hereinafter referred to as "watercourse agreements", which apply and

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

4. Where a watercourse agreement is concluded between two or more watercourse States, it shall define the waters to which it applies. Such an agreement may be entered into with respect to an entire international watercourse or any part thereof or a particular project, programme or use except insofar as the agreement adversely affects, to a significant extent, the use by one or more other watercourse States of the waters of the watercourse, without their express consent.

5. Where a watercourse State considers that adjustment and application of the provisions of the present Convention is required because of the characteristics and uses of a particular international watercourse, watercourse States shall consult with a view to negotiating in good faith for the purpose of concluding a watercourse agreement or agreements.

6. Where some but not all watercourse States to a particular international watercourse are parties to an agreement, nothing in such agreement shall affect the rights or obligations under the present Convention of watercourse States that are not parties to such an agreement.

Refer to pages 88-95

Article 4 - Parties to watercourse agreements

1. Every watercourse State is entitled to participate in the negotiation of and to become a party to any watercourse agreement that applies to the entire international watercourse, as well as to participate in any relevant consultations.

2. A watercourse State whose use of an international watercourse may be affected to a significant extent by the implementation of a proposed watercourse agreement that applies only to a part of the watercourse or to a particular project, programme or use is entitled to participate in consultations on such an agreement and, where appropriate, in the negotiation thereof in good faith with a view to becoming a party thereto, to the extent that its use is thereby affected.

Refer to pages 96-99

PART II - GENERAL PRINCIPLES

Article 5 - Equitable and reasonable utilization and participation

1. Watercourse States shall in their respective territories utilize an international watercourse in an equitable and reasonable manner. In particular, an international watercourse shall be used and developed by watercourse States with a view to attaining optimal and sustainable utilization thereof and benefits therefrom, taking into account the interests of the watercourse States concerned, consistent with adequate protection of the watercourse.
2. Watercourse States shall participate in the use, development and protection of an international watercourse in an equitable and reasonable manner. Such participation includes both the right to utilize the watercourse and the duty to cooperate in the protection and development thereof, as provided in the present Convention.

Refer to pages 100-110

Article 6 - Factors relevant to equitable and reasonable utilization

1. Utilization of an international watercourse in an equitable and reasonable manner within the meaning of article 5 requires taking into account all relevant factors and circumstances, including:

(a) Geographic, hydrographic, hydrological, climatic, ecological and other factors of a natural character;

(b) The social and economic needs of the watercourse States concerned;

(c) The population dependent on the watercourse in each watercourse State;

(d) The effects of the use or uses of the watercourses in one watercourse State on other watercourse States;

(e) Existing and potential uses of the watercourse;

(f) Conservation, protection, development and economy of use of the water resources of the watercourse and the costs of measures taken to that effect;

(g) The availability of alternatives, of comparable value, to a particular planned or existing use.

2. In the application of article 5 or paragraph 1 of this article, watercourse States concerned shall, when the need arises, enter into consultations in a spirit of cooperation.
3. The weight to be given to each factor is to be determined by its importance in comparison with that of other relevant factors. In determining what is a reasonable and equitable use, all relevant factors are to be considered together and a conclusion reached on the basis of the whole.

Refer to pages 111-116

Article 7 - Obligation not to cause significant harm

1. Watercourse States shall, in utilizing an international watercourse in their territories, take all appropriate measures to prevent the causing of significant harm to other watercourse States.
2. Where significant harm nevertheless is caused to another watercourse State, the States whose use causes such harm shall, in the absence of agreement to such use, take all appropriate measures, having due regard for the provisions of articles 5 and 6, in consultation with the affected State, to eliminate or mitigate such harm and, where appropriate, to discuss the question of compensation.

Refer to pages 117-122

Article 8 - General obligation to cooperate

1. Watercourse States shall cooperate on the basis of sovereign equality, territorial integrity, mutual benefit and good faith in order to attain optimal utilization and adequate protection of an international watercourse.
2. In determining the manner of such cooperation, watercourse States may consider the establishment of joint mechanisms or commissions, as deemed necessary by them, to facilitate cooperation on relevant measures and procedures in the light of experience gained through cooperation in existing jointmechanisms and commissions in various regions.

Refer to pages 123-125

Article 9 - Regular exchange of data and information

1. Pursuant to article 8, watercourse States shall on a regular basis exchange readily available data and information on the condition of the watercourse, in particular that of a hydrological, meteorological, hydrogeological and ecological nature and related to the water quality as well as related forecasts.
2. If a watercourse State is requested by another watercourse State to provide data or information that is not readily available, it shall employ its best efforts to comply with the request but may condition its compliance upon payment by the requesting State of the reasonable costs of collecting and, where appropriate, processing such data or information.
3. Watercourse States shall employ their best efforts to collect and, where appropriate, to process data and information in a manner which facilitates its utilization by the other watercourse States to which it is communicated.

Refer to pages 126-128

Article 10 - Relationship between different kinds of uses

1. In the absence of agreement or custom to the contrary, no use of an international watercourse enjoys inherent priority over other uses.
2. In the event of a conflict between uses of an international watercourse, it shall be resolved with reference to articles 5 to 7, with special regard being given to the requirements of vital human needs.

Refer to pages 129-133

PART III - PLANNED MEASURES

Article 11 - Information concerning planned measures

Watercourse States shall exchange information and consult each other and, if necessary, negotiate on the possible effects of planned measures on the condition of an international watercourse.

Refer to pages 134-138

Article 12 - Notification concerning planned measures with possible adverse effects

Before 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 of any environmental impact assessment, in order to enable the notified States to evaluate the possible effects of the planned measures.

Refer to pages 139-143

Article 13 - Period for reply to notification

Unless otherwise agreed:

(a) A watercourse State providing a notification under article 12 shall allow the notified States a period of six months within which to study and evaluate the possible effects of the planned measures and to communicate the findings to it;

(b) This period shall, at the request of a notified State for which the evaluation of the planned measures poses special difficulty, be extended for a period of six months.

Refer to pages 144-145

Article 14 - Obligations of the notifying State during the period for reply

During the period referred to in article 13, the notifying State:

(a) Shall cooperate with the notified States by providing them, on request, with any additional data and information that is available and necessary for an accurate evaluation; and

(b) Shall not implement or permit the implementation of the planned measures without the consent of the notified States.

Refer to pages 146-147

Article 15 - Reply to notification

The notified States shall communicate their findings to the notifying State as early as possible within the period applicable pursuant to article 13. If a notified State finds that implementation of the planned measures would be inconsistent with the provisions of articles 5 or 7, it shall attach to its finding a documented explanation setting forth the reasons for the finding.

Refer to pages 148-149

Article 16 - Absence of reply to notification

1. If, within the period applicable pursuant to article 13, the notifying State receives no communication under article 15, it may, subject to its obligations under articles 5 and 7, proceed with the implementation of the planned measures, in accordance with the notification and any other data and information provided to the notified States.

2. Any claim to compensation by a notified State which has failed to reply within the period applicable pursuant to article 13 may be offset by the costs incurred by the notifying State for action undertaken after the expiration of the time for a reply which would not have been undertaken if the notified State had objected within that period.

Refer to pages 150-151

Article 17 - Consultations and negotiations concerning planned measures

1. If a communication is made under article 15 that implementation of the planned measures would be inconsistent with the provisions of articles 5 or 7, the notifying State and the State making the communication shall enter into consultations and, if necessary, negotiations with a view to arriving at an equitable resolution of the situation.
2. The consultations and negotiations shall be conducted on the basis that each State must in good faith pay reasonable regard to the rights and legitimate interests of the other State.
3. During the course of the consultations and negotiations, the notifying State shall, if so requested by the notified State at the time it makes the communication, refrain from implementing or permitting the implementation of the planned measures for a period of six months unless otherwise agreed.

Refer to pages 152-154

Article 18 - Procedures in the absence of notification

1. If a watercourse State has reasonable grounds to believe that another watercourse State is planning measures that may have a significant adverse effect upon it, the former State may request the latter to apply the provisions of article 12. The request shall be accompanied by a documented explanation setting forth its grounds.
2. In the event that the State planning the measures nevertheless finds that it is not under an obligation to provide a notification under article 12, it shall so inform the other State, providing a documented explanation setting forth the reasons for such finding. If this finding does not satisfy the other State, the two States shall, at the request of that other State, promptly enter into consultations and negotiations in the manner indicated in paragraphs 1 and 2 of article 17.
3. During the course of the consultations and negotiations, the State planning the measures shall, if so requested by the other State at the time it requests the initiation of consultations and negotiations, refrain from implementing or permitting the implementation of those measures for a period of six months unless otherwise agreed.

Refer to pages 155-160

Article 19 - Urgent implementation of planned measures

1. In the event that the implementation of planned measures is of the utmost urgency in order to protect public health, public safety or other equally important interests, the State planning the measures may, subject to articles 5 and 7, immediately proceed to implementation, notwithstanding the provisions of article 14 and paragraph 3 of article 17.
2. In such case, a formal declaration of the urgency of the measures shall be communicated without delay to the other watercourse States referred to in article 12 together with the relevant data and information.
3. The State planning the measures shall, at the request of any of the States referred to in paragraph 2, promptly enter into consultations and negotiations with it in the manner indicated in paragraphs 1 and 2 of article 17.

Refer to pages 161-163

PART IV - PROTECTION, PRESERVATION AND MANAGEMENT

Article 20 - Protection and preservation of ecosystems

Watercourse States shall, individually and, where appropriate, jointly, protect and preserve the ecosystems of international watercourses.

Refer to pages 164-172

Article 21 - Prevention, reduction and control of pollution

1. For the purpose of this article, “pollution of an international watercourse” means any detrimental alteration in the composition or quality of the waters of an international watercourse which results directly or indirectly from human conduct.
2. Watercourse States shall, individually and, where appropriate, jointly, prevent, reduce and control the pollution of an international watercourse that may cause significant harm to other watercourse States or to their environment, including harm to human health or safety, to the use of the waters for any beneficial purpose or to the living resources of the watercourse. Watercourse States shall take steps to harmonize their policies in this connection.
3. Watercourse States shall, at the request of any of them, consult with a view to arriving at mutually agreeable measures and methods to prevent, reduce and control pollution of an international watercourse, such as:

(a) Setting joint water quality objectives and criteria;

(b) Establishing techniques and practices to address pollution from point and non-point sources;

(c) Establishing lists of substances the introduction of which into the waters of an international watercourse is to be prohibited, limited, investigated or monitored.

Refer to pages 173-180

Article 22 - Introduction of alien or new species

Watercourse States shall take all measures necessary to prevent the introduction of species, alien or new, into an international watercourse which may have effects detrimental to the ecosystem of the watercourse resulting in significant harm to other watercourse States.

Refer to pages 181-184

Article 23 - Protection and preservation of the marine environment

Watercourse States shall, individually and, where appropriate, in cooperation with other States, take all measures with respect to an international watercourse that are necessary to protect and preserve the marine environment, including estuaries, taking into account generally accepted international rules and standards.

Refer to pages 185-190

Article 24 - Management

1. Watercourse States shall, at the request of any of them, enter into consultations concerning the management of an international watercourse, which may include the establishment of a joint management mechanism.
2. For the purposes of this article, "management" refers, in particular, to:

(a) Planning the sustainable development of an international watercourse and providing for the implementation of any plans adopted; and

(b) Otherwise promoting the rational and optimal utilization, protection and control of the watercourse.

Refer to pages 191-195

Article 25 - Regulation

1. Watercourse States shall cooperate, where appropriate, to respond to needs or opportunities for regulation of the flow of the waters of an international watercourse.
2. Unless otherwise agreed, watercourse States shall participate on an equitable basis in the construction and maintenance or defrayal of the costs of such regulation works as they may have agreed to undertake.
3. For the purposes of this article, “regulation” means the use of hydraulic works or any other continuing measure to alter, vary or otherwise control the flow of the waters of an international watercourse.

Refer to pages 196-198

Article 26 - Installations

1. Watercourse States shall, within their respective territories, employ their best efforts to maintain and protect installations, facilities and other works related to an international watercourse.
2. Watercourse States shall, at the request of any of them which has reasonable grounds to believe that it may suffer significant adverse effects, enter into consultations with regard to:

(a) The safe operation and maintenance of installations, facilities or other works related to an international watercourse; and

(b) The protection of installations, facilities or other works from wilful or negligent acts or the forces of nature.

Refer to pages 199-200

PART V - HARMFUL CONDITIONS AND EMERGENCY SITUATIONS

Article 27 - Prevention and mitigation of harmful conditions

Watercourse States shall, individually and, where appropriate, jointly, take all appropriate measures to prevent or mitigate conditions related to an international watercourse that may be harmful to other watercourse States, whether resulting from natural causes or human conduct, such as flood or ice conditions, water- borne diseases, siltation, erosion, salt-water intrusion, drought or desertification.

Refer to pages 201-209

Article 28 - Emergency situations

1. For the purposes of this article, “emergency” means a situation that causes, or poses an imminent threat of causing, serious harm to watercourse States or other States and that results suddenly from natural causes, such as floods, the breaking up of ice, landslides or earthquakes, or from human conduct, such as industrial accidents.
2. A watercourse State shall, without delay and by the most expeditious means available, notify other potentially affected States and competent international organizations of any emergency originating within its territory.
3. A watercourse State within whose territory an emergency originates shall, in cooperation with potentially affected States and, where appropriate, competent international organizations, immediately take all practicable measures necessitated by the circumstances to prevent, mitigate and eliminate harmful effects of the emergency.
4. When necessary, watercourse States shall jointly develop contingency plans for responding to emergencies, in cooperation, where appropriate, with other potentially affected States and competent international organizations.

Refer to pages 210-215

PART VI - MISCELLANEOUS PROVISIONS

Article 29 - International watercourses and installations in time of armed conflict

International watercourses and related installations, facilities and other works shall enjoy the protection accorded by the principles and rules of international law applicable in international and non-international armed conflict and shall not be used in violation of those principles and rules.

Refer to pages 216-220

Article 30 - Indirect procedures

In cases where there are serious obstacles to direct contacts between watercourse States, the States concerned shall fulfil their obligations of cooperation provided for in the present Convention, including exchange of data and information, notification, communication, consultations and negotiations, through any indirect procedure accepted by them.

Refer to pages 221-223

Article 31 - Data and information vital to national defence or security

Nothing in the present Convention obliges a watercourse State to provide data or information vital to its national defence or security. Nevertheless, that State shall cooperate in good faith with the other watercourse States with a view to providing as much information as possible under the circumstances.

Refer to pages 221-223

Article 32 - Non-discrimination

Unless the watercourse States concerned have agreed otherwise for the protection of the interests of persons, natural or juridical, who have suffered or are under a serious threat of suffering significant transboundary harm as a result of activities related to an international watercourse, a watercourse State shall not discriminate on the basis of nationality or residence or place where the injury occurred, in granting to such persons, in accordance with its legal system, access to judicial or other procedures, or a right to claim compensation or other relief in respect of significant harm caused by such activities carried on in its territory.

Refer to pages 224-227

Article 33 - Settlement of disputes

1. In the event of a dispute between two or more Parties concerning the interpretation or application of the present Convention, the Parties concerned shall, in the absence of an applicable agreement between them, seek a settlement of the dispute by peaceful means in accordance with the following provisions.
2. If the Parties concerned cannot reach agreement by negotiation requested by one of them, they may jointly seek the good offices of, or request mediation or conciliation by, a third party, or make use, as appropriate, of any joint watercourse institutions that may have been established by them or agree to submit the dispute to arbitration or to the International Court of Justice.
3. Subject to the operation of paragraph 10, if after six months from the time of the request for negotiations referred to in paragraph 2, the Parties concerned have not been able to settle their dispute through negotiation or any other means referred to in paragraph 2, the dispute shall be submitted, at the request of any of the parties to the dispute, to impartial fact-finding in accordance with paragraphs 4 to 9, unless the Parties otherwise agree.
4. A Fact-finding Commission shall be established, composed of one member nominated by each Party concerned and in addition a member not having the nationality of any of the Parties concerned chosen by the nominated members who shall serve as Chairman.
5. If the members nominated by the Parties are unable to agree on a Chairman within three months of the request for the establishment of the Commission, any Party concerned may request the Secretary- General of the United Nations to appoint the Chairman who shall not have the nationality of any of the parties to the dispute or of any riparian State of the watercourse concerned. If one of the Parties fails to nominate a member within three months of the initial request pursuant to paragraph 3, any other Party concerned may request the Secretary-General of the United Nations to appoint a person who shall not have the nationality of any of the parties to the dispute or of any riparian State of the watercourse concerned. The person so appointed shall constitute a single-member Commission.
6. The Commission shall determine its own procedure.

7. The Parties concerned have the obligation to provide the Commission with such information as it may require and, on request, to permit the Commission to have access to their respective territory and to inspect any facilities, plant, equipment, construction or natural feature relevant for the purpose of its inquiry.

8. The Commission shall adopt its report by a majority vote, unless it is a single-member Commission, and shall submit that report to the Parties concerned setting forth its findings and the reasons therefor and such recommendations as it deems appropriate for an equitable solution of the dispute, which the Parties concerned shall consider in good faith.

9. The expenses of the Commission shall be borne equally by the Parties concerned.

10. When ratifying, accepting, approving or acceding to the present Convention, or at any time thereafter, a Party which is not a regional economic integration organization may declare in a written instrument submitted to the Depositary that, in respect of any dispute not resolved in accordance with paragraph 2, it recognizes as compulsory ipso facto and without special agreement in relation to any Party accepting the same obligation:

(a) Submission of the dispute to the International Court of Justice; and/or

(b) Arbitration by an arbitral tribunal established and operating, unless the parties to the dispute otherwise agreed, in accordance with the procedure laid down in the annex to the present Convention.

A Party which is a regional economic integration organization may make a declaration with like effect in relation to arbitration in accordance with subparagraph (b).

Refer to pages 228-233

PART VII - FINAL CLAUSES

Article 34 - Signature

The present Convention shall be open for signature by all States and by regional economic integration organizations from ...until ... at United Nations Headquarters in New York.

Refer to pages 234-250

Article 35 - Ratification, acceptance, approval or accession

1. The present Convention is subject to ratification, acceptance, approval or accession by States and by regional economic integration organizations. The instruments of ratification, acceptance, approval or accession shall be deposited with the Secretary-General of the United Nations.
2. Any regional economic integration organization which becomes a Party to this Convention without any of its member States being a Party shall be bound by all the obligations under the Convention. In the case of such organizations, one or more of whose member States is a Party to this Convention, the organization and its member States shall decide on their respective responsibilities for the performance of their obligations under the Convention. In such cases, the organization and the member States shall not be entitled to exercise rights under the Convention concurrently.
3. In their instruments of ratification, acceptance, approval or accession, the regional economic integration organizations shall declare the extent of their competence with respect to the matters governed by the Convention. These organizations shall also inform the Secretary-General of the United Nations of any substantial modification in the extent of their competence.

Refer to pages 263-266

Article 36 - Entry into force

1. The present Convention shall enter into force on the ninetieth day following the date of deposit of the thirty-fifth instrument of ratification, acceptance, approval or accession with the Secretary-General of the United Nations.
2. For each State or regional economic integration organization that ratifies, accepts or approves the Convention or accedes thereto after the deposit of the thirty-fifth instrument of ratification, acceptance, approval or accession, the Convention shall enter into force on the ninetieth day after the deposit by such State or regional economic integration organization of its instrument of ratification, acceptance, approval or accession.
3. For the purposes of paragraphs 1 and 2, any instrument deposited by a regional economic integration organization shall not be counted as additional to those deposited by States.

Refer to pages 267-268

Article 37 – Authentic texts

The original of the present Convention, of which the Arabic, Chinese, English, French, Russian and Spanish texts are equally authentic, shall be deposited with the Secretary-General of the United Nations.

Refer to pages 269-270

Annex – Arbitration

Article 1

Unless the parties to the dispute otherwise agree, the arbitration pursuant to article 33 of the Convention shall take place in accordance with articles 2 to 14 of the present annex.

Article 2

The claimant party shall notify the respondent party that it is referring a dispute to arbitration pursuant to article 33 of the Convention. The notification shall state the subject matter of arbitration and include, in particular, the articles of the Convention, the interpretation or application of which are at issue. If the parties do not agree on the subject matter of the dispute, the arbitral tribunal shall determine the subject matter.

Article 3

1. In disputes between two parties, the arbitral tribunal shall consist of three members. Each of the parties to the dispute shall appoint an arbitrator and the two arbitrators so appointed shall designate by common agreement the third arbitrator, who shall be the Chairman of the tribunal. The latter shall not be a national of one of the parties to the dispute or of any riparian State of the watercourse concerned, nor have his or her usual place of residence in the territory of one of these parties or such riparian State, nor have dealt with the case in any other capacity.
2. In disputes between more than two parties, parties in the same interest shall appoint one arbitrator jointly by agreement.
3. Any vacancy shall be filled in the manner prescribed for the initial appointment.

Article 4

1. If the Chairman of the arbitral tribunal has not been designated within two months of the appointment of the second arbitrator, the President of the International Court of Justice shall, at the request of a party, designate the Chairman within a further two-month period.
2. If one of the parties to the dispute does not appoint an arbitrator within two months of receipt of the request, the other party may inform the President of the International Court of Justice, who shall make the designation within a further two-month period.

Article 5

The arbitral tribunal shall render its decisions in accordance with the provisions of this Convention and international law.

Article 6

Unless the parties to the dispute otherwise agree, the arbitral tribunal shall determine its own rules of procedure.

Article 7

The arbitral tribunal may, at the request of one of the Parties, recommend essential interim measures of protection.

Article 8

1. The parties to the dispute shall facilitate the work of the arbitral tribunal and, in particular, using all means at their disposal, shall:

(a) Provide it with all relevant documents, information and facilities; and

(b) Enable it, when necessary, to call witnesses or experts and receive their evidence.

2. The parties and the arbitrators are under an obligation to protect the confidentiality of any information they receive in confidence during the proceedings of the arbitral tribunal.

Article 9

Unless the arbitral tribunal determines otherwise because of the particular circumstances of the case, the costs of the tribunal shall be borne by the parties to the dispute in equal shares. The tribunal shall keep a record of all its costs, and shall furnish a final statement thereof to the parties.

Article 10

Any Party that has an interest of a legal nature in the subject matter of the dispute which may be affected by the decision in the case, may intervene in the proceedings with the consent of the tribunal.

Article 11

The tribunal may hear and determine counterclaims arising directly out of the subject matter of the dispute.

Article 12

Decisions both on procedure and substance of the arbitral tribunal shall be taken by a majority vote of its members.

Article 13

If one of the parties to the dispute does not appear before the arbitral tribunal or fails to defend its case, the other party may request the tribunal to continue the proceedings and to make its award. Absence of a party or a failure of a party to defend its case shall not constitute a bar to the proceedings. Before rendering its final decision, the arbitral tribunal must satisfy itself that the claim is well founded in fact and law.

1. The tribunal shall render its final decision within five months of the date on which it is fully constituted unless it finds it necessary to extend the time limit for a period which should not exceed five more months.
2. The final decision of the arbitral tribunal shall be confined to the subject matter of the dispute and shall state the reasons on which it is based. It shall contain the names of the members who have participated and the date of the final decision. Any member of the tribunal may attach a separate or dissenting opinion to the final decision.
3. The award shall be binding on the parties to the dispute. It shall be without appeal unless the parties to the dispute have agreed in advance to an appellate procedure.
4. Any controversy which may arise between the parties to the dispute as regards the interpretation or manner of implementation of the final decision may be submitted by either party for decision to the arbitral tribunal which rendered it.

Statements of Understanding Pertaining to Certain Articles of the Convention

8. During the elaboration of the draft Convention on the Law of the Non- navigational Uses of International Watercourses, the Chairman of the Working Group of the Whole took note of the following statements of understanding pertaining to the texts of the draft Convention:

As regards article 1:

(a) The concept of “preservation” referred to in this article and the Convention includes also the concept of “conservation”;

(b) The present Convention does not apply to the use of living resources that occur in international watercourses, except to the extent provided for in part IV and except insofar as other uses affect such resources.

As regards article 2 (c):

The term “watercourse State” is used in this Convention as a term of art. Although this provision provides that States and regional economic integration organizations can both fall within this definition, it was recognized that nothing in this paragraph could be taken to imply that regional economic integration organizations have the status of States in international law. As regards article 3:

(a) The present Convention will serve as a guideline for future watercourse agreements and, once such agreements are concluded, it will not alter the rights and obligations provided therein, unless such agreements provide otherwise;

(b) The term “significant” is not used in this article or elsewhere in the present Convention in the sense of “substantial”. What is to be avoided are localized agreements, or agreements concerning a particular project, programme or use, which have a significant adverse effect upon third watercourse States. While such an effect must be capable of being established by objective evidence and not be trivial in nature, it need not rise to the level of being substantial.

As regards article 6 (1) (e):

In order to determine whether a particular use is equitable and reasonable, the benefits as well as the negative consequences of a particular use should be taken into account.

As regards article 7 (2):

In the event such steps as are required by article 7 (2) do not eliminate the harm, such steps as are required by article 7 (2) shall then be taken to mitigate the harm.

As regards article 10:

In determining “vital human needs”, special attention is to be paid to providing sufficient water to sustain human life, including both drinking water and water required for production of food in order to prevent starvation.

As regards articles 21, 22 and 23:

As reflected in the commentary of the International Law Commission, these articles impose a due diligence standard on watercourse States. As regards article 28:

The specific reference to “international organizations” is by no means intended to undermine the importance of cooperation, where appropriate, with competent international organizations on matters dealt with in other articles and, in particular, dealt with in the articles in part IV.

As regards article 29:

This article serves as a reminder that the principles and rules of international law applicable in international and non-international armed conflict contain important provisions concerning international watercourses and related works. The principles and rules of international law that are applicable in a particular case are those that are binding on the States concerned. Just as article 29 does not alter or amend existing law, it also does not purport to extend the applicability of any instrument to States not parties to that instrument.

Part I | Scope (Articles 1-4)

Key points

- The Convention adopts a wide definition of the 'uses' of international watercourses, designed to capture multiple economic, social and environmental uses of water (Article (1)).
- The Convention applies to navigational uses but only to the extent that other water users may affect navigation or vice-versa, e.g. pollution from vessels.
- The Convention applies to international 'watercourses and their waters', and emphasises that both the water channel itself, and interrelated components, as well as the waters contained therein are subject to its provisions' (Article 2 (a)). 'Watercourse' is specifically defined as 'a system of surface waters and groundwaters constituting by virtue of their physical relationship a unitary whole and normally flowing into a common terminus' (Article 2 (a)).
- The Convention applies to an 'International Watercourse' defined as 'a watercourse, parts of which are situated in different states' which covers 'watercourse systems' that cross international boundaries, including major and minor watercourses and their tributaries, and connected lakes and aquifers, glaciers, reservoirs, canals, wetlands and floodplains (Articles 2(a) and 2(b)).
- The Convention applies to groundwater systems but only to the extent that an aquifer[85] is connected hydrologically to a system of surface waters, parts of which are situated in different states, which therefore excludes confined aquifers [86] (Articles 2 (a) (b)).
- The definition of a 'watercourse state' (Article 2 (c)), implies that the rights and duties established by the Convention apply exclusively among contracting parties and only to 'other states' (riparian non-contracting states) when they are vulnerable to transboundary harm through an international watercourse. Although, the rules of customary law as codified by the Convention still apply to non-contracting states (see section 4.1 below).
- In terms of existing and new agreements, Articles 3 and 4 require watercourse states to consult with each other on the adjustment and application of the provisions of the Convention, and where necessary harmonise the Convention's principles with the specific watercourse agreements.
- Articles 3(3) and 4(2) of the Convention provide that all watercourse states may become a party to any agreement that only refers to a portion of the basin or to a specific project or use if they may be affected by such an agreement. If riparian parties choose not to become a party to such an agreement, the agreement still cannot adversely affect, to a significant extent, the use of the resource by non-participating riparians without their express consent (Article 3(4)).

85 The word 'aquifer' refers to a 'permeable water-bearing geological formation underlain by a less permeable layer and the water contained in the saturated zone of the formation'. International Law Commission, Draft Articles on the Law of Transboundary Aquifers (21 February 2008) UN Doc. A/CN.4/591 Art. 2.

86 See section 2.1 below for commentary on the nuances and meanings of these terms as they have developed through the work of the ILC on groundwater.

Article 1 | Scope of the present Convention

Convention text

1. The present Convention applies to uses of international watercourses and of their waters for purposes other than navigation and to measures of protection, preservation and management related to the uses of those watercourses and their waters.
2. The uses of international watercourses for navigation is not within the scope of the present Convention except insofar as other uses affect navigation or are affected by navigation.

1.1 Commentary

1.1.1 Scope overview

From a legal perspective, the issue of scope is linked directly to the laws that define the legal coverage of a treaty.[87] Applied to the sharing of an international watercourse, the scope of a treaty normally defines the parameters of the watercourse regime including (but not limited to) the geographical and hydrological boundaries; the types of water uses and activities; the substantive measures guiding such water use; and the state parties to which the treaty applies.[88] Articles 1-4 of the 1997 UN Watercourses Convention determines these scoping issues as well as clarifying the relationship between the Convention and other existing or future watercourse agreements and their legal effect on contracting parties and non-parties.

87 Vienna Convention on the Law of Treaties (adopted 23 May 1969, entered into force 27 January1980) UN Doc A/Conf.39/27, 1155 UNTS 331 (Vienna Convention) Art. 29 Territorial scope of treaties provides, 'Unless a different intention appears from the treaty or is otherwise established, a treaty is binding upon each party in respect of its entire territory'.

88 For examination of state practice defining 'scope' as it relates to international watercourses see Wouters P, 'The International Law of Watercourses : New Dimensions' 3 Collected Courses of the Xiamen Academy of International Law (Martinus Nijhoff 2011) at 377.

1.1.2 Geographical boundaries and water use

Article 1 (1) of the UN Watercourses Convention adopts a broad definition of both geographical and hydrological scope and the scope of water 'uses' of international watercourses, and is designed to capture multiple economic, social and environmental dimensions of water – other than navigation.[89] In using the term 'watercourses and their waters', the Convention emphasises that both the water channel itself, and interrelated components, as well as the waters contained therein are subject to its provisions. In addition, by specifically mentioning the waters of a watercourse, the Convention would apply in the case that such waters are diverted away from their watercourse.[90] An example of the latter might be where water is diverted out of the main channel into a canal for the purpose of hydropower (diversionary dam), for irrigation, or where it is diverted into a canal and carried to a reservoir for municipal or industrial use. The geographical and hydrological scope of the Convention is elaborated upon further under Article 2 and Figure 1.1 below. For a summary of how the world's water resources are distributed see Figure 1.2.

89 For examination of the multiple use dimensions of water see R Lenton and M Muller (eds.), Integrated Water Resources Management in Practice - Better Water Management for Development (Earthscan 2009).

90 Draft Articles on the Law of the Non-navigational Uses of International Watercourses in UNGA 'Report of the International Law Commission on the Work of its Forty-Sixth Session' (2 May-22 July 1994) UNGAOR, 49th Session Supp No 10 UN Doc A/49/10 (1994) at 89 (Hereafter 1994 Draft Articles).

1.1.3 Functional scope

Pursuant to Article 1(1), measures of 'protection, preservation and management' fall under the scope of the Convention. The inclusion of the terms 'protection' and 'preservation' constituted a departure from the 1994 Draft Articles as the latter instrument instead used the term 'conservation'. The Working Group of the Sixth Committee felt that the use of the terms 'protection' and 'preservation' would broaden the scope of the Convention.[91] The intention is therefore to emphasis the broad scope of the Convention thus covering both quantitative and qualitative aspects and, in addition to conservation, measures of 'control' such as regulating flow, floods, pollution and erosion, saline intrusion, and mitigating drought.[92] The terms protection, preservation and management are elaborated on in Article 5 and Part IV (Articles 20-26) of the Convention, and will therefore be further discussed in Part IV of this Guide.

91 UNGA Sixth Committee (51st Session) 'Summary Record of the 12th Meeting of the Working Group on the Law of the Non-Navigational Uses of International Watercourses' (7 October 1996) UN Doc A/C.6/51/SR.12 at 4-12.

92 1994 Draft Articles at 97.

1.1.4 Living resources

The Convention does not explicitly apply to the use of living resources that occur in international watercourses (for example the regulation of fishing and harvesting of other aquatic animals) except insofar as other uses are affected by such activities.[93] The interpretation of the Convention is therefore intended to avoid the application of the general principles of the Convention to fishing rights, unless such rights have an impact on other uses.[94] Additionally, it can be inferred that Article 20 prohibits fishing when it is at variance with the general obligation of protection and preservation of the ecosystem of the international watercourse.[95] Also, Article 22 relates to the protection of fish and other aquatic animals in respect to the duty of prevention against 'the introduction of species, alien or new, into an international watercourse which may have effects detrimental to the ecosystem of the watercourse'.

93 UNWC Annex. See also UNGA Sixth Committee (51st Session) 'Report of Sixth Committee Convening as the Working Group of the Whole' (11 April 1997) UN Doc A/51/869 at 4.

94 UN Doc A/51/869 at 4. For commentary see Tanzi A and Arcari M, The United Nations Convention on the Law of International Watercourses: A Framework for Sharing (Kluwer Law International 2001).

95 Ibid at 53.

1.1.5 Navigation

Along similar lines to living resources, the Convention applies to navigational uses but only in a very limited way. Article 1 clearly demonstrates that the main focus of the Convention is on water uses other than navigation. However, because the Convention addresses management and conservation of transboundary watersheds and their ecosystems, Article 1(2) provides that where navigational uses impact on other water uses – either in terms of water quantity or quality – then they fall under the substantive norms of the Convention. Most notable is the obligation to utilise international watercourses in an equitable and reasonable manner pursuant to Articles 5 and 6.

Navigation activities that would fall under the Convention because of their potential impact on other water uses may include pollution from vessels, adverse environmental effects or conflicts of use from navigational activities which require that certain levels of water be maintained or require passages through and around barriers in the watercourse.[96] Any conflict of interest should be solved according to the principle of equitable and reasonable utilisation of an international watercourse.

Article 1 (2) of the Convention represents a departure from the ILA Helsinki Rules on the Uses of the Water of International Rivers, in that the latter instrument included a chapter on navigation. The ILA provision covered issues such as the right to 'free' navigation, policing the navigation of international rivers, the loading of vessels, and the maintenance of navigation routes.[97]

96 UN Doc A/49/10 (1994 Draft Articles) at 89.

97 Committee on the Uses of the Waters of International Rivers , 'Helsinki Rules on the Uses of the Waters of International Rivers' in International Law Association Report of the at the fifty-second conference (Helsinki 1966) (International Law Association, London 1967) Chapter 4.

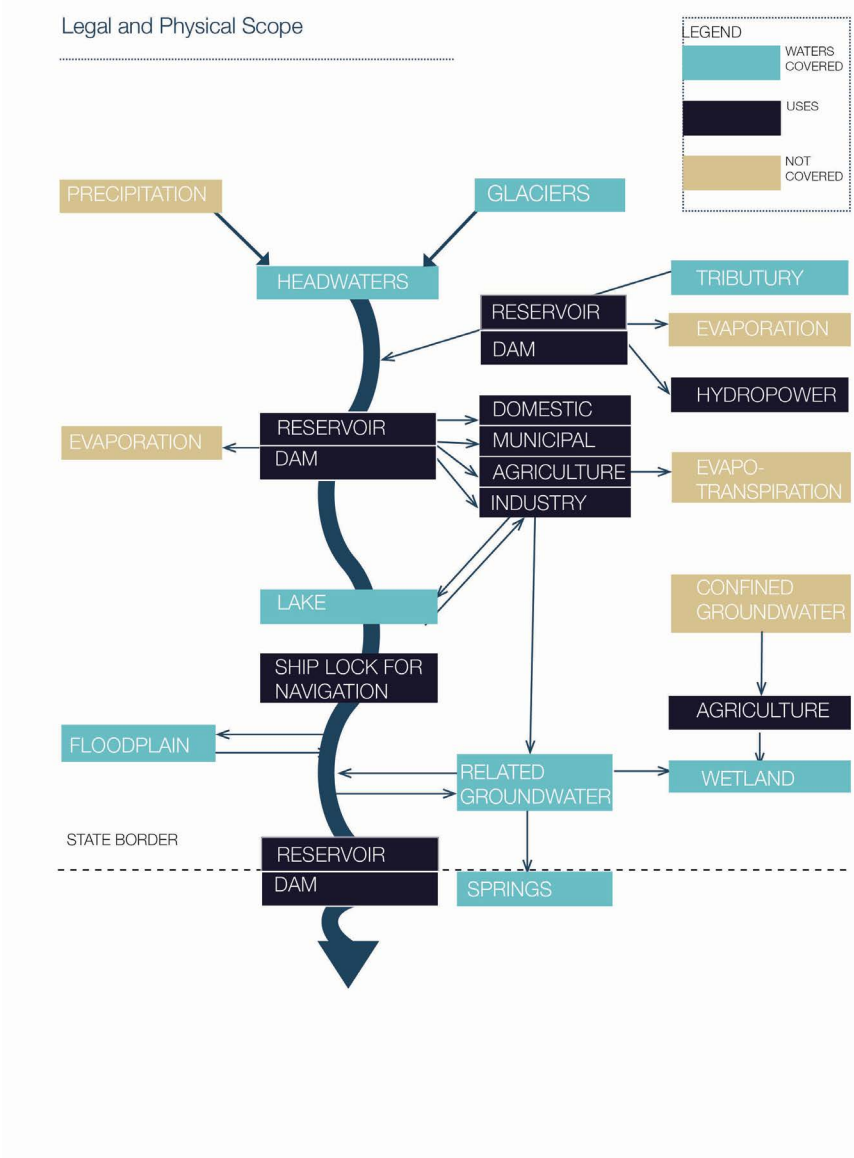


Figure 1.1 | Scope Defines the Legal Coverage of a Treaty – Waters and Water Use (Source Authors)

1.2 Application

1.2.1 Legal and physical scope – watercourse system components and use

The 'watercourse scope' diagram below shows the differ-ent components of an international watercourse system including which physical components and water uses are covered by the UN Convention.

It is not intended to be a comprehensive inventory, but should provide a summary of how the core uses of an international watercourse in one state can impact upon another state and whether or not these waters and water uses will be covered under the scope of the Convention.

The watercourse scope diagram is explained as follows: The transboundary watercourse system above begins with natural precipitation in the mountainous headwaters of state A. The system of tributaries flows downstream, often collecting in one main river channel which may be dammed and the water stored in reservoirs. The dammed water can be used to generate hydropower for state A and potentially state B, but the presence of the dam can reduce water flow and increase the loss of stored water through evaporation, which could ultimately result in less water for downstream state B.

The water continues to flow downstream where it may again be dammed, stored and diverted to supply domestic, municipal, agricultural, energy or industrial uses. Some of the diverted water may be lost from irrigated fields and canals through evapo-transpiration[98] which could result in less water returns to the stream for downstream state B, or return flows may become polluted. The return flows from the various uses will continue to flow downstream as surface water and may enter the groundwater depending on the groundwater table. Groundwater can flow both ways – replenishing or receiving surface water flows.

If the groundwater table is below the bed of the stream, the water in the river bed feeds the groundwater and is an influent stream; such rivers can easily dry up if their flow is reduced (e.g. an irrigation channel or an ephemeral river). When the groundwater table is above the surface elevation in the river, the groundwater feeds the river, creating an effluent river which flows all year round.

An aquifer containing confined groundwater[99] exists in state A, fed (very slowly) through precipitation from a recharge zone located in state A, but this aquifer replenishes at such a slow rate that it is considered non-renewable and it is not related to any immediate transboundary surface water stream. State A may decide to drill a well into the aquifer to supply irrigation water for nearby agriculture.

A significant gap may exist in scientific understanding surrounding the recharge relationship between surface water and groundwater and the impact of different land uses on this relationship, and despite the fact that this aquifer has been classified as 'confined', it is possible that the confined aquifer may also be remotely connected to a distant transboundary wetland situated across the border between states A and B. The withdrawal of water for agriculture may therefore seriously threaten this eco-system by lowering the groundwater table, causing the wetland to dry out, and could even cause subterranean peat fires. This is

98 Evapotranspiration is a term used to describe the loss of water to the atmosphere from the earth's surface by evaporation and by transpiration through plants. US Geological Survey, (USGS 2008) <http://wa.water.usgs.gov/projects/evapo/> accessed 1 October 2011.

99 Confined groundwater was understood by the ILC during the drafting of the Convention to mean 'groundwater which is unrelated to surface water'. See UNGA 'Report of the International Law Commission on the Work of its Forty-Sixth Session' (2 May-22 July 1994) UNGAOR, 49th Session Supp No 10 UN Doc A/49/10 (1994) at 135. The words 'confined aquifer' and 'fossil aquifer' are often (mis) used interchangeably. A confined aquifer can sometimes be a fossil aquifer but not always. Whether an aquifer is confined or not is a matter of pressure and not of the age of the water, whereas fossil aquifer refers to age of the groundwater e.g. an aquifer which is very old. See section 2.1.4 below for further explanation.

of course just one scenario and it may also be that the confined aquifer has no significant connection to the transboundary wetland and therefore state A's water withdrawal would not have this transboundary impact. The use of this confined or unrelated groundwater is not covered by the UN Watercourses Convention. State A may also choose to utilise groundwater from a second aquifer for irrigation which is recharged and recharges the nearby surface water. If the aquifer is unconfined and connected to surface waters, some return flow - for example from irrigation - will occur but the water may be contaminated and affect plant and aquatic life downstream in state B, and some water will be lost to evapotranspiration. Groundwater from the second aquifer also supplies the springs in state B and excessive pumping in state A may affect spring flows to the point where they cannot reach ground surface and feed rivers and lakes.

If state A decides to cut down native forests the groundwater level rises towards the ground surface. At a certain depth high soil evaporation causes the soluble salts in the local geology to migrate to the soil surface causing problems of high soil salinity. This has caused major problems to agriculture, and these problems worsen when there is an increased pumping/overuse of local groundwater.

Floodplains are flat areas of land adjacent to rivers that can stretch from the banks of rivers to the base of valley slopes. As a river travels to the sea, the floodplain becomes an estuary which connects the river to the sea. Damming rivers and overuse of water can cause a river to lose its connectivity with the sea; this has devastating ecological effects and also destroys local coastal economies and communities. Floodplains also need to receive sediments transported by the river to provide fertile soil for agriculture and nutrients for ecosystems. Dams can reduce sediment loads downstream causing eutrophication in reservoirs. Eutrophication can decrease oxygen in the water resulting in loss of fish and diversity of macrophytes. In coastal areas, if freshwater aquifers near the coast are over pumped, saltwater intrusion can occur in the aquifer. Generally aquifers near the coast have a layer or lens of freshwater near the surface and then denser seawater under the freshwater. If the ground-water near the coast is pumped too much, saltwater can intrude into the freshwater aquifer and cause contamination of potable freshwater supplies. An interesting point here is that some aquifers situated near coastal areas which have been classified as confined can become unconfined by this over pumping.

The legal scope of the UN Convention covers all the above mentioned interactions, where they occur across state borders and where the components of the watercourses system are related to the international watercourse. One major exception to this legal coverage is the utilisation of confined groundwater which is not covered by the UN Convention.

To understand how much water is available on earth and in what form, see Figure 1.2 on the right.

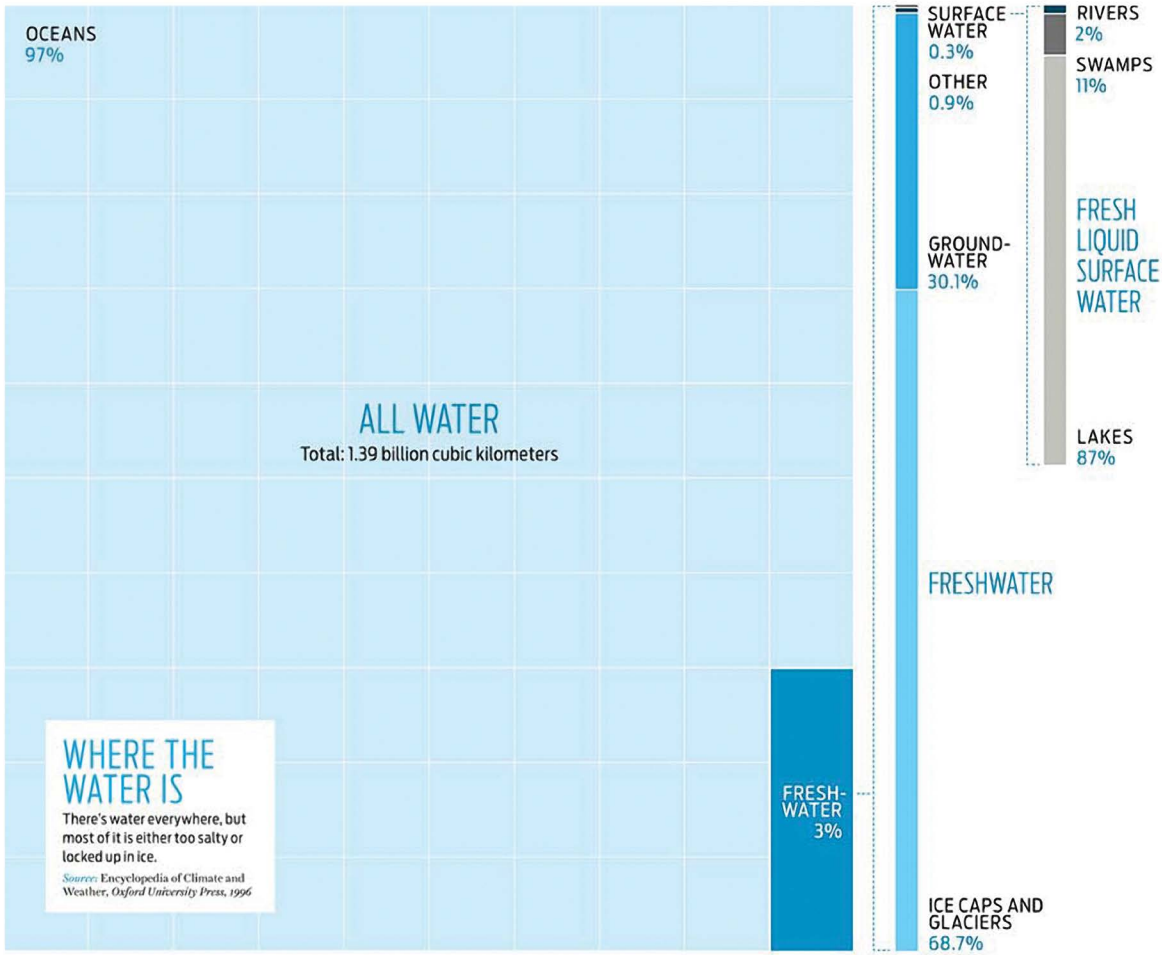


Figure 1.2 |
Status of World Water (Source UNESCO)

1.3 Additional reading

Draft Articles on the Law of the Non-navigational Uses of International Watercourses in UNGA 'Report of the International Law Commission on the Work of its Forty-Sixth Session' (2 May-22 July 1994) UNGAOR, 49th Session Supp No 10 UN Doc A/49/10 (1994) at 89.

UNGA Sixth Committee (51st Session) 'Summary Record of the 12th Meeting of the Working Group on the Law of the Non-Navigational Uses of International Watercourses' (7 October 1996) UN Doc A/C.6/51/SR.12 at 4-12.

McCaffrey SC, The Law of International Watercourses (2nd edn, Oxford University Press 2007) at 23-52.

Online Audio Visual Library of the International Law Commission: Convention on the Law of Non-navigational uses of International Watercourses, <http://untreaty.un.org/cod/avl/ha/clnuiw/clnuiw.html> accessed 1 October 2011.

Tanzi A and Arcari M, The United Nations Convention on the Law of International Watercourses: A Framework for Sharing (Kluwer Law International 2001) at 51-53.

Wescoat JL, 'Beyond the River Basin: The Changing Geography of International Water Problems and International Watercourse Law' (1992) 3 Colorado Journal of International Environmental Law and Policy 301.

Wouters P, 'The International Law of Watercourses: New Dimensions' 3 Collected Courses of the Xiamen Academy of International Law (Martinus Nijhoff 2011) 353 at 377-388.

Article 2 | Use of Terms

Convention text

For the purposes of the present Convention:

(a) 'Watercourse' means a system of surface waters and groundwaters constituting by virtue of their physical relationship a unitary whole and normally flowing into a common terminus;

(b) 'International watercourse' means a watercourse, parts of which are situated in different States;

(c) 'Watercourse State' means a State Party to the present Convention in whose territory part of an international watercourse is situated, or a Party that is a regional economic integration organisation, in the territory of one or more of whose member states part of an international watercourse is situated;

(d) 'Regional economic integration organisation' means an organisation constituted by sovereign states of a given region, to which its member states have transferred competence in respect of matters governed by this Convention and which has been duly authorised in accordance with its internal procedures to sign, ratify, accept or accede to it.

2.1 Commentary

2.1.1 Watercourse

Article 2 (a) includes the term 'watercourse', which defines the type of waters to which the Convention applies and means both the system of surface and groundwater channels, tributaries, and the water that they contain. This definition highlights the need for an integrated approach to systems of surface and underground waters.

The phrase 'normally flowing into a common terminus' has the effect of putting a limit on the geographical scope, for example where two different drainage basins were altered and connected by a canal – this would not make them part of a single 'watercourse' for the purpose of the present Article 2 (a). This Article is modified by the word 'normally' reflecting the seasonal variability and complexity of hydrological systems – e.g. many watercourses will flow into the sea, in whole or in part via groundwater, or a series of tributaries which may be as much as 300 km apart, or only empty at certain times of the year into a common terminus such as an ephemeral river, with temporary surface flow that varies between seasons and years and which will sometimes end its journey terminating into an inland lake or delta (endorheic), or at other times into the ocean (exorheic).[100]

100 1994 Draft Articles at 90. For explanation of ephemeral and endorheic rivers see A Turton, P Ashton and E Cloete, As Transboundary rivers, sovereignty and development: Hydro-political drivers in the Okavango River basin (African Water Issues Research Unit African Water Issues Research Unit (AWIRU) and Green Cross International (GCI) 2003) at 188.

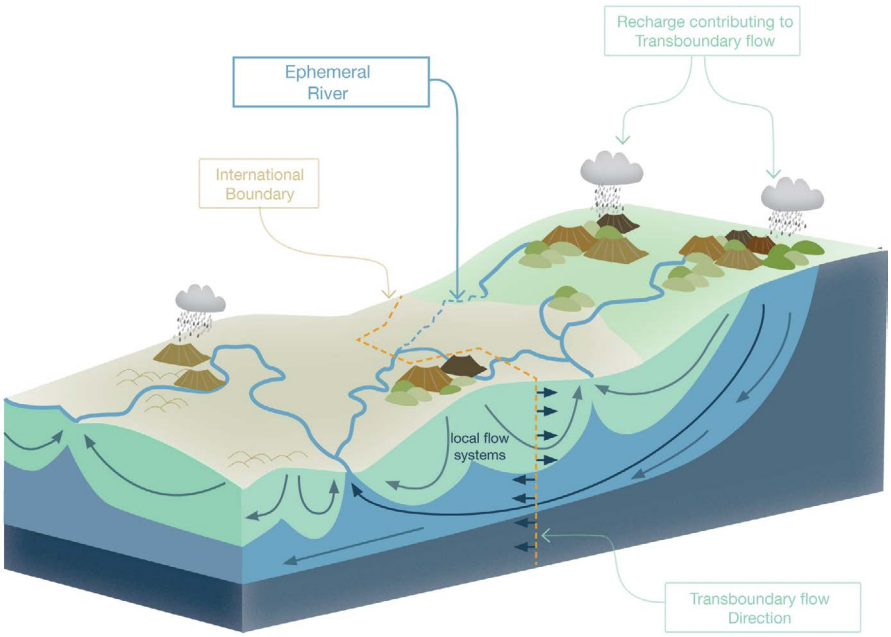


Figure 1.3 |
An Ephemeral River
(Source adapted by Authors (2012) from Figure 1.5 below)

2.1.2 International watercourse

The concept of an 'international watercourse',as derived from Articles 2(a) and 2(b), means the Convention applies to 'watercourse systems' that cross international boundaries, including major and minor watercourses, their tributaries,[101] and connected lakes and groundwater, even when these individual components are entirely located within a single state. Generally, components of freshwater systems that may fall under this concept, when connected to one another, include rivers, lakes, aquifers, glaciers, reservoirs, and canals, wetlands and floodplains.[102] The test to establish whether a watercourse is 'international' depends on physical factors, the existence of which can be established by simple factual and geographical observation in the vast majority of cases, and the word 'situated' is not intended to imply that the water is static.[103]

Related to this test is the question of what waters of an international watercourse are situated in the 'territory' of a state and how is the location of the boundary to be determined especially when an international river changes its course? The Convention does not answer these questions; the answers are found elsewhere in international law. The determination of boundaries depends on whether a watercourse is successive or contiguous (meaning whether it traverses or forms boundaries between states respectively). If it is succ-essive and there is no existing agreement to the contrary, then the border is said 'to cross the river along the shortest line connecting the points at which the borders of the opposite states intersect the banks of the river'.[104]

If the watercourse is contiguous the most common treaty approach is to locate the boundary along the thalweg[105] if the river is navigable, and along the median line if not.

If the international watercourse changes its course and this change occurs over a long period of time (by accretion and erosion) then the general rule is the territorial boundary of a state changes with the river.[106] If this change occurs suddenly (by avulsion), then the general rule is the boundary would remain in the original location.[107] It is also important to note that even if it is acknowledged that a state enjoys exclusive competence over utilisation of the waters of an international watercourse in its territory, given that water is constantly in motion, it is very difficult to determine which waters are located within the territory of a state and thus applying concepts of territorial sovereignty to watercourses is very problematic – as is discussed in Part II.[108]

During the drafting of the Convention, the ILC's efforts to deal with the geographic scope of an international watercourse generated a rich record of discussion within the ILC and sixth Committee.[109]

101 The inclusion of 'tributaries' is important because analysis of several significant watercourse agreements shows that tributaries are often excluded. See B Bearden, Following the Proper Channels: Tributaries in the Mekong Legal Regime (unpublished JSD dissertation 2011), McGeorge School of Law, University of the Pacific. For a summary see http://auei.auburn.edu/conference/pdf/Bearden_1.pdf accessed 12 April 2012.

102 1994 Draft Articles at 90.

103 Ibid.

104 McCaffery, The Law of International Watercourses at 70.

105 The median line of the navigation channel. McCaffrey, The Law of International Watercourses at 70.

106 See JW Donaldson, 'Paradox of the Moving Boundary: Legal heredity of River Accretion and Avulsion' (2011) 4(2) Water Alternatives 155.

107 McCaffrey, The Law of International Watercourses at 72.

108 Ibid at 74.

109 There are a number of key milestones in the deliberation of scope within the ILC and UN General Assembly: 1970 -The initial UN resolution; 1976-The ILC survey of country views; 1980 Formulation of the 'watercourse system' concept; 1984-Rejection of the 'system' concept; 1986-Return to the 'watercourse [system]'; 1991 - Synthesis: the 'watercourse as a system of surface and underground waters'; the 1994 Draft Articles; and the final 1997 UN Watercourses Convention. Access to these documents is available at the Online Audio Visual Library of the International Law Association: Convention on the Law of Non-navigational uses of International Watercourses, available at <http://untreaty.un.org/cod/avl/ha/clnuiw/clnuiw.html> accessed 30 April 2012. See JL Wescoat, 'Beyond the River Basin: The Changing Geography of International Water Problems and International Watercourse Law' (1992) 3 Colorado Journal of International Environmental Law and Policy 301. See also McCaffrey The Law of International Watercourses at 36-54.

The ILC gathered state opinion on whether the concept of an 'international drainage basin' should be the appropriate basis for their study. Some states objected to the concept arguing that it could result in regulation not only of the use of the water but also of the land territory. [110] Ultimately, the expression 'international watercourse' was chosen by the ILC and supported by states. However, leading academics refute the argument that the concept 'international watercourse' is less expansive than 'international drainage basin', stating that Article 1(1) of the Convention 'applies to uses of international watercourses and of their waters for purposes other than navigation and to measures of protection, preservation and management related to the uses of those watercourses and their waters'.[111] This means that the Convention indirectly applies to land-based activities taking place within a river basin to the extent that such activities might be relevant for the use, protection, and management of an international watercourse.[112] See Application 2.2.2 below for an example of where an activity carried out within the drainage basin pollutes the international watercourse.

110 For differing state views on geographical scope see the Replies of Governments to the International Law Commission's questionnaire, UN Doc A/CN.4/294 and Add.1, 1 April 1976, available <http://untreaty.un.org/ilc/documentation/english/a_cn4_294.pdf> accessed 22 November 2011. For further commentary see also Tanzi and Arcari, The United Nations Convention on the Law of International Watercourses: A Framework for Sharing at 51-53.

111 McCaffrey The Law of International Watercourses, at 37, provides that the concept of drainage basin is functionally equivalent – at least hydrologically to that of the watercourse system.

112 Tanzi and Arcari, The United Nations Convention on the Law of International Watercourses: A Framework for Sharing at 59

2.1.3 Ecosystem approach

Further support for the contention that the entire basin is covered by the Convention can be found in the use of the concept of 'ecosystems'. It can there fore be maintained that the geographical scope of application of the Convention applying to watercourse systems 'comprises all its ecosystems, including those in land areas, whose concrete identification depends on their interdependence'.[113]

The conclusion that the Convention follows an ecosystems approach in based primarily on the wording of Article 20 and will be discussed further in Part IV.

113 Ibid at 61.

2.1.4 Groundwater

The Convention applies to groundwater systems but only to the extent that groundwater is connected hydrologically to a system of surface waters, parts of which are situated in different states (Articles 2 (a) (b)) and also see Figure 1.6 below. According to the ILC commentary, 'groundwaters' refers to the hydrologic system composed of a number of different components through which water flows, both on and under the surface of the land. These components include rivers, lakes, aquifers, glaciers, reservoirs and canals. So long as these components are interrelated with one another, they form part of the watercourse.[114] The definition does not mean that a particular aquifer containing groundwater has to be situated across a boundary to be covered by the Convention; it is sufficient for such groundwater to be located in one state but connected to transboundary surface water.[115] In the preparatory work of the ILC leading up to the adoption of the Convention, agreement could not be reached on whether aquifers containing 'confined groundwater'[116] should be included within the scope of the Convention. In 1992 Special Rapporteur Robert Rosenstock recommended that confined aquifers should be governed by the same rules as those applicable to international watercourses[117] however, the final text of the Convention does not apply directly to confined aquifers.[118] Following this issue, in 1994 the ILC adopted a Resolution on Confined Transboundary Groundwater which recognised the need for continuing efforts to create rules regarding confined transboundary groundwater and also commended that states be guided by the principles contained in (what is now) the UN Watercourses Convention, where appropriate, when regulating confined transboundary groundwater.[119]

The level of inclusion of groundwater systems in the Convention is important given that the total volume of groundwater represents 97 percent of our planet's freshwater resources (excluding Antarctica) and yearly consumption of groundwater worldwide is estimated at

114 1994 Draft Articles at 90.

115 McCaffrey, The Law of International Watercourses at 497.

116 'Confined Groundwater' was defined by ILC as 'groundwater not related to an international watercourse' in the ILC Resolution on Confined Transboundary Groundwater, see UNGA 'Report of the International Law Commission on the Work of its Forty-Sixth Session' (2 May-22 July 1994) UNGAOR, 49th Session Supp No 10 UN Doc A/49/10 (1994) at 135. See also SC McCaffrey, Comments on the International Law Commission's Draft Articles on the Law of Transboundary Aquifers (2006), 30 March 2008, Available at <SSRN: http://papers.ssrn.com/sol3/papers.cfm?abstract_id =1114988> accessed 16 November 2011. It may not always be possible to know if an aquifer is confined or unconfined geologically. In this case the storativity can be estimated. This characterises the capacity of the aquifer to release groundwater from storage in response to a decline in hydraulic head or water pressure. A confined aquifer has very low storativity.

117 1994 Draft Articles at 135. In 1992 Special Rapporteur Robert Rosenstock suggested the inclusion of all groundwater, including confined groundwater, in the scope of the draft articles; his proposal was rejected. The ILC did not want to broaden the scope of its work to include a resource that it had not considered while formulating its articles. See Rosenstock's First and Second reports, A/CN.4/451, para 11 and A/CN.4/462 para 2-11.

118 Several commentators argue that confined aquifers were not the only types of aquifers excluded by the Convention. The argument here is that the requirement of a 'system of surface waters and groundwaters ' 'normally flowing into a common terminus' renders the Convention inapplicable to aquifers that are recharged solely from rain and discharge either into the sea or into another aquifer or where the aquifer itself is the end point due to evaporation. K Mechlem, 'Moving Ahead in Protecting Freshwater Resources: The International Law Commission's Draft Articles on Transboundary Aquifers' (2009) 22 Leiden Journal of International Law 801 at 806. See also C Behrmann & R Stephan, 'The UN Watercourse Convention and the Draft Articles on Transboundary Aquifers: The way ahead' UNESCO-IAP-UNEP Conference, Paris, December 2010, Available at <http://www.siagua.org/archivos_adjuntos/documentos/cursos_agua.pdf>, accessed 2 April 2012.

119 Resolution on Confined Transboundary Groundwater in Report of the International Law Commission on the Work of Its Forty-sixth Session, [1994] UN Doc. A/49/10 at 135.

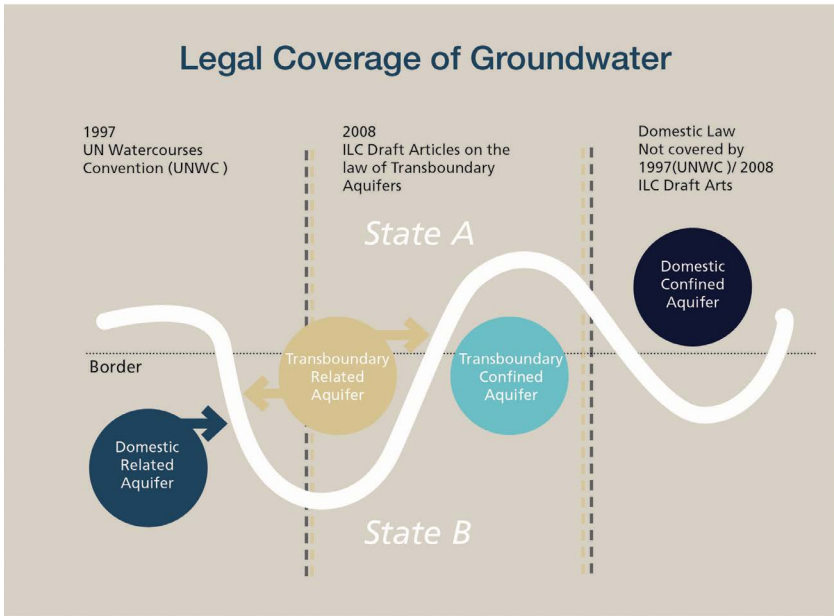


Figure 1.4 |
Legal Coverage of Groundwaters (Source Authors)

900 cubic kilometres.[120] See Figure 1.6 below for global groundwater types and sources.[121]

In response to this remaining issue of confined transboundary groundwater, and as part of a wider initiative on Shared Natural Resources, in 2002 the ILC commenced further study on transboundary groundwater initially with a focus on non-renewable or fossil groundwater unconnected to surface water.[122] Shortly after, the ILC broadened the topic from 'confined' transboundary groundwater to include all transboundary aquifers and aquifer systems containing both renewable and non-renewable groundwater.[123] This decision to move the subject of study from the law of (confined) transboundary groundwater to the law of transboundary aquifers has repercussions in terms of the alignment and overlap between the physical and legal scope covered by the Draft Articles and the UN Convention.[124] The word 'aquifer' was defined in the Draft Articles as a 'permeable water-bearing geological formation underlain by a less permeable layer and the water contained in the saturated zone of the formation'.[125]It is argued that this definition prioritises the geological formation above the water containedwithin, and it is this fact, in combination with the other provisions on sovereignty found elsewhere in the Draft Articles, that has lead several leading commentators to conclude that this change in scope is a potentially regressive step in the codification of international water law, as discussed further below.[126]

In 2008, the ILC Draft Articles on the Law of Transboundary Aquifers were adopted and apply to single transboundary aquifers and transboundary aquifer systems consisting of a series of two or more hydraulically connected aquifers (Article 2(b)). Unlike the UN Convention, the Draft Articles apply to transboundary confined aquifers (Articles 1 (a) and 2 (a)).[127]

However they also apply to renewable transboundary aquifers, the latter application being an overlap with the scope of the UN Convention.[128] The Draft Articles do not apply however, to an unconfined aquifer that is situated entirely in one state but contributes water to a river that flows from that state into another state.[129]

120 UN WWAP Side Publication Series, 'Freshwater and International Law: The Interplay between Universal, Regional and Basin Perspectives' (2009) at 4, Available at <http://unesdoc.unesco.org/images/0018/001850/185080e.pdf>, accessed 12 October 2011.

121 UNESCO IHP-VI Series on Groundwater, 'Non-renewable groundwater resources: A guidebook on socially sustainable management for water-policy makers', 2006, Available at <http://unesdoc.unesco.org/images/0014/001469/146997e.pdf>, accessed 30 April 2012.

122 The word fossil aquifer is sometimes (incorrectly) used interchangeably with confined aquifer as discussed elsewhere in this section. Confined is not necessarily fossil. Whether an aquifer is confined or not is a matter of pressure, whereas the term fossil refers to the age of the water contained in these aquifers, which is so old that it has inspired the use of terminology borrowed from paleontology 'Fossil Aquifers', or non-renewable, see UNESCO IHP-VI Series on Groundwater, 'Non-renewable groundwater resources: A guidebook on socially sustainable management for water-policy makers', (2006), Available at <http://unesdoc.unesco.org/images/0014/001469/146997e.pdf> accessed 12 November 2011, preface. Report of the International Law Commission to the General Assembly on Its Fifty-Fourth Session, UNGAOR, 57th Sess., Supp. No. 10, UN Doc. A/57/10 (2002), at 243 para. 519.

123 Report of the International Law Commission to the General Assembly on Its Fifty-Sixth Session, UN GAOR,56th Sess., Supp. No. 10, 2004, UN Doc. A/59/10, 126–7, paras. 89–92. K Mechlem, 'Moving Ahead in Protecting Freshwater Resources: The International Law Commission's Draft Articles on Transboundary Aquifers' at 804.

124 For commentary see S McCaffrey 'The International Law Commission Adopts Draft Articles on Transboundary Aquifers' (2009) 103 American Journal of International Law 272 at 282.

125 International Law Commission, Draft Articles on the Law of Transboundary Aquifers (21 February 2008) UN Doc. A/CN.4/591, Art. 2.

126 McCaffrey 'The International Law Commission Adopts Draft Articles on Transboundary Aquifers' at 282. O McIntyre 'International Water Resources Law and the International Law Commission Draft Articles on Transboundary Aquifers: A Missed Opportunity for Cross-Fertilisation?' (2011) 13 International Community Law Review at 237.

127 International Law Commission, 'Draft Articles on the Law of Transboundary Aquifers', UN Doc. A/CN.4/L.724, 29 May 2008, Yearbook of the International Law Commission, Geneva; United Nations Publications, p.19. UNGA "The law of transboundary aquifers", UN Doc. A/RES/63/124, 15 January 2009. Available at <http://www.un.org/ga/search/view_doc.asp?symbol=A/RES/63/124>, accessed 11 October 2011.

128 One of the criticisms of the Draft Articles, is that this overlap with the UN Convention will cause confusion over which instrument applies. See McCaffrey, Comments on the International Law Commission's Draft Articles on the Law of Transboundary Aquifers at 4.

129 Mechlem, 'Moving Ahead in Protecting Freshwater Resources: The International Law Commission's Draft Articles on Transboundary Aquifers' at 809.

This is a contrast to the UN Convention – which does cover such aquifers. Neither the UN Convention nor the Draft Articles cover a domestically situated confined aquifer, even in circumstances where it may be remotely connected to a transboundary surface water body, or where the aquifer is domestically located, recharged solely from rain and discharges either into the sea or into a second aquifer, or where the other domestically situated aquifer itself is the end point due to evaporation. The legal coverage of groundwater is shown in Figure 1.4 above.

The future shape and role of this draft instrument is uncertain.[130] Although, the 2008 ILC Draft Articles build on the 1997 UN Convention and adjust many of its principles to the special case of groundwater, the ILC turned down the suggestion proposed by Special Rapporteur Chusei Yamada to examine the relationship and possible coordination between the Draft Articles and other treaties including the Convention.[131]

Numerous prominent experts have identified several fundamental criticisms of the scope, and substantive principles of the 2008 Draft Articles, which arguably create irreconcilable difficulties for future coordination and alignment of the provisions of these two instruments. A first major criticism of the Draft Articles rests on the matter of overlap in scope between the Draft Articles and the UN Convention as discussed above. A second major criticism rests on the emphasis by the Draft Articles on sovereignty[132] under Article 3, where 'Each aquifer state has sovereignty over the portion of a transboundary aquifer or aquifer system located within its territory'. McCaffrey asserts that this use of the concept of sovereignty will reinforce the historic tendency of states to claim absolute sovereignty over the portion of even transboundary surface waters within their territories and may also give a state the impression that it has absolute discretion over the water contained in a transboundary aquifer when in fact - and in law - it does not.[133] McIntyre argues that 'the emphasis on State sovereignty over shared water resources appears to represent something of a retreat from the distributive equity inherent in the firmly established principle of equitable and reasonable utilisation and from the intense procedural and institutional cooperation required to achieve the community of interests approach necessary to give meaning to this principle'.[134] It remains to be seen how these instruments will be reconciled.[135]

130 The Articles exist currently as an Annex to General Assembly Resolution, A/RES/63/124 and the UNGA recommends that states make appropriate arrangements bilaterally or regionally for the proper management of transboundary aquifers on the basis of the principles enunciated in the draft articles (Preamble, para 5). The General Assembly was scheduled to consider the elaboration of a convention on the basis of the draft articles in its 66th Session in 2011.

131 C Yamada, Fifth Report on Shared Natural Resources: Transboundary Aquifers, UN Doc. A/CN.4/591 (2008), at 14–15, paras. 38–40.

132 Refer to Part II for a more specific discussion of Sovereignty.

133 McCaffrey, Comments on the International Law Commission's Draft Articles on the Law of Transboundary Aquifers at 6-7. Also see S McCaffrey 'The International Law Commission Adopts Draft Articles on Transboundary Aquifers' (2009) 103 American Journal of International Law at 272-293

134 O McIntyre 'International Water Resources Law and the International Law Commission Draft Articles on Transboundary Aquifers: A Missed Opportunity for Cross-Fertilisation?' (2011) 13 International Community Law Review at 237.

135 For another point of view on this alignment see C Behrmann & R Stephan, 'The UN Watercourse Convention and the Draft Articles on Transboundary Aquifers: The way ahead' UNESCO-IAP-UNEP Conference, Paris, December 2010, Available at <http://www.siagua.org/archivos_adjuntos/documentos/cursos_agua.pdf>, accessed 2 April

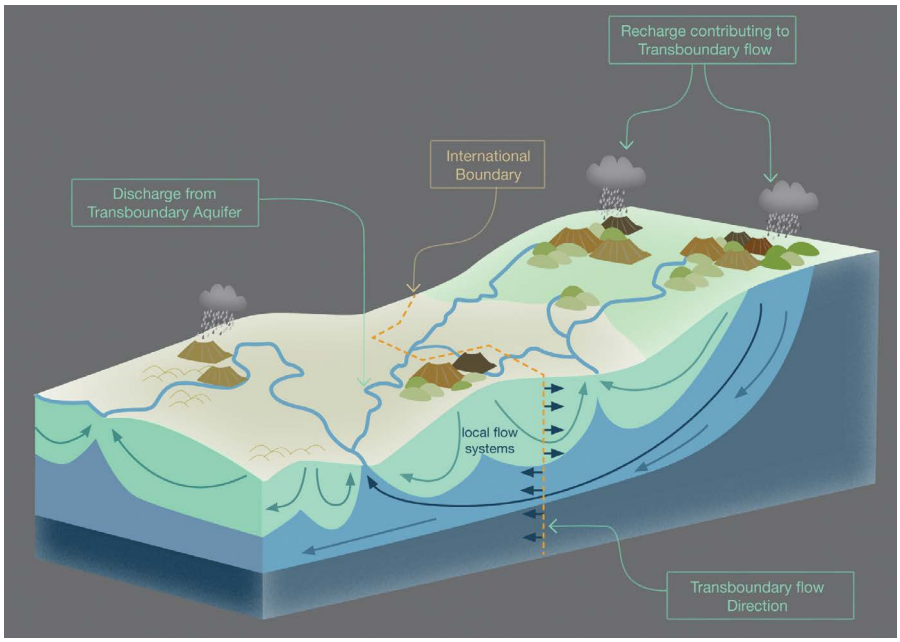
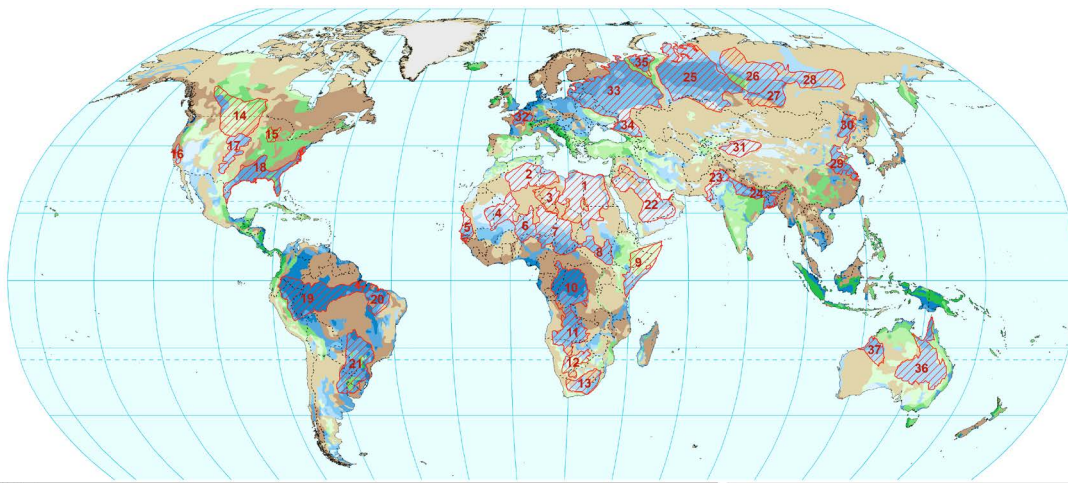


Figure 1.5 |
Illustration of Transboundary Aquifer (Source Puri and others, 2001)[136]

136 Image adapted from S Puri and others, 'Internationally shared aquifer resources management, their significance and sustainable management: A framework document' IHP-VI International Hydrological Programme Non-Serial Publications in Hydrology SC-2001/WS/40 (UNESCO 2001).



Large Aquifer Systems

1. Nubian Aquifer System (NAS)	11. Northern Kalahari Basin	21. Guarani Aquifer System	31. Tarim Basin
2. Northwest Sahara Aquifer System (NWSAS)	12. Southeast Kalahari Basin	22. Arabian Aquifer System	32. Parisian Basin
3. Murzuk-Djado Basin	13. Karoo Basin	23. Indus Basin	33. East European Aquifer System
4. Taoudeni-Tanezrouft Basin	14. Northern Great Plains / Interior Plains Aquifer	24. Ganges-Brahmaputra Basin	34. North Caucasus Basin
5. Senegalo-Mauritanian Basin	15. Cambro-Ordovician Aquifer System	25. West Siberian Artesian Basin	35. Pechora Basin
6. Iullemeden-Irhazer Aquifer System	16. California Central Valley Aquifer System	26. Tunguss Basin	36. Great Artesian Basin
7. Chad Basin	17. High Plains-Ogallala Aquifer	27. Angara-Lena Artesian Basin	37. Canning Basin
8. Sudd Basin (Umm Ruwaba Aquifer)	18. Gulf Coastal Plains Aquifer System	28. Yakut Basin	
9. Ogaden-Juba Basin	19. Amazonas Basin	29. North China Plain Aquifer System	
10. Congo Intracratonic Basin	20. Maranhao Basin	30. Songliao Basin	

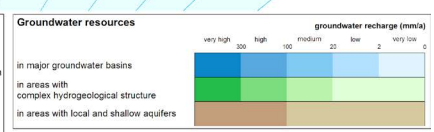


Figure 1.6 |
Groundwater Resources of the World (Source WHYMAP and Margat, 2008)[137]

WHYMAP and Margat, 'Groundwater Resources of the World' (2008) available at http://www.whymap.org/EN/Downloads/Global_whymap_largeaquifers_pdf. accessed 21 november 2011

2.1.5 Scope of parties – watercourse state and others

In order to understand the practical meaning of 'watercourse state' in Article 2 (c), the term must be differentiated from other types of actors mentioned within the text of the Convention. 'Watercourse state' technically means two things: a state party to the Convention in whose territory part of an international watercourse is situated; and/or a party that is a regional economic integration organisation, with at least one member state in whose territory part of an international watercourse is situated (Article 2 (c)). In practice, the primary legal relationships which the Convention governs are between state parties that are riparians of the same international watercourse(s).[138] This is evident in the numerous references to 'watercourse states' which are applied throughout the Convention's text to establish various rights and duties. For example Article 4 stipulates that it is 'watercourse states' which have the right to take part in the consultations and negotiations for the conclusion of specific international agreements relating to a part or to the whole of an international watercourse.

There are two categories of 'other states' – non-contracting riparian states and contracting non-riparian states. Non-contracting riparian states (other watercourse states) are those states situated on an international watercourse which do not become a party to the Convention. The Convention does not directly apply to these parties. However, where 'other states' are vulnerable to events taking place within an international watercourse, the Convention makes the exception in its scope by referring to 'other states'.[139] For example, the provisions in Article 23 would require watercourse states to protect the marine environment of 'other states'. Provisions under Article 28 related to 'emergency situations' apply to 'watercourse states or other states', thus recognising that situations such as floods, landslides, earthquakes and industrial accidents may have significant impacts outside a particular international watercourse.[140]

Outside of these exceptional circumstances and in light of the definition of a 'watercourse state' (Article 2 (c)) the rights and duties established by the Convention apply exclusively among parties and only to those 'other states' sharing an international watercourse when they are vulnerable to transboundary harm through an international watercourse. However, the rules of customary law as codified by the Convention will still apply to non-contracting states.

A final possible type of contracting party which the Convention could apply to is states which sign and ratify or accede to the Convention that are not a riparian to any international watercourse - this could include island nations. Non-riparian contracting parties do not inherit the same rights and duties to an international watercourse as 'watercourse states'. Although, there is an absence of decisive guidance in the Convention as to what types of limited rights and duties non-riparian contracting parties receive. Clearly, a non-riparian party does not have any rights to use or develop an international watercourse pursuant to the Convention. Nevertheless, there are indirect benefits of these parties signing the Convention in terms of strengthening international law in this area, and given the fact that many states rely on the goods and services produced from transboundary water resources.[141]

138 Tanzi and Arcari. The United Nations Convention on the Law of International Watercourses: A Framework for Sharing at 72.

139 See Part IV.

140 See Part V.

141 See Introduction.

2.1.6 Regional economic organisations

Article 2 (d) provides that regional economic integration organisations can become a contracting state to the Convention. Therefore organisations such as the European Union, the Southern African Development Community (SADC), the Economic Community of West African States (ECOWAS), and the Southern Common Market (MERCOSUR), could become contracting parties to the Convention. However, regional economic organisations can only become contracting parties to the Convention if competence is transferred from the members of that organisation in respect of matters governed by the Convention. Moreover, such bodies would have to be authorised to ratify or accede thereto by their members. To date, no regional economic organisation has requested permission to become a party to the Convention.

While regional organisations have been included in the Convention's definition of a 'watercourse state', nothing in the Convention implies that regional organisations have the status of states in international law.[142] Likewise, it is wrong to assume that a member of those bodies that is not a riparian state could acquire any rights and duties regarding a given international watercourse simply because the regional organisation of which that state is a member acceded to the Convention.[143]

142 Report of the Sixth Committee convening as the Working Group of the Whole (prepared by Chusei YAMADA), UN Doc. A/51/869 (11 April 1997) at 5. Available at <http://www.un.org/law/cod/watere.htm>, accessed 10 September 2011.

143 SMA Salman, 'The United Nations Watercourses Convention Ten Years Later: Why Has its Entry into Force Proven Difficult?' (2007) 32(1) Water International 1, at 11.

2.1.7 Natural and legal persons

Natural and legal persons, which include individuals and private companies, are also covered by the Convention in so far as they have rights not to be discriminated against when seeking redress and remedy for significant harm caused, or the threat thereof.[144]

144 See Part IV.

2.2 Application

2.2.1 Scope scenario – Which land based water use activities are covered by the Convention?

The Convention applies to land-based activities taking place within the river basin but only to the extent that such activities might be relevant for the use, protection, and management of an international watercourse. For example, where state A builds a tannery plant located a distance from an international watercourse, but toxic waste and chemical pollution from the plant are discharged onto the surrounding land which then filters through soil into a connected aquifer or is carried by surface runoff into an international watercourse. These activities may cause significant harm to riparian state B and will thus fall under the scope of the Convention.
Acid Rain – An example of a pollution scenario which is not covered by the Convention is where non-riparian State C has an industrial plant which emits nitrogen and sulphur gases into the Earth's atmosphere – the gases then react with water vapour to produce 'acid rain' which then falls onto riparian state D polluting the watercourse of state D. This type of activity will not be covered by the Convention because the origin of pollution is not continuously traceable through the land based watercourse system or drainage basin and is instead traceable through the atmospheric water system where the origin could be from a State in another continent.[145]

Cloud Seeding – A further potential pollution scenario which is caused by anthropogenic allocation of atmospheric water is pollution from cloud seeding. This is not covered by the Convention, although it is provided for to a very limited extent in other legal frameworks at national and international level.[146]

Green Water – Green water is the water stored in soil as soil moisture. Upstream State A changes the landscape within a section of an international river basin from natural vegetation to arable farming and cattle grazing. Removal of the natural vegetation increases the evaporation from the soil surface, and increases the level of soil erosion, which reduces the degree of infiltration capacity of the land and leads to greater overland flow. Downstream state B is affected by the changing land use practices through increased surface water run-off leading to greater risk and magnitude of floods, and also from rising sedimentation loads – which in turn reduces the storage capacity of its dam reservoirs. The latter scenario potentially falls within the scope of the Convention, particular in relation to the requirement to utilise international watercourses in an equitable and reasonable manner, taking into account all relevant factors and circumstances, and the obligation to protect the ecosystems of an international watercourse.

145 Acid Rain pollution is however regulated by various national and international laws see J Brunnee, Acid Rain and Ozone Layer Depletion: International Law and Regulation (Transnational Publishers

146 Arguably, the Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques adopted by the U.N. General Assembly on December 10, 1976, and entered into force on October 5, 1978, is the result of the cloud seeding operations led by the American Army during the Vietnam War.

2.3 Additional reading

Draft Articles on the Law of the Non-navigational Uses of International Watercourses in UNGA 'Report of the International Law Commission on the Work of its Forty-Sixth Session' (2 May-22 July 1994) UNGA, 49th Session Supp No 10 UN Doc A/49/10 (1994) at 89-92.

International Law Commission, 'Draft Articles on the Law of Transboundary Aquifers', UN Doc. A/CN.4/L.724, 29 May 2008, Yearbook of the International Law Commission, Geneva; United Nations Publications.

UNGA 'The law of transboundary aquifers', UN Doc. A/RES/63/124, (15 January 2009). Available <http://www.un.org/ga/search/view_doc.asp?symbol=A/RES/63/124> accessed 11 October 2011.

Eckstein G, 'A Hydrogeological Perspective of the Status of Ground Water Resources under the UN Watercourse Convention' (2005) 30 Columbia Journal of Environmental Law 525.

Mechlem K, 'Moving Ahead in Protecting Freshwater Resources: The International Law Commission's Draft Articles on Transboundary Aquifers' (2009) 22 Leiden Journal of International Law at 801.

McCaffrey S, 'The International Law Commission Adopts Draft Articles on Transboundary Aquifers' (2009) 103 American Journal of International Law at 272-293.

McCaffrey SC, The Law of International Watercourses (2nd edn, Oxford University Press 2007) at 35-39 and 497-503.

McIntyre O, 'International Water Resources Law and the International Law Commission Draft Articles on Transboundary Aquifers: A Missed Opportunity for Cross-Fertilisation?' (2011) 13(3) International Community Law Review 237.

Salman SMA, 'The Helsinki Rules, the UN Watercourses Convention and the Berlin Rules: Perspectives on international water law' (2007) 23 International Journal of Water Resources Development at 625-640.

Sindico F, 'The Guarani Aquifer System and the International Law of Transboundary Aquifers' (2011) 13 International Community Law Review 255.

Stephan RM, 'The Draft Articles on the Law of Transboundary Aquifers: The process at the UN ILC' (2011) 13(3) International Community Law Review 223.

Article 3 | Watercourse Agreements

Convention text

1. In the absence of an agreement to the contrary, nothing in the present Convention shall affect the rights or obligations of a watercourse state arising from agreements in force for it on the date on which it became a party to the present Convention.
2. Notwithstanding the provisions of paragraph 1, parties to agreements referred to in paragraph 1 may, where necessary, consider harmonising such agreements with the basic principles of the present Convention,
3. Watercourse states may enter into one or more agreements, hereinafter referred to as watercourse agreements, which apply and adjust the provisions of the present Convention to the characteristics and uses of a particular international watercourse or part thereof.
4. Where a watercourse agreement is concluded between two or more watercourse states, it shall define the waters to which it applies. Such an agreement may be entered into with respect to an entire international watercourse or any part thereof or a particular project, programme or use except insofar as the agreement adversely affects, to a significant extent, the use by one or more other watercourse states of the waters of the watercourse, without their express consent.
5. Where a watercourse state considers that adjustment and application of the provisions of the present Convention is required because of the characteristics and uses of a particular international watercourse, watercourse states shall consult with a view to negotiating in good faith for the purpose of concluding a watercourse agreement or agreements.
6. Where some but not all watercourse states to a particular international watercourse are parties to an agreement, nothing in such agreement shall affect the rights or obligations under the present Convention of watercourse states which are not parties to such an agreement.

3.1 Commentary

3.1.1 Contractual relationship between the Convention and pre-existing or future watercourse agreements

Article 3 (1) of the Convention preserves the contractual freedom of watercourse states. In this sense, the Convention does not affect the rights and duties of states that become parties to it arising from existing freshwater-related agreements. Neither does the Convention impose a duty on states to adopt future basin-specific treaties compatible with its provisions where none exist. The Convention rather encourages states to consider harmonising existing agreements with its basic provisions, as well as to adopt new agreements that apply and adjust the general principles of the Convention to the characteristics and uses of a particular watercourse (Articles 3(2)(3)).

Whilst parties are negotiating new agreements the Convention performs a 'guideline function'. The Convention is therefore mostly drafted in general terms so it can be applied to a range of different river basins. However some of its provisions are more precise and specific than the provisions of many existing sub-regional agreements and parties do have the freedom to adjust these more specific provisions to the characteristics of a particular watercourse. At the conclusion of any new agreement,[147] the Convention will not alter the rights and obligations contained in the new agreement. This means, for example, that an existing agreement between states A and B is not affected mandatorily by the Convention unless the states agree otherwise. If, however, both states were party to the Convention and it was in force, the Convention would likely have a significant influence on the negotiation of subsequent water agreements between the countries.

A large number of states have adjusted their existing multilateral or bilateral agreements to better reflect the basic provisions of the Convention, as well as adopting new agreements that apply the general principles of the Convention to the characteristics and uses of a particular watercourse. The original SADC Protocol on Shared Watercourse Systems was replaced by a second agreement closely modelled on the Convention's final text.[148] The recent Nile River Basin Cooperative Framework Agreement (NRBCFA) contains general principles and rules which clearly draw from the Convention.[149]

Comprehensive regional and basin assessments have been conducted as part of the 1997 UN Watercourses Global Initiative which examines how the Convention can play a supplementary role to existing agreements in specific existing regional and basin legal frameworks which do not comprehensively define the rights and obligations of the parties they are applicable to. Results from these studies demonstrates that in specific river basins including the Congo and Amazon, as well as a multitude of basin and regional agreements across Central Asia, Southern Africa, West Africa, East Africa, Central America and South-east Asia, agreements could individually and collectively be strengthened by applying and adjusting particular provisions of the Convention to their existing frameworks.[150] For example, in Central Asia the legal architecture of transboundary water cooperation in the Aral Sea Basin (ASB) is composed of numerous agreements at bilateral, sub-regional, regional and global levels, many of which have been

147 UNGA Sixth Committee (51st Session) 'Report of Sixth Committee Convening as the Working Group of the Whole' (11 April 1997) UN Doc A/51/869 at 5.

148 The Revised Protocol on Shared Watercourses in the Southern African Development Community (SADC), 7 August 2000, reprinted in ILM, Vol. 40, at 321. For an overview and analysis of the Protocol, see S Salman, 'Legal Regime for Use and Protection of International Watercourses in the Southern African Region: Evolution and Context' (2001) 41 Natural Resources Journal at 981. The original Protocol was concluded in 1995. The Revised Protocol replaces the 1995 Protocol. See also, A Earle and D Malzbender, 'Southern Africa', in F Loures and A Rieu-Clarke (eds.), The UN Watercourses Convention in Force – Strengthening International Law for Transboundary Water Management (Earthscan 2012

149 For analysis see M Abseno, 'The Concepts of Equitable Utilisation, No Significant Harm and Benefit Sharing under the Nile River Basin Cooperative Framework Agreement: Some Highlights on Theory and Practice' (2009) 20 Journal of Water Law 86.

150 Summaries of regional and basin case studies are found in Loures and Rieu-Clarke, The UN Watercourses Convention in Force.

adopted without consideration of the relationships between each other and also which do not always incorporate the principles of the law of international watercourses or best water management practice.[151] In this context, the Convention can make a contribution to improving the legal framework for transboundary water cooperation in the ASB and assist countries in building and maintaining effective and peaceful management systems for their shared resources. Some of the gaps that the Convention can fill relate to issues of scope, substantive rules, procedural rules, institutional mechanisms and dispute settlement. For example the agreements in the ASB region contain no explicit provisions on equitable and reasonable use (the central substantive rule of international water law) and dispute settlement mechanisms are lacking.[152] The contribution that the Convention can make to strengthen the legal frameworks in other basins, regions or sub-regions is discussed throughout this guide as each Article is examined in depth.

151 D Ziganshina, 'Legal framework governing transboundary waters in the Aral Sea Basin: What is a role for the UNWC?' in F Loures and A Rieu-Clarke (eds.), The UN Watercourses Convention in Force – Strengthening International Law for Transboundary Water Management (Earthscan 2012).
152 Ibid.

3.1.2 Relationship of the Convention to part of shared watercourse or specific projects and rights of third parties.

Articles 3 (3) and 4 (2) of the Convention allow all watercourse states to become a party to any agreement that only refers to a portion of the basin or to a specific project or use if they may be affected by such an agreement. In addition, these agreements cannot adversely affect, to a significant extent,[153] the use of the resource by non-participating riparians without their express consent (Article 3(4)). Furthermore, nothing in such an agreement will affect the rights or obligations of non-contracting parties under the Convention. In other words, these provisions safeguard the rights of states that are not parties to partial agreements, but are parties to the Convention (Article 3 (6)). Article 3 (6) therefore upholds Article 34 of the Vienna Convention containing the general rule regarding third states – that a treaty does not create either obligations or rights for a third state without its consent.[154]

153 See Section 3.1.3 for explanation of significant adverse effects.
154 Vienna Convention, UN Doc A/Conf.39/27 Art 34.

3.1.3 Significant adverse effects to other watercourse states – Objective test

Two watercourse states are free to enter into an agreement which covers the whole or part of a watercourse, provided third watercourse states are not adversely affected 'to a significant extent'. This test of what is to a 'significant extent' is an objective test which requires that the effect is one which can be established by objective evidence. Additionally, it must be shown that there is a real impairment of use.[155] Additionally the term 'significant' is not used in the sense of 'substantial'. What are to be avoided are localised agreements, or agreements concerning a particular project or use, which have a significant adverse effect upon third watercourse states - such an effect need not rise to the level of being substantial.[156] The Arbitral Tribunal in Lake Lanoux, in which Spain insisted upon delivery of Lake Lanoux water through the original system, found that:

'[…] thanks to the restitution effected by the devices described above, none of the guaranteed users will suffer in his enjoyment of the waters […]; at the lowest water level, the volume of the surplus waters of the Carol, at the boundary, will at no time suffer a diminution; In the absence of any assertion that Spanish interests were significantly affected in a tangible way, the tribunal held that Spain could not require maintenance of the natural flow of the waters'.[157]

The term 'significant' is a term that pervades many of the provisions of the Convention and as such is discussed further throughout this Guide as it applies to specific Articles and contexts.

155 1994 Draft Articles at 94.

156 UNWC, Annex 'Statement of Understanding'.

157 Lake Lanoux para ILR, 7957, at 123, para 6 (first subparagraph) of the arbitral (draft articles).

3.1.4 Negotiating watercourse agreements in good faith

What is meant by negotiating in good faith for the purpose of concluding a watercourse agreement (Articles 3 (5) and 4 (2)? The answer is found by first looking at the meaning of the principle of good faith as it exists as a general principle of international law. In international law, to act in good faith is to carry out an act with honest intent, fairness and sincerity, and with no intention of deceit.[158] This principle governs the relationships between nations and is fundamental to maintaining international peace and security, as per Article 2 (2) of the Charter of the United Nations.[159] States must abide by the principle of good faith in the performance and interpretation of treaties as set out in the Vienna Convention on the Law of Treaties.[160] The principle also extends beyond the law of treaties and informs and shapes the observance of existing rules of international law, and in addition constrains the manner in which those rules may be legitimately exercised.[161]

158 See `good faith' in J Law, E A Martin (eds.) A Dictionary of Law (Oxford University Press Oxford 2009) <http://www.oxfordreference.com> accessed 21 November 2011.

159 Article 2 (2) of the UN Charter states that "all members, in order to ensure to all of them the rights and benefits resulting from membership, shall fulfil in good faith the obligations assumed bythem in accordance with the present Charter'.

160 Articles 26 and 31 of the Vienna Convention on the Law of Treaties (adopted 22 May 1969, entered into force 27 January 1980) (Vienna Convention) 1155 UNTS

161 MN Shaw, International Law (6th edn, Cambridge University Press 2008) at 104.

The application of the principle is particularly fundamental to the negotiation process.[162] Parties are under the obligation to conduct negotiations in good faith and in a manner that 'the negotiations are meaningful, which will not be the case when either of them insists upon its own position without contemplating modification of it' as stipulated by the ICJ in Gabcíkovo-Nagymaros and the North Sea Continental Shelf case[163] and most recently in the Pulp Mills case.[164] Negotiating in good faith 'implies honesty, fairness, tolerance, lack of prejudice, consideration for the position, interests and needs of others, flexibility, willingness to seek a solution and, above all, cooperation'.[165] This interpretation applies equally to the obligation to negotiate in good faith for the purpose of concluding an agreement under Articles 3 (5) and 4 (2) of the Convention.

162 The ICJ affirmed the important role of good faith in the negotiation process in cases including North Sea Continental Shelf (Federal Republic of Germany/Denmark/Netherlands) Judgment of 20 February 1969 ICJ Reports 1969 at 3; Fisheries Jurisdiction (United Kingdom v Iceland) Decision of July 251974 ICJ Reports 1974 at 3; Case concerning the Gabcíkovo-Nagymaros Project (Hungary/Slovakia) Judgment of 25 September 1997 ICJ Reports 1997 at 7; and Case Concerning Pulp Mills on the River Uruguay (Argentina v. Uruguay), Judgment of 20 April 2010, paras 143-150.

163 Gabcíkovo-Nagymaros para 14, quoting from North Sea Continental Shelf case at para 85.

164 Pulp Mills Case, para 146.

165 E J Shafer `Good Faith Negotiation, the Nuclear Disarmament Obligation of Article VI of the NPT, and Return to the International Court of Justice' (paper presented at International Seminar `Abolition of Nuclear Weapons, War and Armed Forces' sponsored by the University of Costa Rica Faculty of Law and the International Association of Lawyers Against Nuclear Arms San Jose Costa Rica 26 January 2008) http://lcnp.org/wcourt/goodfaith-shafer.pdf accessed 21 November 2011; T Liguori, 'The Principle of Good Faith in the Argentina-Uruguay Pulp Mills Dispute' (2009) 20 Journal of Water Law 70 at 70.

3.2 Application

3.2.1 Scenario – Do the rights and duties established by the Convention apply exclusively among parties to the Convention?

What happens when an international watercourse is shared by three riparians but only states A and B become parties to the UN Watercourses Convention and state C does not? The Convention will only apply to contracting parties, that is states A and B, not to all riparians of an international watercourse (state C) because the definition of 'watercourse state', which is applied throughout the Convention's text to establish various rights and duties, includes only those countries that have ratified the Convention (Article 2(c)). In other words, the Convention confirms that reciprocity is a condition for its applicability, and that the rights and duties established by the Convention apply exclusively among parties. This is standard practice in international law.

Yet, established principles of customary international law, many of which are codified by the Convention, still apply to all watercourse states, regardless of whether they ratify the Convention or not, in the absence of watercourse agreements determining otherwise. For further discussion of these customary law principles, see section 4.1.2 below, the Introduction and Part II of this Guide. This is particularly relevant in the context of over 889 out of 1084 watercourse agreements signed between 1945 and 2007. Although they may not include all riparians, the missing riparians will still be subject to the rules of customary international law. Figure 1.7 below shows that of the 1,084 watercourse agreements signed among sovereign countries between 1945 and 2007 only 195 are basin-wide accords which include all riparians - the remaining treaties are mostly bilateral.[166]

166 N Zawahri, A Dinar, and G Nigatu (2010) Governing International Freshwater Resources: An Analysis of Treaty Design. Paper presented at the ISA Congress, New Orleans, February, 2010.

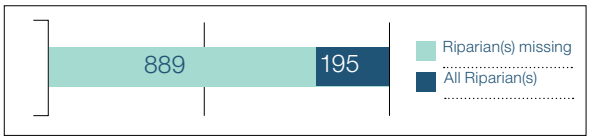


Figure 1.7 |
Treaty Inclusivity[167]

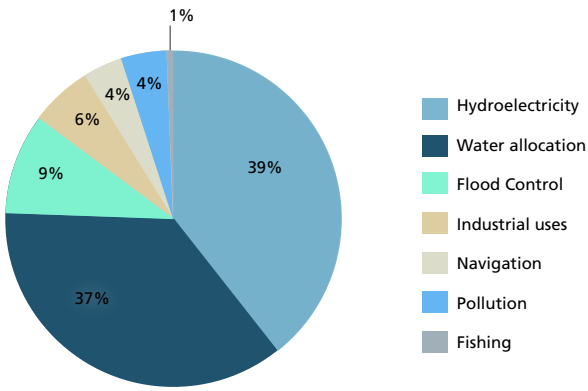


Figure 1.8 |
Primary Focus of Transboundary Water Agreements Adopted During the 20th Century (Source - Jägerskog and Phillips 2006)[168]

167 Data is from N Zawahri, A Dinar, and G Nigatu (2010) Governing International Freshwater Resources: An Analysis of Treaty Design. Paper presented at the ISA Congress, New Orleans, February 2010.

168 D Phillips and others, Trans-Boundary Water Cooperation as a Tool for Conflict Prevention and for Broader Benefit-Sharing (EGDI, Ministry for Foreign Affairs 2006).

3.2.2 Scenario – What scoping gaps can the Convention fill?

The Convention is sufficiently broad in scope that where existing agreements have gaps in their coverage which may pose a serious obstacle to cooperation, the Convention will support and supplement them (Article 3). A number of important elements of the hydrologic cycle are often missing from transboundary agreements. Also many transboundary agreements identifying water use types and water allocations fail to include any standards for the quality of that water.
Figure 1.8 shows the primary focus of transboundary water agreements adopted during the 20th Century, which suggests there are many gaps which could be filled by the Convention to provide more integrated water management within the respective agreements.[169]

169 See also the discussion on gaps the Convention can fill under Section 3.1.1.

3.2.3 Scenario – Application of the Convention to existing agreements where countries party to an existing agreement are also party to the Convention

If states A and B are parties to an existing Agreement X and decide to negotiate a Protocol Y to Agreement X on a specific aspect, such as procedures for emergencies including flooding or drought. Would the Convention bind the negotiations? If the protocol is not a separate international agreement which countries must join for it to come into effect, the answer is no – however Parties should consider harmonising Protocol Y with Part IV of the Convention (Article 3 (2)). However, if the protocol is treated as a separate new agreement which countries must ratify, rather than a protocol to an existing agreement, then arguably parties are under a stronger obligation to apply and adjust the provisions of the Convention, even though it could not affect the obligations in the original agreement.[170]

170 E Brown Weiss, 'The Evolution of International Water Law' in Hague Academy of International Law (ed), Recueil Des Cours, Collected Courses, Tome 331, vol 331 (Martinus Nijhoff Publishers 2009) at 260.

3.2.4 Scenario – Does the Convention require watercourse states to conclude a specific agreement before using an international watercourse?

No, watercourse states are not under an obligation to conclude an agreement before using the waters of the international watercourse. This is not supported by the terms or the intent of Article 3[171] and nor is it supported by state practice or international judicial decisions. However, it is advisable that the riparian countries enter into such specific agreements for ensuring the more effective management and development of their transboundary river basin.

171 1994 Draft Articles at 94.

3.3 Additional reading

Draft Articles on the Law of the Non-navigational Uses of International Watercourses in UNGA 'Report of the International Law Commission on the Work of its Forty-Sixth Session' (2 May-22 July 1994) UNGAOR, 49th Session Supp No 10 UN Doc A/49/10 (1994).

Aust A, Modern Treaty Law and Practice (2nd edn, Cambridge University Press 2007).

Brown Weiss E, 'The Evolution of International Water Law' in Hague Academy of International Law (ed),

Recueil Des Cours, Collected Courses, Tome 331, vol 331 (Martinus Nijhoff Publishers 2009) at 259.

Liguori T, 'The Principle of Good Faith in the Argentina-Uruguay Pulp Mills Dispute' (2009) 20 Journal of Water Law 70.

Rieu-Clarke A and Loures FR, 'Still Not in Force: Should States Support the 1997 UN Watercourses Convention?' (2009) 18 Review of European Community & International Environmental Law 185.

Rieu-Clarke A, 'The Role and Relevance of the UN Convention on the Law of the Non-Navigational Uses of International Watercourses to the EU and Its Member States' (2008) 78 The British Yearbook of International Law 389.

Salman SMA, 'The Helsinki Rules, the UN Watercourses Convention and the Berlin Rules: Perspectives on International Water Law' (2007) 23 International Journal of Water Resources Development 625 at 630.

Shaw MN, International Law (6th edn, Cambridge University Press 2008) at 103.

Tanzi A and Arcari M, The United Nations Convention on the Law of International Watercourses: A Framework for Sharing (Kluwer Law International 2001).

Wouters P, 'The International Law of Watercourses: New Dimensions' 3 Collected Courses of the Xiamen Academy of International Law (Martinus Nijhoff 2011) at 441-466.

Wouters P, 'The Legal Response to International Water Conflicts: The UN Watercourses Convention and Beyond' (1999) 42 German Yearbook of International Law 293.

Article 4 | Parties to watercourse agreements

Convention text

1. Every watercourse state is entitled to participate in the negotiation of and to become a party to any watercourse agreement which applies to the entire international watercourse, as well as to participate in any relevant consultations.
2. A watercourse state whose use of an international watercourse may be affected to a significant extent by the implementation of a proposed watercourse agreement which applies only to a part of the watercourse or to a particular project, programme or use is entitled to participate in consultations on such an agreement and, where appropriate, in the negotiation thereof in good faith with a view to becoming a party thereto, to the extent that its use is thereby affected.

4.1 Commentary

4.1.1 Right to participation for watercourse states

When an agreement deals with an entire international watercourse, there is no reasonable basis for excluding a watercourse State from participation in its negotiation, and from becoming a party to the agreement, or from participating in any relevant consultations.[172] As explained in Section 2.2.5 the primary legal relationships which the Convention governs are between state parties which are riparians of the same international watercourse and Article 4 stipulates that only riparians have the right to take part in the consultations and negotiations. However, this exclusion of non-riparians may be challenged in particular circumstances as elaborated upon in Section 4.1.2 below.

When an agreement deals with only part of an international watercourse only watercourse states whose use of the watercourse may be significantly affected by the implementation of an agreement are entitled to participate in consultations and negotiations relating to such a proposed agreement, with a view to becoming a party to the agreement, to the extent that its use is thereby affected – See the Application Scenario 4.2.1 below.

172 1994 Draft Articles at 95.

4.1.2 The relationship of the Convention to customary law – and value added

The Convention codifies numerous principles of customary international law related to the non-navigational use of international watercourses and these principles served as the conceptual framework for the Convention. These exact principles will be explored in more depth throughout the relevant parts of this Guide – although the most fundamental principle to understand is that of equitable and reasonable utilisation (which will be explored in Part II and elsewhere).

At this stage it is important to mention that the Convention actually goes beyond simply codifying customary law, and also clarifies the content and scope of specific rules and principles, providing minimum standards for interpretation. For example although countries may accept the customary legal status of the principle of equitable and reasonable utilisation and the no-harm rule, this does not mean that all states share the same interpretation of these norms including their scope, meaning, how they relate to each other, and, ultimately, how they should be implemented in a harmonious manner. The Convention's role in this instance is to provide common ground for interpretation, arrived at after discussions amongst relevant parties. The existence of a minimum standard to be followed by all countries would make them a priori aware of their general rights and obligations. A clearer status of the applicable law through codification is crucial to prevent disputes and thus promotes stability and consistency among riparians.

Furthermore, the role of the ILC in drafting the Convention was not only the codification of existing customary international law, but also its progressive development and the crystallisation of emerging norms (e.g. ecosystem protection). In addition, the Convention incorporates the rights and obligations which support substantive rules and principles - i.e. procedural rules covering issues like the exchange of data and information, consultations and negotiations, and dispute settlement. Finally, since states have to implement its provisions in their entirety, the Convention serves as an overarching umbrella addressing the multitude of issues arising out of present and future conflicts over water, and preventing the parties from following a 'selective' approach regarding the management of international watercourses – that is selectively picking which customary principles they choose to follow.

Furthermore, the ambiguities and abstractness of customary law make it harder for the international community or affected individuals to question joint governmental decisions. This becomes relevant where all co-riparians agree on the implementation of a certain project by one state based on tradeoffs regarding future river development elsewhere or on the sharing of benefits deriving from such a project. In such a case, the Convention, more than custom, would inform an analysis of whether the decision conforms to minimum duties related to environmental protection and human rights.[173]

173 See FR Loures and others 'Possible Effects From Entry and Non-entry Into Force', FR Loures and A Rieu-Clarke, The UN Watercourses Convention In Force.

4.2 Application

4.2.1 Scenario - Rights of third parties to consultation and participation[174]

States A and B, whose common border is the River X, agree that each may divert 50 per cent of the river flow for domestic consumption, manufacturing and irrigation purposes at a point 25 miles upstream from state C, through which River X flows upon leaving states A and B. The total amount of water available to state C from the river, including return flow in states A and B, will be reduced as a result of the diversion, by 25 percent from what would have been available without diversion. Downstream state C relies extensively on aquaculture especially salmon farming on the section of the River X which flows through its territory and is concerned that the reduced flow will have an impact upon salmon migration upstream to breeding grounds.

Does state C have the right to join in consultations and negotiations, as a prospective party to any agreement, with regard to the proposed action by states A and B?

The answer is yes, state C has the right to join consultation and negotiation but the right is qualified to the extent that it must appear that the proposed water use by State A and B will have a significant effect on state C. What constitutes 'a significant effect' is something greater than an 'adverse effect'. State C must be likely to suffer from a real impairment of use, with a detrimental impact of the proposed diversion by states A and B, upon the environment or the socio-economic development of the harmed state (e.g. public health, industry, property, and agriculture). If state C can prove objectively that the diversion will create a real impairment of use to its salmon industry, then it will be entitled to participate in consultations and negotiations relating to the agreement, and potentially to become a party thereto. If state C is not significantly affected by the proposed agreement between states A and B, regarding diversion of part of the River X, the physical unity of the river does not of itself require that state C have these rights. In these circumstances states A and B are legally entitled to enter into such an agreement without state C.

174 Adopted from 1994 Draft Articles at 96.

4.3 Additional reading

Draft Articles on the Law of the Non-navigational Uses of International Watercourses in UNGA 'Report of the International Law Commission on the Work of its Forty-Sixth Session' (2 May-22 July 1994) UNGAOR, 49th Session Supp No 10 UN Doc A/49/10 (1994).

Arevalo, L, 'The Work of the International Law Commission in the Field of International Environmental Law' Boston College Environmental Affairs Law Review 32 (2005) at 498-501

Dellapenna JW, 'The Customary International Law of Transboundary Fresh Waters' (2001) 1 International Journal of Global Environmental Issues 264.

McIntyre O, 'The Proceduralisation and Growing Maturity of International Water Law' (2010) 22 Journal of Environmental Law 475.

Rieu-Clarke A and Loures FR, 'Still Not in Force: Should States Support the 1997 UN Watercourses Convention?' (2009) 18 Review of European Community & International Environmental Law at 185-97.

Tanzi A and Arcari M, The United Nations Convention on the Law of International Watercourses: A Framework for Sharing (Kluwer Law International 2001).

Part II | General Principles (Articles 5-10)

Article 5 | Equitable and reasonable utilisation and participation

Key points

- The principle of 'equitable and reasonable utilisation' is the cornerstone of international law related to transboundary watercourses.
- It entitles a watercourse state to an equitable and reasonable share of the uses or benefits of the particular watercourse and creates the correlative obligation not to deprive other states of their respective rights.
- It is based on the allocation theory of 'limited territorial sovereignty' which stipulates that watercourse states enjoy equal rights to the utilisation of an international watercourse.
- Article 6 provides an indicative list of factors and circumstances to be taken into account when determining what constitutes an equitable and reasonable use.
- The Legal Assessment Model developed by the IHP-HELP Centre for Water Law, Policy and Science provides a useful tool for identifying, measuring and evaluating the relevant factors and circumstances applicable to equitable and reasonable use.
- States are obliged to take all appropriate measures not to cause significant harm to other watercourse states, however, some significant harm may be tolerated – in very limited circumstances – where it can be established to be equitable and reasonable.
- While no use of a transboundary watercourse has inherent priority over others, special regard has to be given to vital human needs and the ecosystems of international watercourses must be protected.

Convention text

1. Watercourse states shall in their respective territories utilise an international watercourse in an equitable and reasonable manner. In particular, an international watercourse shall be used and developed by watercourse states with a view to attaining optimal and sustainable utilisation thereof and benefits therefrom taking into account the interests of the watercourse states concerned, consistent with adequate protection of the watercourse.
2. Watercourse states shall participate in the use, development and protection of an international watercourse in an equitable and reasonable manner. Such participation includes both the right to utilise the watercourse and the duty to cooperate in the protection and development thereof, as provided in the present Convention.

5.1 Commentary

5.1.1 Theories of allocation

Article 5 defines the fundamental rights and duties of states regarding their utilisation of international watercourses by laying down the well-established principle of equitable and reasonable utilisation in paragraph 1 and its complementary principle of equitable participation in paragraph 2.

Despite the fact that the prosperity of societies has always been linked with the development of shared freshwater resources, it was not until the 1950s that customary international law governing international watercourses emerged.[175] Before then, two conflicting approaches reflected the claims and counterclaims of states over their share of the resource – the theories of 'absolute territorial sovereignty' (also referred to as the Harmon Doctrine)[176] and 'absolute territorial integrity.' While the former favours upstream riparians, allowing the unlimited use of the waters of a transboundary watercourse located within national borders (regardless of any consequences that may occur downstream in other countries), the latter approach favours downstream states wishing to prohibit any development in an upstream state that would interfere with the natural flow of such a watercourse.[177]

It was the dispute between the USA and Mexico over the Rio Grande in 1895 which gave rise to the theory of 'absolute territorial sovereignty.' In this case, Mexico claimed that diversions in the USA (Colorado and New Mexico) significantly reduced the supply of water to Mexican communities. In protest at the diversion, Mexico declared that its legal right to use the water of the Rio Grande is 'incontestable, being prior to that of the inhabitants of Colorado by hundreds of years.'[178] The US Secretary of State requested a legal opinion of the US Attorney General, Judson Harmon, as to whether the United States violated Mexico's rights under international law. In the section of his opinion Harmon denied that the general rules of international law imposed any obligation on the United States to restrict its own use of the portion of the Rio Grande within its own territory, even if this use might cause adverse effects downstream in Mexico.

'The fundamental principle of international law is the absolute sovereignty of every nation, as against all others, within its own territory.'

'All exceptions […] to the full and complete power of a nation within its own territories must be traced up to the consent of the nation itself. They can flow from no other legitimate source.'

'The immediate as well as the possible consequences of the right asserted by Mexico show that its recognition is entirely inconsistent with the sovereignty of the United States over its national domain.'

'[T]he rules, principles, and precedents of international law impose no liability or obligation upon the United States.'[179]

Attorney-General Harmon therefore advised the Department of State that the USA had no responsibility towards Mexico for the significant reductions to the Rio Grande. His opinion is commonly referenced by those who claim an upstream state has a right under

175 CB Bourne, 'The Primacy of the Principle of Equitable Utilisation in the 1997 Watercourses Convention' (1997) 35 Canadian Yearbook of International Law 215 at 215.

176 Named after the opinion delivered by the American Attorney General Judson Harmon in 1896 concerning a water dispute between the United States and Mexico over the use of the Rio Grande.

177 SC McCaffrey, The Law of International Watercourses (2nd edn, Oxford University Press 2007) at 117; A Rieu-Clarke, International Law and Sustainable Development : Lessons from the Law of International Watercourses (IWA Publishing 2005) at 147.

178 See Minister Romero to US Secretary of State Richard Olney, 21 Oct. 1895, US APPENDIX, at 202; quoted in McCaffrey, The Law of International Watercourses at 113.

179 21 Opinion Attorney General, pp. 281-283 (1898); quoted in ibid at 114.

international law to act unilaterally in complete freedom regarding an international watercourse within its territory, irrespective of any impact this action might have in downstream countries. Interestingly, the strong position has never been applied by the USA – neither in the resolution of the Rio Grande dispute, which was based on 'equitable and acceptable' use, nor in any following controversy.

The same can be said for general state practice. While some states have, at times, argued they possess absolute sovereignty over the parts of international watercourses located within their own territories; in the end these states have usually resolved their disputes by entering into agreements which recognised the rights of the co-basin states.[180]

The concept of absolute territorial integrity runs contrary to that of absolute territorial sovereignty, since the former is employed to argue that the upstream state has no right to do anything which may affect the natural flow of the water into the territory of the state(s) downstream. Applying such a theory would most likely have a serious impact on upstream states which developed their water resources at a much slower pace compared to their downstream neighbours, as it would ultimately impede any upstream development which may adversely affect the natural (even seasonal) flow of the watercourse.[181]

Ironically, the country most closely associated with the theory of absolute territorial sovereignty is also linked with absolute territorial integrity. During the Trail Smelter arbitration, a case involving transboundary air pollution emanating from a smelter in Canada (Trail) and causing harm in the USA, the Legal Adviser of the US Department of State shared the view that:

'It is a fundamental principle of the law of nations that a sovereign state is supreme within its own territorial domain and that it and its nationals are entitled to use and enjoy their territory and property without interference from an outside source.'[182]

Again, this extreme perspective shows that – like the absolute territorial sovereignty theory - the concept of absolute territorial integrity may only be useful as a diplomatic tool, rather than being reflective of state practice. In the case at hand, the tribunal allowed the smelter to continue operating subject to a very stringent emissions regime meant to avoid unreasonable harm in the USA and the payment of compensation for any damage caused despite complying with the emissions regime. Few other countries have referred to the concept in transboundary water disputes.[183]

Neither of these two extreme positions therefore received universal support – for an obvious reason: watercourse states cannot be easily divided into upstream or downstream states as some countries fit into both categories (some rivers may end in a state's territory, while others may originate from it) and other countries may be midstream states (in the case an international river flows through three or more countries). History has shown that the theories of absolute territorial sovereignty and absolute territorial integrity have been merely used as strong bargaining positions – a negotiation technique known as the 'zero-sum game' – before reaching a compromise agreement which is satisfactory to all parties.[184]

180 E.g., India v Pakistan (1950s); Austria v Germany (1950s); Chile v Bolivia (1920s).

181 See McCaffrey, The Law of International Watercourses at 126.

182 Memorandum in Relation to the Arbitration of the Trail Smelter Case, United States and Canada, 10 August 1937, prepared by Green H. Hackworth, Legal Adviser, for Swagar Sherley, Agent of the United States; quoted in ibid at 127.

183 E.g. Egypt v Ethiopia ('full right to maintain the status quo of the rivers flowing on its territory'); Pakistan v India; Lake Lanoux Arbitration (France v Spain) (16 November 1957) 24 ILR 101 (1957).

184 A Nardini, A Goltara and B Chartier, 'Water Conflicts: An Unavoidable Challenge from the Transboundary to the Local Dimension' in Meire P and others (eds), Integrated Water Management Practical Experiences and Case Studies (Springer 2008) at 97.

Today, the more balanced concept of 'limited territorial sovereignty' is widely accepted as the foundation upon which the law of international watercourses in general, and the UNWC in particular, have evolved.[185] It stipulates that all watercourse states enjoy an equal right to the utilisation of a shared water resource, and each watercourse state has to respect the sovereignty and correlative rights of other watercourse states – i.e. not to exceed its own right to equitable utilisation.[186]

Such an approach is exemplified in a dispute concerning the River Meuse in 1856. Holland protested against a Belgian diversion of water from the transboundary river into the Campine Canal as it believed this measure caused damage by reducing the navigability of the Meuse and increasing the vulnerability of flooding.[187] According to the Dutch government:

'The Meuse being a river common both to Holland and to Belgium, it goes without saying that both parties are entitled to make the natural use of the stream, but at the same time, following general principles of law, each is bound to abstain from any action which might cause damage to the other. In other words, they cannot be allowed to make themselves masters of the water by diverting it to serve their own needs, whether for purposes of navigation or of irrigation.'[188]

185 A Tanzi and M Arcari, The United Nations Convention on the Law of International Watercourses : A Framework for Sharing (Kluwer Law International 2001) at 136.

186 Rieu-Clarke, International Law and Sustainable Development : Lessons from the Law of International Watercourses at 148.

187 McCaffrey, The Law of International Watercourses at 137.

188 As quoted in ibid at 137.

The two states settled their dispute over the Meuse with two treaties in 1863 and 1873.[189] This is just one of numerous cases in which upstream states have recognised the legal rights of their lower riparians.[190]

189 Treaty between the Netherlands and Belgium establishing the regime for taking water from the Meuse (12 May 1863); subject to some technical modifications introduced in January 1873.

190 See, for example, Art 2(2) (c) of the UNECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes, 17 March 1992 (entered into force 6 October 1996), reprinted in 31 ILM 1312 (1992); Art 3(7) of the SADC Revised Protocol on Shared International Watercourses, 7 August 2000 (entered into force 22 September 2003), reprinted in 40 ILM 321 (2001).

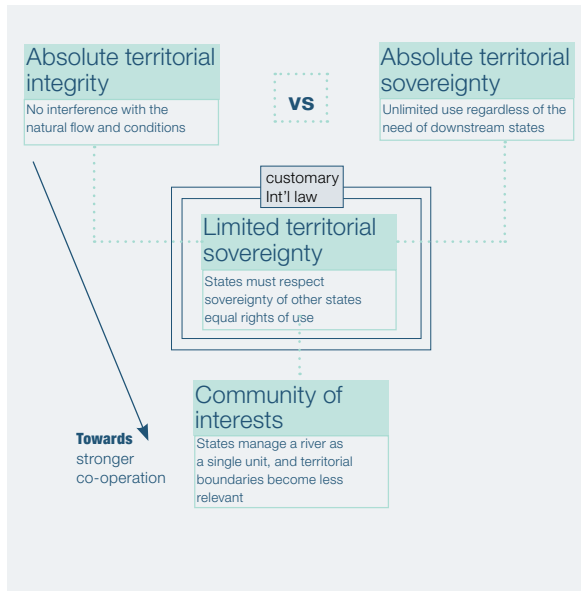


Figure 2.1 |
Theories of Allocation (Source Authors)

The concept of limited territorial sovereignty is strongly reflected in the principle of equitable and reasonable utilisation, which can now be considered as a principle of customary international law. It aims to reconcile conflicting interests across international borders, so as to 'provide the maximum benefit to each basin state from the uses of the waters with the minimum detriment to each.'[191]

One of the main advantages of the principle is that it simultaneously recognises the rights of both upstream and downstream countries. It underpins the theory of limited territorial sovereignty by entitling each basin state to a reasonable and equitable share of water resources for beneficial uses within its own territory while at the same time upholding the obligation not to deprive other basin states of their own right to equitable and reasonable utilisation.

The principle of equitable and reasonable utilisation performs two functions. Firstly, it establishes the objective to be achieved (an equitable and reasonable use), which determines the lawfulness of a use of the transboundary watercourse; and secondly, it serves as an important operational function at the process level, requiring that all relevant factors and circumstances (natural and socio-economic) are taken into account in the process of balancing the needs and proposed uses of each riparian state when determining what qualifies as a legitimate – i.e. equitable and reasonable – use (see Article 6 – Factors relevant to equitable and reasonable utilisation).[192]

The idea that all co-riparians enjoy an equal right in the use of an international watercourse has been affirmed by the judgment of the International Court of Justice (ICJ) in the Gabcíkovo-Nagymaros Case. Here, the court held that the unilateral operation of a Slovak project on the Danube (referred to as 'Variant C'), allowing Slovakia (at the time Czechoslovakia) to utilise between 80 and 90 per cent of the waters of the transboundary river for its exclusive benefit, represented an infringement on Hungary's 'basic right to an equitable and reasonable sharing of the resources of an international watercourse.'[193]

In order to complete the analyis of the theories of allocation it is important to mention the concept of 'a community of interests'. The concept of a community of interests can be seen as a step beyond the theory of limited territorial sovereignty. The Permanent International Court of Justice made reference to the concept in the 1929 Territorial Jurisdiction of the International Commission of the River Oder, where it stated that:

'This community of interest in a navigable river become the basis of a common legal right, the essential features of which are the perfect equality of all riparian states in the use of the whole course of the river and the exclusion of any preferential privilege of any one riparian state in relation to the others.'[194]

The River Oder case was referred to more recently in

191 Article IV of the Helsinki Rules on the Uses of the Waters of International Rivers, adopted by the International Law Association at the 52nd Conference, Helsinki, Finland, August 1966, reprinted in S Bogdanovic, International Law of Water Resources : Contribution of the International Law Association (1954-2000) (Kluwer Law International 2001) at 89.

192 P Wouters, S Vinogradov and B-O Magsig, 'Water Security, Hydrosolidarity and International Law: A River Runs through It ...' (2009) 19 Yearbook of International Environmental Law 97 at 116.

193 Case Concerning the Gabcíkovo-Nagymaros Project (Hungary v Slovakia) Judgement of 25 September 1997 (Gabcíkovo-Nagymaros Case) [1997] ICJ Reports 1997, 7 at 54, para 78.

194 Judgement no. 16 (10 September 1929), PCIJ Series A, No. 23, at 5-46.

the Gabcíkovo-Nagymaros case where the International Court of Justice states that:

'Modern development of international law has strengthened this principle for non-navigational uses of international watercourses as well, as evidenced by the adoption of the Convention of 21 May 1997 on the Law of the Non-navigational Uses of International Watercourses by the United Nations General Assembly.'[195]

The Court therefore went on to conclude that:

'Czechoslovakia, by unilaterally assuming control of a shared resource, and thereby depriving Hungary of its right to an equitable and reasonable share of the natural resource of the Danube … failed to respect the proportionality which is required by international law'.[196]

In reference to the above statements McCaffrey claims that, 'the concept of community of interest can function not only as a theoretical basis of the law of international watercourses but also as a principle that informs concrete obligations of riparian states, such as that of equitable utilisation.'[197] However, McCaffrey also goes on to claim that the precise legal implications of the community of interests concept are less than completely clear:

'The legal import of the doctrines of absolute territorial sovereignty and integrity is clear enough; that of limited territorial sovereignty, while not so stark, is also fairly well understood. How, then, is the notion of community of interest different from these theories? It is one thing to say, as the Permanent Court did in the River Oder case, that one state may not prevent other states from navigating on an international watercourse because they all enjoy a community of interest in it. It is something quite different to maintain that the community of interest in an international watercourse allows one state to prevent another state from diverting water from it, for example. While all riparian states (and other states, as well) may have an interest in navigating on the whole course of a river can it be said that all riparian states have an interest in the whole course of a river – i.e. the entire watercourse system – insofar as non-navigational uses are concerned? For example, would a state that was not adversely affected by a co-riparian state's diversion have legal grounds for protesting the diversion, absent an applicable agreement? There would seem to be little doubt that the answer would be in the negative. Such a right is supported neither in state practice nor in the writings of commentators. Therefore, the concept of community of interest must have another meaning in the case of non-navigational uses.'[198]

In this regard, some commentators have sought to equate the community of interests concept with that of 'common management.'[199] Caflisch argues for the merits of 'denationalising' international watercourses, shifting the emphasis from individual states to joint organisation.[200] However, the latter commentator also observes that, 'while it is clear that a condominium could be established by treaty, one cannot maintain that, by virtue of the rules of customary law, the whole of an international watercourse, including its resources, forms a condominium.'[201]

195 Case concerning the Gabcíkovo-Nagymaros Project (Hungary v Slovakia), available at <http://www3.icj-cij.org/docket/files/92/7375.pdf?PHPSESSID=756c3208dcb4692850e8bbf72af34ed6>, accessed 30 April 2012, para 85.

196 Ibid

197 McCaffrey, The Law of International Watercourses at 150.

198 McCaffrey, The Law of International Watercourses at 161.

199 Owen McIntyre, Environmental Protection of International Watercourses under International Law (Ashgate 2007), at 33.

200 Lucius Caflish, Regles Generales du Droit des Cours d'Eau Internationau, 219 Recueil des Court (1989-VII) (1992), at 59-61.

201 Ibid.

5.1.2 What is meant by 'equitable'?

Beyond doubt, each riparian state is still entitled to make use of the waters of an international watercourse – within its own territory – which is a fundamental feature of the concept of sovereignty. It is the principle of sovereign equality (or 'equality of right') which stipulates that every riparian state has a right to the utilisation of the watercourse which is qualitatively equal to the rights of the co-riparians.[202] However, this must not be mistaken for the right to an equal share of the uses and benefits of the watercourse; nor does it imply that the water resource itself has to be divided into equal shares.[203] Since it is based on the notion of equity, the concept demands the weighing and balancing of the competing (reasonable) interests of states; taking into account all relevant factors and circumstances (see Article 6 – Factors relevant to equitable and reasonable utilisation).

Equity has many different meanings, and the precise nature of the concept is somewhat obscure. As a set of legal principles, or found in broader 'general norms,' it has a long history in both common and civil law systems. Equity can be described as a supplement to rather strict rules, giving the judge some leeway in their application, where it would seem too rigid or harsh otherwise. In international law equity is often used as a synonym for fairness or justice with both procedural and substantive dimensions.[204] While the procedural part is concerned with reaching decisions through 'right process', the substantive part tries to achieve distributive justice.[205]

Based on the perspective that fairer proceedings lead to fairer outcomes, the two dimensions of equity are often seen as being interlinked.[206] One example here is the concept of environmental justice which aims at guaranteeing procedural equity through a participatory decision-making process; in turn leading to outcomes which treat all affected stakeholders fairly. The movement pushing for environmental justice emerged as a result of correlations between race and poverty; and the allocation of environmental burdens. The argument is that greater equity in the allocation of both benefits and harm (distributive justice) can only be achieved by overcoming the traditional exclusion of minority groups in the decision-making process (procedural fairness).[207]

In the climate change debate the substantive dimension of 'equity' (distributional justice), is at the centre of the discussion – consisting of three domains:[208]

(1) Need | Mitigation strategies and emission caps should leave room for eradicating poverty and achieve a reasonable standard of living – basically, they should take into account the right to development.

(2) Capability | The efforts and costs for mitigation should be shared in proportion to each state's financial means and to its mitigation opportunities.

202 See Article IV of the Helsinki Rules on the Uses of the Waters of International Rivers, adopted by the International Law Association at the 52nd Conference, Helsinki, Finland, August 1966, reprinted in Bogdanovic, International Law of Water Resources : Contribution of the International Law Association (1954-2000) at 89.

203 Draft Articles on the Law of the Non-navigational Uses of International Watercourses, in Report of the International Law Commission on the Work of its Forty-Sixth Session, UNGAOR, 49th Sess, Supp (No. 10), UN Doc A/49/10 (1994) [hereinafter 1994 ILC Draft Articles] at 98.

204 TM Franck, Fairness in International Law and Institutions (Clarendon Press; Oxford University Press 1995) at 9.

205 Ibid at 7.

206 D Shelton, 'Equity' in Bodansky D, Brunnée J and Hey E (eds), The Oxford Handbook of International Environmental Law (Oxford University Press 2007) at 640.

207 Ibid at 641.

208 L Ringius, A Torvanger and A Underdal, 'Burden Sharing and Fairness Principles in International Climate Policy' (2002) 2 International Environmental Agreements: Politics, Law and Economics 1 at 17.

(3) Responsibility | Mitigation efforts should be allocated in proportion to a state's share of responsibility for causing climate change.

These basic elements have been translated into several approaches introduced to international climate change negotiations. The concept of egalitarian equity states that every individual has an equal right to pollute and to be protected from pollution.[209] Thus, each state would be allowed to emit greenhouse gases (GHGs) in proportion to its population. In contrast, the theory of sovereignty demands that all states have an equal right to pollute and to be protected from pollution; leading to a reduction of global GHG emissions in proportion to states' status quo right by maintaining the relative differences in emission levels between them.[210] Applying a horizontal approach, where states with similar economic characteristics have similar rights to emit GHGs, would entail equalising net welfare changes across nations. Finally, the polluter pays principle distributes the economic burden of mitigation in accordance with each state's (historical) emissions.

Complicating things further, each of these approaches can have different nuances, depending on the indicators applied for implementation. One prominent example here is the distinction between emissions due to secure fundamental basic needs and 'luxury' emissions.

The ongoing climate change debate points to the fact that defining what exactly is meant by 'equitable' will always remain a challenging and moving target, since governments transcribe their individual interests into various competing concepts of equity.

209 Ibid at 5.
210 Ibid.

5.1.3 What is meant by 'reasonable'?

Frequently, the principle of 'equitable and reasonable' utilisation is used synonymously with simply 'equitable utilisation', raising the question about the actual role and meaning of reasonableness.[211] In its Commentaries to the 1994 Draft Articles, the International Law Commission (ILC) took the view that there is a distinction to be made in the application of 'reasonable' and 'equitable'. The former being applied in the judgement on the quality of the use; and the latter being employed in the balancing process of the various uses between states in case of a 'conflict of use.'[212]

The second sentence of Art 5 (1) elaborates upon the concept of equitable and reasonable utilisation, providing that watercourse states shall develop an international watercourse 'with a view to attaining optimal and sustainable utilisation thereof and benefits therefrom' consistent with adequate protection of the watercourse. The term 'with a view to' indicates that the achievement of optimal utilisation and benefits is the objective international watercourse states should ultimately aim for. The terms 'optimal utilisation' and 'benefits' do not indicate the goal to achieve the 'maximum,' the most efficient, or even the most (economically) valuable use. Nor do they indicate that the state in the position of utilising the watercourse most efficiently (e.g. due to economic or technological advantages) should have a superior claim to the use of the waters. It rather implies attaining maximum possible benefits for all riparians and achieving the greatest possible satisfaction of all their needs, while minimising potential detrimental impact. The term 'sustainable use' reflects the need to balance economic, social, and environmental values in the use of natural resources and to take into account the long-term carrying

211 A Allan, 'The Role of Reasonableness in Assessing Equitable and Reasonable Use' (2009) 01/2009 Ympäristöjuridiikka 22.
212 1994 Draft Articles, Art 5 at 98, para 9.

capacity of international watercourses – in line with the principle of sustainable development.[213] The closing phrase of the second sentence stresses that the efforts to attain optimal and sustainable utilisation must be in line with the 'adequate protection' of the watercourse – which not only includes the conservation measures and activities tackling water-related diseases, but also technical and hydrological 'measures of control.'[214]

In determining what constitutes a reasonable use, the 'reasonable man' test can be applied to create an objective standard against which conduct can be measured.[215] By using this test it becomes clear that the requirement of reasonableness does not demand the most efficient use available, and neither does it call for utilising the most advanced technology. Reasonableness differs from the concepts of 'beneficial' or 'best possible' use. It encompasses the contemporary conception of rationality and takes factors like the stage of development of a state into consideration. Yet, even if a use of an international watercourse has been identified as reasonable, it might still be challenged when compared with other uses through the lens of equity. The principle of equitable and reasonable use, then, recognises equity as a broader umbrella within which the concept of reasonableness becomes relative. This means that what may be considered to be perfectly reasonable by one state can be inequitable when looked at within the broader picture of the whole watercourse and the various needs and interests of co-riparian states. Hence, 'reasonable' uses are still subject to an 'equitable' allocation.

213 Agenda 21: A Programme for Action for Sustainable Development, 13 June 1992, Rio de Janeiro, Brazil, in Report of the United Nations Conference on Environment and Development,Annex II, UN Doc A/Conf.151/26 (Vol II) (1992) at para 18.16.

214 E.g., flow regulation, flood control, drought mitigation, prevention of erosion and pollution control; see 1994 ILC Draft Articles, Art 5 at 97, para 5.

215 Allan, 'The Role of Reasonableness in Assessing Equitable and Reasonable Use'.

5.1.4 Equitable participation

Article 5 (2) embodies the concept of 'equitable participation,' which acknowledges the fact that only cooperative action by all watercourse states can produce the optimal benefits for each of them, while supporting the equitable and reasonable utilisation and the adequate protection of the international watercourse. Hence, the concept of equitable participation directly flows from the principle of equitable and reasonable utilisation – since the latter requires the former. Equitable participation, then, gives states the right to the cooperation of co-riparians regarding the measures necessary for the 'adequate protection' of the watercourse; which is linked to the general obligation to cooperate contained in Article 8 of the UNWC.[216]

216 1994 Draft Articles, Art 5 at 97, para 3.

5.2 Application

In the case where the quantity or quality of water in an international watercourse is insufficient to satisfy the needs of all riparian states – i.e. a conflict of uses exists – the application of the principle of equitable and reasonable utilisation follows a two-step approach. First, one has to ask whether the relevant uses are reasonable; and second, the competing reasonable uses have to be reconciled on the basis of equity.

States A (developing country, upstream) and B (downstream) share an international watercourse. State A intends to increase the diversion of the flow of the river for its irrigation canals and informs state B of its plan. In its communication state A assures state B that the increase of the withdrawal will be negligible – only a very small percentage of the overall flow – but will bring huge benefits for state A's food security. In its reply state B argues that instead of wasting even more water in its ancient irrigation canals, state A should rather invest in drip irrigation systems or just buy the required amounts of food from state B. While state B acknowledges that the planned increased withdrawal of water is only marginal, it fears that 'giving in' every time A wants to use more water to feed its rapidly growing population, could interfere with state B's plans to extend its holiday resorts along the river.

While B is right in claiming that state A's plans to grow crops in additional areas is not the most efficient or beneficial use of the watercourse, the question whether the use is reasonable follows a different line of argument. The requirement of 'reasonableness' does not demand for the most economical use (here, using the most advanced irrigation technology), but rather follows the contemporary conception of rationality which takes country specific factors into account – e.g. the stage of development. Considering that the planned utilisation of the shared waters will most likely also be 'sustainable,' since state A took into account the long-term carrying capacity of the watercourse, the use might be deemed to be reasonable.

After establishing that the utilisation of the international watercourse is reasonable, states A and B have to debate whether it is also equitable. Here, again, the argument of state B does not hold, since it is unlikely that using the shared water resource for its envisaged upgrade of the tourism activities along the river bank will be deemed of higher value than state A's demand for irrigation. It would be advisable, however, for states A and B to design a long-term management plan for the whole basin where future needs of both states will be considered, and potentially win-win scenarios could be developed. Only then can further frictions between the riparians be avoided.

When looking at the operational aspects of the principle of equitable and reasonable utilisation – and especially while trying to reach an equitable (re) allocation of the water resource – one has to read Article 5 with both Articles 6 and 10 in mind (the former providing for a non-exhaustive list of factors which has to be considered and weighed when deciding whether a use is equitable and reasonable; and the latter for determining that no use of a transboundary watercourse has inherent priority).

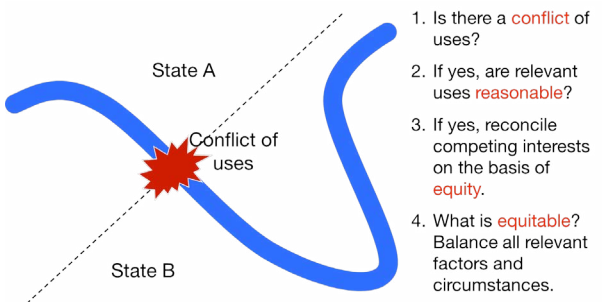


Figure 2.2 |
The Application of Equitable and Reasonable Use (Source Authors)

5.3 Additional reading

Allan A, 'The Role of Reasonableness in Assessing Equitable and Reasonable Use' (2009) 01/2009 Ympäristöjuridiikka 22.

Draft Articles on the Law of the Non-navigational Uses of International Watercourses, in Report of the International Law Commission on the Work of its Forty-Sixth Session, UNGAOR, 49th Sess, Supp (No. 10), UN Doc A/49/10 (1994) Art 5 at 96-100.

Fuentes X, 'Sustainable Development and the Equitable Utilisation of International Watercourses' (1999) 69 British Year Book of International Law 119.

Kaya I, Equitable Utilisation: The Law of Non-Navigational Uses of International Watercourses (Ashgate 2003).

Lipper J, 'Equitable Utilisation' in Garretson AH and others (eds.), The Law of International Drainage Basins (Oceana Publications 1967).

Rieu-Clarke A, International Law and Sustainable Development: Lessons from the Law of International Watercourses (IWA Publishing 2005), at 100-132.

Wouters P and others, Sharing Transboundary Waters: An Integrated Assessment of Equitable Entitlement: The Legal Assessment Model (UNESCO 2005).

Article 6 | Factors relevant to equitable and reasonable utilisation

Convention text

1. Utilisation of an international watercourse in an equitable and reasonable manner within the meaning of Article 5 requires taking into account all relevant factors and circumstances, including:

(a) Geographic, hydrographic, hydrological, climatic, ecological and other factors of a natural character;

(b) The social and economic needs of the watercourse states concerned;

(c) The population dependent on the watercourse in each watercourse state;

(d) The effects of the use or uses of the watercourses in one watercourse State on other watercourse states;

(e) Existing and potential uses of the watercourse;

(f) Conservation, protection, development and economy of use of the water resources of the watercourse and the costs of measures taken to that effect;

(g) The availability of alternatives, of comparable value, to a particular planned or existing use.

2. In the application of Article 5 or paragraph 1 of this article, watercourse states concerned shall, when the need arises, enter into consultations in a spirit of cooperation.

3. The weight to be given to each factor is to be determined by its importance in comparison with that of other relevant factors. In determining what is a reasonable and equitable use, all relevant factors are to be considered together and a conclusion reached on the basis of the whole.

6.1 Commentary

6.1.1 General

Since the principle of equitable and reasonable utilisation (see Article 5) is, necessarily, rather general and flexible, its implementation depends on the relevant factors and circumstances in each case. Article 6 (1) of the Convention provides a non-exhaustive list of those factors that should be considered in order to ensure that a state's use of an international watercourse is in line with the standard of the principle. The competing interests of states have to be balanced and weighted; taking into account all relevant factors and circumstances. Here, the list of Article 6 merely tries to help with the implementation of the principle of equitable and reasonable utilisation. It is neither intended to be exhaustive nor to give priority to any of the factors (see paragraph 3), since their respective importance may change from case to case.

Article 6 (2) foresees the possibility that a need arises for consultations between the riparian states. Several scenarios can trigger such a need – e.g. changing natural conditions causing a decrease of available high quality freshwater; or socio-economic changes causing an increase in demand. The wording 'in a spirit of cooperation' suggests that a request by one state to enter into consultations, triggered by changing conditions, should not be ignored by its co-riparians.[217]

217 1994 Draft Articles, Art 6 at 101, para 5.

6.1.2 Relevant factors matrix

The list of factors and circumstances to be taken into account when determining equitable and reasonable use can be divided into three broad categories: (1) factors of a natural character (hydrographic, hydrological, climatic, ecological, etc.); (2) economic and social ones (economic needs, population dependent on watercourse, effects of use on co-riparians, existing and potential uses, conservation measures, and availability of alternatives); and (3) environmental factors.

An interdisciplinary team of legal experts, economists and hydrologists, in association with the IHP-HELP Centre for Water Law, Policy and Science, developed the 'Relevant Factors Matrix' as the core of the 'Legal Assessment Model' (LAM).[218] Its aim is to support the implementation of the principle of equitable and reasonable utilisation by providing a methodology which can be used for identifying and considering all relevant factors in each specific case. The LAM follows four basic steps: (1) defining scope, (2) collection of data, (3) evaluation and (4) providing options for ensuring equitable and reasonable utilisation. It has been designed as a flexible tool applicable to both upstream and downstream countries and also to transboundary groundwater resources. This allows for its employment when developing national water plans where a state needs to manage its transboundary water resources; when legal guidance is required for data information and exchange agreements; for transboundary river basin studies; as a process for negotiating a freshwater agreement between states; or for facilitating dispute resolution mechanisms.

The Relevant Factors Matrix has been designed and developed on the basis of the two principal documents related to the law of international watercourses: the Helsinki Rules on the Uses of the Waters of International Rivers; and the Convention. However, the factors of the Relevant Factors Matrix differ from both sources in a number of ways, as they are grouped into six categories (See Figure 2.3).

218 See P Wouters and others, Sharing Transboundary Waters : An Integrated Assessment of Equitable Entitlement: The Legal Assessment Model (UNESCO 2005).

1 | What ?	Natural context, covering the physical or natural characteristics of the watercourse	Surface / groundwater Geographic Hydrological Climatic Environmental services
2 | Who ?	Details the population in the area dependent on the watercourse	Population (growth) Migration patterns Demography
3 | What uses ?	Identifies the demands on or the uses of the watercourse and the benefits related to such uses	Domestic Industrial Agricultural Recreational Cultural
4 | What impacts ?	Identifies the consequences of the uses, both within a nation and the effects of use in one state on others	Economic gains Social benefits Environmental degradation
5 | What options ?	Consideration of alternatives with comparable feasibility, practicability and cost-effectiveness	Different uses Different means Different sources
6 | Case specific	Reserved for additional factors that might be considered to be relevant in a particular situation	

Figure 2.3 |
Relevant Factors Matrix (Source Authors)

6.2 Application

Imagine a scenario where states A (upstream), B (midstream) and C (downstream) share a transboundary river with an annual inflow of 100 km3.

State A (population of 30 million) has a significant agricultural base, which supports its people, 50% who live below the poverty level and who depend upon subsistence farming. The average GDP is $50 per capita. The new President has just delivered a national Strategic Economic Reform Plan based on increasing significantly the irrigation across the country. The reform package is based on meeting the 'vital human needs' of the poverty-stricken population, many of whom do not have clean water or sanitation. State A contributes about 60 km3 to the flow of the river, and currently only uses 30 km3 for domestic uses, small industries and agriculture. While the return flow is quite considerable, the water is of diminished quality due to the high content of pesticides and nitrates resulting from heavy irrigation. Despite its agricultural base, State A is heavily reliant on food imports; which have proven to be a costly way of achieving food security. Just over 50 percent of the river basin is contained within the borders of state A. Under the reform package its demand for water will increase to 60 km3.

State B (population of 5 million; GDP of $150 per capita) uses the water of the transboundary river primarily for domestic and some highly profitable agricultural uses. The country is home to a significant area of wetlands which is connected to the watercourse and provides important ecological services. It contributes 10 km3 to flow of the river, uses about 10 km3 and is in dire need of another 10 km3 to sustainably support its endangered wetlands.

State C (population of 15 million; GDP of $400 per capita) is heavily industrialised and is planning to increase its hydropower production to serve the surging needs of its industry and rapidly growing population. It contributes 30 km3 to the shared watercourse, but uses 70 km3 and needs a further 20 km3 to fill its planned reservoir. Around 35 percent of the river basin is located in state C. While it has a considerable amount of coal plants supplying state C with energy, it still relies on (costly) electricity imports. One of state C's main points in any negotiation has always been that due to its early development of the river's water resources, it holds a historic right which will be put at risk by any development upstream affecting the transboundary watercourse.

It is obvious that the respective development plans of the three countries will lead to a conflict of uses. The three states now have to enter into consultations in a spirit of cooperation (Article 6(2)); and determine whether their (planned) uses are both equitable and reasonable. In doing so, all relevant factors have to be considered together and the watercourse states have to come to reach a conclusion on the basis of the whole (Article 6(3)).

Once the states have completed the exercise of assessing whether or not their existing or planned uses of the transboundary watercourse meet the criteria of equitable and reasonable utilisation, they are in a position where they can determine how to proceed with their respective national water policies and plans – including the transboundary water resources. The range of these options available to the three watercourse states is sufficiently wide; and the choice will depend on the particular outcome of the whole assessment. The following two scenarios only serve as examples, since 'real life cases' are most likely more complex and demand for more subtle considerations.

Scenario 1:
The use(s) meet(s) the criteria of equitable and reasonable utilisation

In this case the state may continue its use of the water resources on a 'business as usual' basis. It will not be legally obliged to undertake any actions vis-à-vis the other watercourse states. However, even in this situation it is suggested for the states sharing the watercourse to aim for a certain degree of cooperation – e.g. through the regular exchange of data and information. Existing use may continue provided that the co-riparian states agree (explicitly or implicitly) with the underlying assumption that it constitutes an equitable and reasonable utilisation.

Scenario 2:
The use(s) does (do) not meet the criteria of equitable and reasonable utilisation

If, like in the example at hand, the existing use of the water by the state in question is both 'inequitable' and in conflict with existing uses of co-riparians, the former is under a legal obligation to reduce its utilisation of the international watercourse. However, it has an option to enter into negotiations with the other states in order to come to an acceptable arrangement – e.g. payment of compensation for the use of water in excess of its equitable share. The refusal or unwillingness either to amend (i.e. reduce) the existing use or to enter into negotiations with a genuine view to achieve an equitable result may be interpreted as a breach of its international legal obligations.

6.3 Additional reading

Draft Articles on the Law of the Non-navigational Uses of International Watercourses, in Report of the International Law Commission on the Work of its Forty-Sixth Session, UNGAOR, 49th Sess, Supp (No. 10), UN Doc A/49/10 (1994) Art 6 at 101-102.

Fuentes X, 'The Criteria for the Equitable Utilisation of International Rivers' (1997) 67 British Year Book of International Law 337.

Kaya I, Equitable Utilisation: The Law of Non-Navigational Uses of International Watercourses (Ashgate 2003).

Wouters P and others, Sharing Transboundary Waters: An Integrated Assessment of Equitable Entitlement: The Legal Assessment Model (UNESCO 2005).

Wouters P, 'What Role for Law in Achieving Trans-boundary Drainage Basin Security? The Development and Testing of the Legal Assessment Model (LAM) for Transboundary Watercourse States' (2004) 49 Water Science and Technology 97.

Article 7 | Obligation Not to Cause Significant Harm

Convention text

1. Watercourse states shall, in utilising an international watercourse in their territories, take all appropriate measures to prevent the causing of significant harm to other watercourse states.

2. Where significant harm nevertheless is caused to another watercourse state, the states whose use causes such harm shall, in the absence of agreement to such use, take all appropriate measures, having due regard for the provisions of Articles 5 and 6, in consultation with the affected state, to eliminate or mitigate such harm and, where appropriate, to discuss the question of compensation.

7.1 Commentary

The obligation 'not to cause significant harm' also derives from the theory of limited territorial sovereignty. According to this principle, no states in an international watercourse are allowed to use the watercourses in their territory in such a way as to cause significant harm to other watercourse states or to their environment, including harm to human health or safety, to the use of the waters for beneficial purposes, or to the living organisms of the watercourse systems. This principle is widely recognised and incorporated not only in modern transboundary water agreements, but also in international environmental law. However, the question remains about the definition or extent of the word 'significant' and how to define 'harm' as a 'significant harm'. It is also important to note that, contrary to popular belief, in some cases 'harm' can be caused by a downstream state to its upstream riparian – i.e. by foreclosing the upstream state's future water uses through the prior utilisation of such water.'[219]

219 See SMA Salman, 'Downstream Riparians Can Also Harm Upstream Riparians: The Concept of Foreclosure of Future Uses' (2010) 35 Water International 350.

The evolution of the ‘no significant harm rule’

1938 Trail Smelter Case | ‘Good Neighbourliness’

[N]o state has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another […] when the case is of serious consequence and the injury is established by clear and convincing evidence.

1972 Stockholm Convention | Principle 21

States have […] the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other states or of areas beyond the limits of national jurisdiction.

1985 Vienna Convention for the Protection of the Ozone Layer | Article 2(1)

The parties shall take appropriate measures […] to protect human health and the environment against adverse effects resulting or likely to result from human activities which modify or are likely to modify the ozone layer.

1992 Biodiversity Convention | Article 3

States have […] the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other states or of areas beyond the limits of national jurisdiction.

1992 Rio Declaration | Principle 2

States have […] the sovereign right to exploit their own resources pursuant to their own environmental and developmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other states or of areas beyond the limits of national jurisdiction.

1992 UNECE Helsinki Convention | Article 2(1)

The Parties shall take all appropriate measures to prevent, control and reduce any transboundary impact.

1997 UN Watercourses Convention | Article 7(1)

Watercourse states shall, in utilising an international watercourse in their territories, take all appropriate measures to prevent the causing of significant harm to other watercourse States.

7.1.1 All appropriate measures

The prevention of significant harm is an obligation of conduct. Co-riparian states are under the obligation to take 'all appropriate measures' to ensure that activities conducted under their jurisdiction do not cause significant harm to the territory of other riparians. States must, for instance, provide prior notification and exchange information with regard to any planned measure that might significantly harm other transboundary watercourse states. This is in contrast to an obligation of result, where states have to reach a fixed goal – sometimes without specification on how to get there.

Taking 'all appropriate measures,' then, is an obligation of due diligence in utilisation: 'a diligence proportioned to the magnitude of the subject and to the dignity and strength of the power which is exercising it [...] and such care as governments ordinarily employ in their domestic concerns'.[220] The question which has to be answered here is one of duty of care: What would be expected of a reasonable government in similar circumstances – e.g. enacting necessary legislation; enforcing its laws; preventing or terminating an illegal activity; punishing the person responsible for it. Hence, a state can be deemed to have breached the obligation not to cause significant harm not only when it has intentionally or negligently caused the event itself, but also in case the state did not prevent others in its territory from causing it.[221] Some examples of types of measures that should be in place include: establishing water rights; protecting water quality for human and ecosystem uses; setting up a participatory water management structure; establishing a legal system which is coherent at all levels (local, national, international); and setting up the institutional machinery needed to enforce these laws.[222]

220 1994 Draft Articles, Art 7 at 103, para 4; referring to the The Geneva Arbitration (The Alabama Case) reported in Moore JB, History and Digest of the International Arbitrations to which the United States has been a Party, Vol I (1898) at 572-573, 612.

221 Ibid.

222 See A Iza and R Stein (eds), Rule : Reforming Water Governance (IUCN 2009).

7.1.2 Significant harm

The level of harm in order to qualify as 'significant' has to be higher than merely perceptible or trivial (which would be considered insignificant); but could be less than severe or substantial.[223] What constitutes 'harm' has to be more than just an 'adverse effect' – a real impairment of a use, with a detrimental impact of some consequence upon the environment or the socio-economic development of the harmed state (e.g. public health, industry, property, agriculture). Significant harm, then, has to be established by objective evidence and determined on a case by case basis.[224]

Since the allocation approach of 'limited territorial sovereignty' serves as the framework for the two main substantive principles of present international water law – 'equitable and reasonable utilisation' (Article 5) and 'significant (transboundary) harm' (Article 7) – the relationship between these rules has been the cause of extensive debates and the question which takes precedent is probably the most crucial one in the application of both Articles 5 and 7. Downstream states tend to favour the no harm rule, as it protects their existing uses from adverse effects caused by upstream developments; while upstream states tend to favour the principle of equitable and reasonable utilisation, as it allows for a broader use of the shared resource for developments that may impact co-riparians. [225] The UN Convention tries to avoid the potential difficulties between those two rules by affording the principle of equitable and reasonable utilisation priority (Article 5) while giving the no significant harm rule special status (Article 7 (1)). Pursuant to the Convention, and only in certain limited circumstances, taking measures to prevent significant harm may be inappropriate, or lead to an inequitable result, and some level of harm may therefore be tolerated (Article 7 (2)). The reference to Articles 5 and 6 support the UN Convention, states are therefore not legally responsible for causing significant harm if they can show that they have taken all appropriate measures to prevent such harm, and their use of an international watercourse is equitable and reasonable. Thus, the scope for a state to cause significant harm becomes limited. See also Article 20 with regard to the protection of ecosystems, and Article 10 relating to vital human needs, where the principle of preventing significant harm to other watercourse states is further limited.

The burden of proof for establishing that a particular use of an international watercourse is still equitable and reasonable lies with the state whose use of the watercourse is causing significant harm.[226] According to the ILC, '[t]he plaintiff state starts with the presumptive rule in its favour that every state is bound to use the waters of rivers flowing within its territory in such a manner as will not cause substantial injury to a co-riparian state. Having proved such substantial injury, the burden then will be upon the defendant state to establish an appropriate defence, except in those cases where damage results from extra-hazardous pollution and liability is strict. This burden falls on the defendant state by implication from its exclusive sovereign jurisdiction over waters flowing within its territory'.[227]

223 See, for example, Art 1 of the 2000 SADC Revised Protocol on Shared Watercourses

224 Wouters and others, Sharing Transboundary Waters : An Integrated Assessment of Equitable Entitlement: The Legal Assessment Model at 56.

225 D Freestone and SMA Salman, 'Ocean and Freshwater Resources' in Bodansky D, Brunnée J and Hey E (eds), The Oxford Handbook of International Environmental Law (Oxford University Press 2007) at 351.

226 Ibid.

227 1994 Draft Articles, Art 7 at 104, para 14.

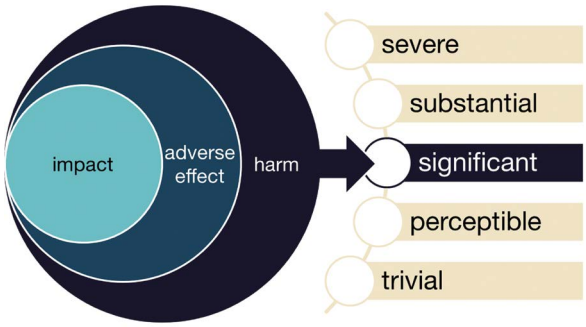


Figure 2.4 | Significant Harm (Source Authors)

7.2 Application

States A and B share a river forming the border between the two countries. While state A is considerably less economically developed than state B, the government of the former is pushing for new industrial projects along the river in order to catch up.

State A does not intend to limit pollutant discharges into the river to the sophisticated extent state B has been doing for decades. State B is therefore concerned that the planned expansion of the industrial activity will significantly harm the international watercourse. Without applying 'best available technologies' (BATs), the ecosystem will suffer unnecessary harm and the tourism industry in state B, which depends on the watercourses flora and fauna, will incur heavy losses. Hence, state B claims that state A is not taking all appropriate measures to prevent the significant harm.

Since state A still has to be considered a 'developing country,' state B cannot demand imposing the same level of environmental regulation on state A's industry. However, instead of simply demanding payment of compensation, which would be possible according to Article 7(2), a more promising way forward here would be to enter into an agreement regarding sharing of information and technological know-how in order to achieve a coherent management of the river in the best possible way for both states.

7.3 Additional reading

Bourne CB, 'The Primacy of the Principle of Equitable Utilisation in the 1997 Watercourses Convention' (1997) 35 Canadian Yearbook of International Law 215.

Draft Articles on the Law of the Non-navigational Uses of International Watercourses, in Report of the International Law Commission on the Work of its Forty-Sixth Session, UNGAOR, 49th Sess, Supp (No. 10), UN Doc A/49/10 (1994) Art 7 at 102-105.

Aguilar G and Iza A, Governance of Shared Waters: Legal and Institutional Issues (IUCN 2011) at 25-28.

McCaffrey SC, The Law of International Watercourses (2nd edn, Oxford University Press 2007) at 57-170, and 406-445.

McIntyre O, Environmental Protection of International Watercourses under International Law (Ashgate 2007) at 87-1120.

Rieu-Clarke A, International Law and Sustainable Development: Lessons from the Law of International Watercourses (IWA Publishing 2005) at 115-120.

Wegerich K and Olsson O, 'Late Developers and the Inequity of 'Equitable Utilisation' and the Harm of "Do No Harm"' (2010) 35 Water International 707.

Article 8 | General obligation to cooperate

Convention text

1. Watercourse states shall cooperate on the basis of sovereign equality, territorial integrity, mutual benefit and good faith in order to attain optimal utilisation and adequate protection of an international watercourse.
2. In determining the manner of such cooperation, watercourse states may consider the establishment of joint mechanisms or commissions, as deemed necessary by them, to facilitate cooperation on relevant measures and procedures in the light of experience gained through cooperation in existing joint mechanisms and commissions in various regions.

8.1 Commentary

8.1.1 General

International lawyers have been at odds over the issue of whether cooperation is indeed a binding legal obligation rather than a mere goal or a guideline for conduct. The questions arising are: Can one assert that states must (rather than should) cooperate; and can this obligation actually be imposed on states and legally enforced?[228] This is why the precise status of the duty to cooperate under customary international law has been questioned. While it links the principle of 'sovereignty over natural resources' and the 'no significant harm' rule – due to the need in practice to achieve a 'balance' of the two – and thus plays a vital role in international law, cooperation is too broad to qualify as a rule. It is, however, a logical extension of the principle of equitable and reasonable utilisation; and most states have concluded that cooperating with their co-riparians is ultimately more in their self-interest than proceeding unilaterally.

However, despite the general status of the duty to cooperate in international law, Article 8 of the UNWC presents cooperation as a legal obligation. Such a duty takes on meaning in specific contexts – e.g. working together with co-riparians to achieve an equitable allocation of the uses and benefits; entering into consultations and negotiations in good faith.[229] Failure to cooperate through the means set forth in the Convention could constitute an internationally wrongful act drawing the state's responsibility as a legal consequence. The importance of cooperation with regard to the equitable and reasonable utilisation of international watercourses has been repeatedly stressed in various studies, conventions and agreements.[230]

228 Wouters and others, Sharing Transboundary Waters : An Integrated Assessment of Equitable Entitlement: The Legal Assessment Model at 23.

229 See Part I, at 91-92.

230 See, e.g., 1944 USA-Mexico Water Treaty; 1964 Columbia Treaty between USA and Canada; 1960 Indus Waters Treaty (Articles VI–VIII); 1961 IDI Salzbug Resolution (Preamble); 1977 Mar del Plata Action Plan (Recommendation 90); 1979 IDI 1982 ILA Montreal Rules on Water Pollution in an International Drainage Basin (Article 5); 1995 Mekong River basin agreement (Articles 24 and 30); 2000 Revised SADC Protocol; 2002 Framework Agreement of the Sava River basin (Articles 3 and 4).

8.1.2 Sovereign equality

The Peace of Westphalia is generally regarded as the historical milestone paving the way for a new era of international relations based on the principles of sovereign independence and equality. This was made possible by the rise of the nation state in Europe which ultimately created a novel kind of society among equal (state) communities. [231]

Sovereign equality is one of the tenets of the international legal order, since it has to be regarded as the cornerstone of the rights and duties of states. It consists of two basic premises: (1) Jurisdiction over a territory and a permanent population living there; and (2) Non-intervention in the area of exclusive jurisdiction of another state.

From the concept of sovereign equality flows several other important principles (e.g. the right to independence and the ban on the use of force). It should also be noted that sovereign equality – as a legal concept – does not guarantee political and economic equality, since international law operates in an environment that is influenced by hegemonic power. However, sovereign equality can be described as 'equality of chances' of all states.

231 See J Kokott, 'States, Sovereign Equality' in Max Planck Encyclopaedia of Public International Law.

8.1.3 Territorial integrity

Article 2(4) of the UN Charter requires all member states to 'refrain in their international relations from the threat or use of force against the territorial integrity or political independence of any state, or in any other manner inconsistent with the purposes of the United Nations.' While the Charter does not define what it actually means by 'territorial integrity', it is now well recognised and reflects the fundamental international objective in the stability of boundaries.[232] In 1986, a chamber of the ICJ considered the principle as one of general international law.[233] This view was confirmed by the 'Badinter Commission' regarding the former Yugoslav republics, stating that 'whatever the circumstances, the right of self-determination must not involve changes to existing frontiers at the time of independence.' [234]

8.1.4 Mutual benefit

The principle of mutual benefit implies that cooperation should lead to 'win-win' outcomes whereby all states involved in cooperative activities gain from the interaction.

232 A Aust, Handbook of International Law (Cambridge University Press 2005) at 41.

233 Burkino Faso v Republic of Mali, ICJ Reports (1986), at 554; 80 ILR 459.

234 Opinion No. 2; ILM (1992) 1497; 92 ILR 167; referring to the internal boundaries of the former Republic of Yugoslavia.

8.1.5 The normative content of the duty to cooperate

The duty to cooperate contains the procedural duties of prior information and of prior consultation. It could be said that these procedural duties of cooperation seek to 'operationalise' Article 5 – 7 of the UN Watercourses Convention (equitable and reasonable utilisation and no significant harm). Article 8(1) therefore provides the basis for many of the procedural rights and obligations contained primarily in parts III-VI of the UN Watercourse Convention.

8.1.6 Joint institutions

Article 8 (2) suggests that the employment of joint mechanisms and institutions among the states of an international watercourse offer an important mechanism by which to facilitate cooperation amongst states.[235] Joint institutions are discussed further in part IV.[236]

235 I Kaya, Equitable Utilization : The Law of Non-Navigational Uses of International Watercourses (Ashgate 2003) at 126.
236 Pages 164-200.

8.2 Application

See case study under Section 18.3.

8.3 Additional reading

Benvenisti E and Hirsch M (eds.), The Impact of International Law on International Cooperation: Theoretical Perspectives (Cambridge University Press 2004).

Draft Articles on the Law of the Non-navigational Uses of International Watercourses, in Report of the International Law Commission on the Work of its Forty-Sixth Session, UNGAOR, 49th Sess, Supp (No. 10), UN Doc A/49/10 (1994) Art 8 at 105-107.

McIntyre O, 'The Proceduralisation and Growing Maturity of International Water Law' (2010) 22 Journal of Environmental Law 475.

Perrez FX, Cooperative Sovereignty: From Independence to Interdependence in the Structure of International Environmental Law (Kluwer Law International 2000).

Article 9 | Regular Exchange of Data and Information

Convention text

1. Pursuant to Article 8, watercourse states shall on a regular basis exchange readily available data and information on the condition of the watercourse, in particular that of a hydrological, meteorological, hydrogeological and ecological nature and related to the water quality as well as related forecasts.
2. If a watercourse state is requested by another watercourse state to provide data or information that is not readily available, it shall employ its best efforts to comply with the request but may condition its compliance upon payment by the requesting state of the reasonable costs of collecting and, where appropriate, processing such data or information.
3. Watercourse states shall employ their best efforts to collect and, where appropriate, to process data and information in a manner which facilitates its utilisation by the other watercourse states to which it is communicated.

9.1 Commentary

The obligation to regularly exchange data and information directly flows from the general obligation to cooperate in Article 8 of the Convention. The need for information exchange on the conditions of a transboundary watercourse is obvious, since, in most cases, it constitutes the first step in the process of cooperation between co-riparians in general, and in the determination of the relevant factors and circumstances pursuant to Article 6.[237] Thus, it is designed to ensure that all riparian states possess the facts necessary to enable them to utilise the transboundary watercourse in an equitable and reasonable manner. It is also necessary in order to enable co-riparians to take all appropriate actions for the fulfilment of the due diligence obligation not to cause significant harm (see Article 7). Furthermore, the collection and sharing of fundamental data is a precondition for the realisation of higher degrees of cooperation – especially where no joint body is in charge of this task. The obligation laid out here is also closely linked to Articles 11 and 12 on information and notification concerning planned measures.

In demanding a 'regular' exchange of data and information, this Article requires a continuous process following systematic procedures; which differs from the ad hoc provision of information concerning planned measures contained in Article 11 of the Convention.[238] The use of the term 'readily available' indicates that the legal obligation of a state is limited to the kind of data and information which is already at its disposal (e.g. has been collected for its own use) or is easily accessible.[239] Determining whether data is 'readily available' depends on evaluating the effort and cost its provision would entail taking into account the specific factors and circumstances of each case.

237 See above at 111

238 1994 ILC Draft Articles, Art 9 at 108, para 4.

239 See also the commentary to Article XXIX of the 1966 Helsinki Rules.

The data and information that have to be transmitted concern the 'condition of the watercourse.' The list of conditions in paragraph 1 – hydrological, meteorological, hydrogeological and ecological – is by no means exhaustive, as it rather serves as an illustration of potentially important kinds of data for achieving an equitable and reasonable utilisation.[240] Furthermore, data and information should not only relate to the current conditions, but could also include forecasts – e.g. changing weather patterns with long-term effect on present uses.

Article 9 (2) determines that a state which has been asked to provide data or information which is not readily available has to employ its 'best efforts to comply with the request' – i.e. act in good faith and in the spirit of the general obligation to cooperate. This implies, for example, not stalling for time with the transmission of the information; and not to overwhelm the requesting state with data which is not linked to the request.

While transboundary watercourse states are under no obligation to process the data and information they exchange, Article 9 (3) requires them to employ their best efforts to 'facilitate[s] its utilisation by the other watercourse state' – i.e. provide the data and information in a form which is usable for the receiving states.

240 1994 Draft Articles, Art 9 at 108, para 8.

9.2 Application

State A (upstream) and state B (downstream) share a transboundary river. Since they are in friendly relations with each other, both states have a long history of exchanging information regarding the management of the watercourse.

In an attempt to upgrade its system of dams, state B is demanding more detailed data on the flow of the river. So far, state A has only shared this kind of data by the quarter. State B has secured a loan from a development bank to upgrade its system of dams. Due to requirements determined by its lenders, state B needs flow data on a monthly basis.

State A argues that from its point of view the information currently shared is more than sufficient, as it satisfies the requirements for running its own dams. Furthermore, owing to financial constraints, it simply cannot increase the frequency of measures.

In its reply state B acknowledges that the information it seeks is not readily available to A, but claims that, according to Article 9(2) of the UNWC, state A has to do its utmost to comply with the request of exchanging more detailed data.

In the case at hand, the two states will have to come to an agreement where state B likely pays a reasonable amount of compensation for receiving the information requested, as state A will have to bear extra costs for the collection and processing of the data.

9.3 Additional reading

Allan A, 'The Role of a Water Accounting System in the Avoidance and Resolution of International Water Disputes' in Godfrey JM and Chalmers K (eds.), Water Accounting – International Approaches to Policy and Decision-Making (Edward Elgar 2012).

Bourne CB, 'Procedure in the Development of International Drainage Basins: Notice and Exchange of Information' in Wouters P (ed), International Water Law: Selected Writings of Professor Charles B Bourne (Kluwer Law International 1997).

Draft Articles on the Law of the Non-navigational Uses of International Watercourses, in Report of the International Law Commission on the Work of its Forty-Sixth Session, UNGAOR, 49th Sess, Supp (No. 10), UN Doc A/49/10 (1994) Art 9 at 107-109.

Gerlak A, Lautze J and Giordano M, 'Water Resources Data and Information Exchange in Transboundary Water Treaties' (2011) 11 International Environmental Agreements: Politics, Law and Economics 179.

McCaffrey SC, The Law of International Watercourses (2nd edn, Oxford University Press 2007).

Sadoff CW and others (eds.), Share: Managing Water across Boundaries (IUCN 2008).

Tanzi A and Arcari M, The United Nations Convention on the Law of International Watercourses: A Framework for Sharing (Kluwer Law International 2001).

Article 10 | Relationship Between Different Kinds of Uses

Convention text

1. In the absence of agreement or custom to the contrary, no use of an international watercourse enjoys inherent priority over other uses.
2. In the event of a conflict between uses of an international watercourse, it shall be resolved with reference to Articles 5 to 7, with special regard being given to the requirements of vital human needs.

10.1 Commentary

10.1.1 Vital human needs

Although, in the absence of agreement to the contrary, no use of an international watercourse has inherent priority over others, where a conflict over competing uses between riparians occurs, the terms of Articles 5-7 are to be applied, with 'special regard being given to the requirements of vital human needs.' The fundamental question arising with regard to Article 10 is: are minimum individual water requirements therefore protected under the Convention?

The UN Watercourses Convention was the first water-related agreement introducing the term 'vital human needs,' which has been defined as 'sufficient water to sustain human life, including both drinking water and water required for the production of food in order to prevent starvation.' Thus, it seems reasonable to assume that what is intended by using the term 'vital human needs' is to give special attention only to the most essential needs in order to prevent death from dehydration or starvation.[241] This represents a much narrower approach than the 2002 General Comment on the Right to Water attached to the 1966 UN International Covenant on Economic, Social and Cultural Rights, which uses the term 'personal and domestic uses' comprising drinking water, personal sanitation, washing of cloths, food preparations, and personal and household hygiene.[242]

241 1994 Draft Articles, Art 10 at 110, para 4.

242 UN Committee on Economic, Social and Cultural Rights, 'General Comment No. 15, The Right to Water, International Covenant on Economic, Social and Cultural Rights' (29th Session, 26 Nov 2002) UN Doc E/C 12/2002/11. The General Comment is an interpretive statement adopted by the Committee on Economic, Social and Cultural rights, an independent body of experts, which monitors the implementation of the International Covenant on Economic, Social and Cultural Rights. While general comments can therefore be described as 'non-legally binding', they may have significant influence in the interpretation of the provisions of existing legal agreements (see C Blake 'Normative Instruments in International Human Rights Law: Locating the General Comment', Centre for Human Rights and Global Justice Working Paper, 17 Nov 2008, available at <http://www.chrgj.org/publications/docs/wp/blake.pdf>, accessed 30 April 2012.

By using the term 'special regard' in Article 10 (2) it has to be presumed that water to meet vital human needs will almost certainly take precedence over other uses. While a contrary argument seems highly unlikely, the issue of quantifying the actual amount of water required per person per day is still contested and figures range between 50 and 100 litres per person per day as a minimum threshold for drinking water, sanitation and/or hygiene.[243]

The comparison with Article 14 of the 2004 ILA Berlin Rules is worthy of note. In the latter instrument the priority for vital human needs has been determined much stronger, as states, in determining an equitable and reasonable use, are under an obligation to 'first allocate waters to satisfy vital human needs.'[244] This wording leaves much less room for debate than the UN Watercourses Convention. However, in any case it will be difficult to see how some uses will be deemed 'equitable' if they impede the satisfaction of vital human needs. Possibly the only scenario where vital human needs may not take precedence within a particular watercourse is where it could be argued that those vital human needs could be satisfied by alternative supplies of water. Pursuant to the need to account for 'the availability of alternative' under Article 6 of the UN Watercourses Convention, a scenario may therefore exist where a state could satisfy vital human needs from a domestic water source, which was in close proximity to the international watercourse in question.

243 Gleick suggests 50 l/p/d; Falkenmark and Widstrand 100 l/p/d. See M Falkenmark and C Widstrand, 'Population and Water Resources: A Delicate Balance' (1992) 47 Population Bulletin 1; PH Gleick, 'Basic Water Requirements for Human Activities : Meeting Basic Needs' (1996) 21 Water International 83.

244 Art 14 (1) of the 2004 ILA Berlin Rules.

10.1.2 The human right to water

There are a number of global instruments related to human rights, including the 1948 Universal Declaration of Human Rights;[245] the 1966 International Covenant on Civil and Political Rights;[246] the 1966 International Covenant on Economic, Social and Cultural Rights (ICESCR);[247] the 1979 Convention on the Elimination of All Forms of Discrimination Against Women;[248] and the 1989 Convention on the Rights of the Child; [249] There are also regional human rights instruments which contain similar provisions. With regard to freshwater, two provisions of the ICESCR (Article 11 on the right to an adequate standard of living and Article 12 on the right to the highest attainable standard of physical and mental health) are the most relevant – recognising the right to water 'implicitly'; there are explicit references to water in Article 14 of the Convention on the Elimination of All Forms of Discrimination Against Women, and the Article 24 of the Convention on the Rights of the Child.

245 UN General Assembly, Universal Declaration of Human Rights, 10 December 1948, 217 A (III), available at <http://www.unhcr.org/refworld/docid/3ae6b3712c.html>,accessed 30 April 2012.

246 UN General Assembly, International Covenant on Civil and Political Rights, 16 December 1966 (entered into force 23 March 1976) UNTS Vol 999, at 171, available at <http://www2.ohchr.org/english/law/ccpr.htm> accessed 30 April 2012.

247 UN General Assembly, International Covenant on Economic, Social and Cultural Rights, 16 December 1966 (entered into force 3 January 1976) UNTS Vol 993, at 3, available at <http://www.unhcr.org/refworld/docid/3ae6b36c0.html> accessed 30 April 2012.

248 UN General Assembly, Convention on the Elimination of All Forms of Discrimination Against Women, 18 December 1979 (entered into force 3 September 1981), available at <http://www.un.org/womenwatch/daw/cedaw/text/econvention.htm#intro> accessed 30 April 2012.

249 UN General Assembly, Convention on the Rights of the Child, 20 November 1989 (entered into force 2 September 1990), available at <http://www2.ohchr.org/english/law/crc.htm> accessed 30 April 2012.

In 2002, the UN Committee on Economic, Social and Cultural Rights adopted the General Comment on the Right to Water in order to provide greater interpretative clarity as to the intent, meaning and content of the Covenant.[250] According to the General Comment the right to water 'entitles everyone to sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic uses.

An adequate amount of safe water is necessary to prevent death from dehydration, to reduce the risk of water-related disease and to provide for consumption, cooking, personal and domestic hygienic requirements.' [251] What is envisaged in the definition contained in the General Comment is arguably much broader than the interpretation of 'vital human needs' under Article 10 of the UN Watercourses Convention. This therefore begs the question whether the entitlement to water under the General Comment takes precedence in the context of international watercourses. Or in other words, is sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic uses always afforded priority when determining what is equitable and reasonable? In this regard, the General Comment observes that 'international cooperation requires states parties to refrain from actions that interfere with the enjoyment of the right to water in other countries'.[252] Additionally the General Comment explains that, 'any activities undertaken within the state party's jurisdiction should not deprive another country of the ability to realise the right to water for persons in its jurisdiction'.[253] Regardless of the nuances here, it would appear consistent with the principle of equitable and reasonable utilisation under Article 5 of the UN Watercourses Convention that water for personal and domestic uses takes priority over other uses, unless it can be argued that these needs can be satisfied from an alternative water source.

The legal recognition of a human right to water must be distinguished from the global effort to promote this recognition and develop the definition of the right to water under international law. This is due to the fact that no legal obligations derive from a political acknowledgement like, for instance, UN General Assembly resolutions. However, their resulting political pressure should not be underestimated. In 2006, a first step was taken in this process by the former United Nations Sub-commission on Human Rights, whose guidelines led to the United Nations Human Rights Council establishing an independent expert on the issue.[254] Eventually, 122 states formally acknowledged the 'right to water' in the UN General Assembly on 28 July 2010.[255] In September of the same year, the UN Human Rights Council adopted a resolution which recognises the human right to water and sanitation as being part of the right to an adequate standard of living.[256]

250 CESCR, General Comment No. 15, 2002, para 2, available at <http://www.unhchr.ch/tbs/doc.nsf/0/a5458d1d1bbd713fc1256cc400389e94?Opendocument> accessed 30 April 2012.

251 Ibid.

252 Ibid, para 31.

253 Ibid, para 57.

254 UN Sub-Commission on the Promotion and Protection of Human Rights, Sub-commission guidelines on the realisation of the right to drinking water and sanitation, Report of the Special Rapporteur El Hadji Guissé, UN Doc E/CN.4/Sub.2/2005/25, 2006, available at <http://www2.ohchr.org/english/issues/water/docs/SUb_Com_Guisse_guidelines.pdf> accessed 30 April 2012.

255 UNGA resolution (Ref. A/64/L.63/Rev.1) available at <http://ods-dds-ny.un.org>, accessed 30 April 2012.

256 Office of the United Nations High Commissioner for Human Rights (OHCHR), 'UN united to make the right to water and sanitation legally binding' (1 October 2010) available at <http://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=10403&LangID=E> accessed 30 April 2012.

10.2 Application

10.2.1 Unsustainable scenario

State A (upstream) and state B (downstream) share an international watercourse which is heavily polluted due to the exploitation of the water resources for the industrial needs of both countries. In a push to achieve food self-sufficiency, state A is planning to extract a considerable amount of the (less polluted) river's headwater for agricultural use outside the basin.

State B immediately complains about the planned withdrawal and water transfer, arguing that this will cause increased pollution of the river, leading to a complete collapse of the river system. This in turn would make the little remaining biodiversity along the watercourse disappear. State A argues that all uses have to be regarded as equal – and that the already highly modified river is only good enough for economic exploitation. The maintenance of environmental services would be too costly, since both states have chosen the path of maximising the economic benefit of the river.

While state A is right in arguing that according to the Convention no use enjoys inherent priority, the sustainability of a watercourse will always be protected. The tipping point where the river's ecosystem will be irreversibly destroyed has to be avoided at all costs. Rather than focusing on short term benefits states A and B have to think about how to collaborate in order to manage the watercourse more sustainably - i.e. imposing higher environmental standards on their industries utilising the river's water. See also Part IV of the Convention – Protection, Preservation and Management.

10.2.2 Protection vital human needs scenario

State A (upstream) wishes to develop its hydropower potential by constructing a series of dams in the upper reaches of an international river it shares with its downstream neighbour, state B. Out of all the dam sites along the course of the river, the proposed sites in the upper reaches of state A are considered the most efficient and effective for maximising the benefits of hydropower while minimising the impact. State B claims that such uses are inequitable as a number of downstream communities will be affected by the change in use of the river. These communities rely on the river for their basic human needs, including drinking water and significant fisheries. However, the communities in State B have alternative sources of domestic groundwater that are situated exclusively within the territory of State B and are easily accessible. In such a scenario it might be argued that the development of hydropower in state A takes precedence as the vital human needs can be satisfied from an alternative source.

10.3 Additional reading

Björklund G and Sjödin J, 'The Human Right to Water and Sanitation: Securing Access to Water for Basic Needs' (2009) 8 Swedish Water House Policy Brief.

Bourquain K, Freshwater Access from a Human Rights Perspective: A Challenge to International Water and Human Rights Law (Martinus Nijhoff Publishers 2008).

Bulto TS, The Emergence of the Human Right to Water in International Human Rights Law: Invention or Discovery? (2011).

Draft Articles on the Law of the Non-navigational Uses of International Watercourses, in Report of the International Law Commission on the Work of its Forty-Sixth Session, UNGAOR, 49th Sess, Supp (No. 10), UN Doc A/49/10 (1994) Art 10 at 109-110.

International Covenant on Civil and Political Rights, UNGA Res 2200A (XXI), 21 UNGAOR Supp (No. 16) at 52, UN Doc A/6316 (1966), 999 UNTS 171 (entered into force 23 Mar 1976).

International Covenant on Economic, Social and Cultural Rights, UNGA Res 2200A (XXI), 21 UNGAOR Supp (No. 16) at 49, UN Doc A/6316 (1966), 993 UNTS 3 (entered into force 3 Jan 1976).

Khadka AK, 'The Emergence of Water as a 'Human Right' on the World Stage: Challenges and Opportunities' (2010) 26 International Journal of Water Resources Development 37.

McCaffrey SC and Neville KJ, 'Small Capacity and Big Responsibilities: Financial and Legal Implications of a Human Right to Water for Developing Countries' (2009) 21 Georgetown International Environmental Law Review 679.

Tanzi A, 'Reducing the Gap between International Water Law and Human Rights Law: The UNECE Protocol on Water and Health' (2010) 12 International Community Law Review 267.

UN Committee on Economic, Social and Cultural Rights, 'General Comment No. 15, The Right to Water, International Covenant on Economic, Social and Cultural Rights' (29th Session, 26 Nov 2002) UN Doc E/C 12/2002/11.

Universal Declaration on Human Rights, UNGA Res 217A (III) (10 Dec 1948) UN Doc A/810.

Part III | Planned Measures (Articles 11-19)

Key points

- The procedural requirements of this section are of particular importance with regard to the effective implementation of the substantive requirements of the Convention, and Articles 5 – 7 in particular.
- Each riparian state to an international watercourse is entitled to prior notification, consultation and (in some cases) negotiation where the proposed use by a co-riparian may cause serious harm to its rights or interest.
- Many of the rights and obligations stated in this section can be considered as a manifestation of the general right to cooperate (see Article 8) with regard to planned measures affecting international watercourses.
- While some of these principles are generally accepted as customary international law, their interpretation as to when and how exactly to notify is often the centre of the debate in a dispute.
- The exchange of information and data on all affairs relating to an international watercourse is essential for solid planning of the development of any area of the basin; knowing all the relevant facts; and also learning about any planned measures which may affect them as early as possible.
- The following procedural rules foster, and in some cases even kick-start, cooperation between states; since the notifying state often benefits as much as the notified state from the exchange of data and information.
- The legal effect of a breach of the duty to notify can be deduced from general principles of international law, e.g. a state might be liable under the principles of international tort law for the damage caused to co-riparians by its failure to transmit relevant data and information.
- Failure to inform the other watercourse state(s) of planned measures presents a factor to be taken into account in future debates about the rights of co-basin states under the principle of equitable and reasonable utilisation.

Article 11 | Information Concerning Planned Measures

Convention text

Watercourse states shall exchange information and consult each other and, if necessary, negotiate on the possible effects of planned measures on the condition of an international watercourse.

11.1 Commentary

Article 11 of the UN Watercourses Convention serves as a bridge to the more general substantive norms, such as those rights and obligations described above in Part II, and the procedural aspects of Part III which deal with the provision of information and the consultation process regarding planned measures. Part III postulates a general obligation of watercourse states to provide their co-riparians with information concerning the possible effects that planned measures might have on the condition of an international watercourse. Furthermore, the article requires watercourse states to consult with each other, and if necessary to negotiate, on the effects of such measures.

The general rule of prior notification has reached the status of a customary international legal obligation; being applicable regardless of whether a special agreement between the initiating and the potentially affected states exists.[257] This explains the use of the word 'shall' – being mandatory – rather than following the mere recommendatory approach of the 1966 Helsinki Rules.[258] However, it should be noted that, subject to compliance with the procedural and substantive obligations of the Convention, states do not necessarily have a veto right over the development of an international watercourse.[259]

257 Wouters and others, Sharing Transboundary Waters : An Integrated Assessment of Equitable Entitlement: The Legal Assessment Model at 24.

258 Article XXIX (1) of the 1966 Helsinki Rules: 'With a view to preventing disputes from arising between basin States as to their legal rights or other interests, it is recommended that each basin State furnish relevant and reasonably available information to the other basin states concerning the waters of a drainage basin within its territory and its use of, and activities with respect to such waters.'

259 S Vinogradov, P Wouters and P Jones, Transforming Potential Conflict into Cooperation Potential: The Role of International Water Law (UNESCO 2003) at 19.

11.1.1 Possible effects

According to the commentary to the 1994 ILC Draft Articles, the expression 'possible effects' comprises all potential effects of planned measures – both positive and negative.[260] Hence, Article 11 goes further than the subsequent articles of Part III, which concern planned measures that may have a 'significant adverse effect' upon other watercourse states. Here, the more general wording takes into account that watercourse states have an interest in being informed of both potential adverse or beneficial effects of planned measures; leading to a reduction of risks and an increased planning security for the whole basin. Moreover, the requirement for the exchange of information and consultation with regard to all possible effects avoids the issues involved in the unilateral assessment of the actual nature of the potential impacts. This approach has been followed by other international legal instruments, e.g. Article 7 of the 1933 Declaration of Montevideo.[261]

260 1994 Draft Articles, Art 11 at 111, para 3.

261 Declaration of the Seventh Pan-American Conference on the Industrial and Agricultural Use of International Rivers adopted at Montevideo, 24 December 1933, in (1934) 28 American Journal of International Law, supplement at 59-60.

11.1.2 Planned measures

The term 'measures' has to be interpreted rather broadly and includes any new (major or minor) projects or programmes, as well as changes in existing uses of an international watercourse.[262] Such measures might therefore include hydropower developments, river regulation, deforestation adjacent to an international watercourse, establishment of industrial plants likely to affect the quality or quantity of a river, and so forth.

262 1994 Draft Articles, Art 11 at 111, para 4.

11.1.3 The necessity to negotiate

In cases where the notification confirms the existence of a conflict of interest(s) between the riparian countries, or if a state potentially affected by a planned measure files a request, consultation and negotiation are consequential (See Articles 17 and 33).

It has to be remembered, though, that international law does not require reaching an agreement between the parties regarding a planned measure. However, the negotiation process demands that all interests which may be affected by the measure have to be considered by the parties, even if they do not constitute a legal right. This follows the rules of 'good faith,' demanding the planning state to seek to give all the interests in play 'every satisfaction compatible with the pursuit of its own interests and to show that it has, in this matter, a real desire to reconcile the interests of the other riparian with its own.'[263]

263 Paragraph 22(3) of the Lac Lanoux Award; see Lac Lanoux Arbitration (France v Spain), 1957, 24 International Law Reports 101 (1957).

11.2 Application

States A (upstream), B (midstream) and C (downstream) share a transboundary watercourse which is prone to flooding. In recent years, the socio-economic damage caused by the floods has increased dramatically – mainly due to the swelling of the urban areas close to the river banks. While both states B and C experience these large scale natural disasters, state B is being hit the hardest, since its population is growing much faster.

After trying to minimise the flood risk by means of planting vegetation to retain water and the construction of smaller floodways, state B decides to construct a reservoir which can hold the extra water during times of flooding. In addition, the dam is supposed to produce hydropower to quench the ever-growing thirst for energy in state B.

State C has only learned about the planned project from the media, and now claims state B should have provided information regarding the dam and entered into consultation with states A and C according to Art 11 of the UNWC. State B rejects the claim, stating that the dam will not have any impact on state A; and would only positively affect state C, since it drastically reduces the risk of damages from floods for both countries by storing water in the rainy season while it also increases the flow in the dry period.

In this case, the line of argument of state B does not hold. While it is true that the planned measure will (almost certainly) only have positive impacts for the downstream state C, state B still has to exchange information with the other watercourse states. This is due to the fact that Article 11 has been drafted as a general obligation which comes into play even if the effects are solely beneficial. The idea is to provide for basin wide risk reduction and planning security.

11.3 Additional reading

1992 UNECE Convention on the Protection and Use of Transboundary Watercourses, 17 March 1992 (entered into force 6 October 1996) Arts 9-19.

2000 SADC Revised Protocol on Shared Watercourse Systems, Aug. 7, 2000, Arts 4, 5.

2004 ILA Berlin Rules on Water Resources, Chapter XI.
Bourne CB, 'Procedure in the Development of International Drainage Basins: Notice and Exchange of Information' in Wouters P (ed), International Water Law: Selected Writings of Professor Charles B Bourne (Kluwer Law International 1997).

Helsinki Rules on the Uses of the Waters of International Rivers (including commentaries), International Law Association, adopted at 52nd Conference, Helsinki, 1966, Art XXIX.

Lake Lanoux Arbitration (France v Spain) (16 November 1957) 24 International Law Reports 101 (1957).
Projects on International Waterways, World Bank Operational Manual OP 7.5, June 2001.

Projects on International Waterways, World Bank Operational Manual BP 7.5, June 2001.

Vinogradov S, Wouters P and Jones P, Transforming Potential Conflict into Cooperation Potential: The Role of International Water Law (UNESCO 2003) at 54-61.

Article 12 | Notification Concerning Planned Measures with Possible Adverse Effects

Convention text

Before 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 of any environmental impact assessment, in order to enable the notified states to evaluate the possible effects of the planned measures.

12.1 Commentary

The requirement of notifying on planned measures is embodied in numerous international agreements,[264] declarations and resolutions,[265] decisions of courts and tribunals,[266] and studies by intergovernmental and non-governmental organisations. The widespread support of the principle reveals the importance that states and expert institutions attach to the issues of prior notification on planned measures.

264 Examples of treaties include: Art XI of the Additional Act of 26 May 1866 to the Boundary Treaties of 2 December 1856, 14 April 1862 and 26 May 1866 (ratified on 12 July 1866) reprinted in 24 International Law Reports (1961) 102-105; Art 4 of the Convention of 25 May 1954 between Yugoslavia and Austria concerning water economy questions relating to the Drava (entered into force on 15 January 1955) UNTS, vol. 227, p. 111; Art VII (2) of the 1960 Indus Waters Treaty; Art XXIX of the 1966 ILA Helsinki Rules; Art 4 of the 1972 Convention relating to the status of the Senegal River; Arts 7-12 of the 1975 Statute of the Uruguay River, reprinted in Actos Internacionales, Uruguay-Argentina, 1830-1980 (1981) at 593.

265 See, for example, Recommendation 51 of the Action Plan for the Human Environment adopted by the United Nations Conference on the Human Environment in 1972: "Nations agree that when major water resource activities are contemplated that may have a significant environmental effect on another country, the other country should be notified well in advance of the activity envisaged." Reprinted in United Nations publication, Sales No. E.73.II.A.14 and corrigendum, part one, chap. II.B; Declaration of Montevideo, adopted by the Seventh International Conference of American States, First Supplement 1933-1940 (1940) at 109; Recommendation C(74)224 adopted by the Council of OECD on 14 November 1974 (OECD, OECD and the Environment (Paris, 1986)), p. 142; Report of the United Nations Water Conference, Mar del Plata, 14-25 March 1977 (United Nations publication, Sales No. E.77.II.A.12), part one, chap. I., pp. 51-52, especially Recommendation 86 (g); Principles 6, 7 of the Draft principles of conduct in the field of the environment for the guidance of States in the conservation and harmonious utilisation of natural resources shared by two or more states (adopted by the Governing Council of UNEP in 1978) available at <http://www.unep.org/training/programmes/Instructor%20Version/Part_2/Activities/Interest_Groups/Decision-Making/Supplemental/Enviro_Law_Guidelines_Principles_rev2.pdf> accessed 30 April 2012.

266 See 1957 Lac Lanoux Arbitration; 1997 Gabcíkovo-Nagymaros Case; 2010 Pulp Mills Case.

12.1.1 Significant adverse effect

Article 12 of the UN Watercourses Convention is the first in a series of articles on planned measures which may have a significant adverse effect upon other watercourse states. The threshold which triggers this procedural framework provided for in Articles 12 to 19(see Figure 3.1) – the possibility of having a 'significant adverse effect' upon other watercourse states – is lower than that of 'significant harm' laid out in Article 7. The reason for setting a lower standard than the one of 'significant harm' was to avoid the situation where a notifying watercourse state would automatically be put in the position of admitting that a planned measure may cause significant harm to its co-riparians.

12.1.2 Implements or permits the implementation

The choice of the expression 'implements or permits the implementation,' clarifies that Article 12 covers both measures planned by the state and by private entities.[267] 'Permit' has to be defined rather broadly – encompassing allowances and authorisations. Hence, when a private entity is planning a measure, the watercourse state where the measure is to be carried out is under an obligation to withhold authorisation before notifying its co-riparians.[268] The same interpretation has to be applied in subsequent articles regarding the 'implementation' of planned measures.[269]

267 1994 Draft Articles, Art 12 at 111, para 3.
268 Ibid.
269 See Arts 15 (2); 16 (1); and 19 (1).

12.1.3 Timely

The requirement of 'timely' notification is intended to allow for a thorough evaluation of the possible effects by the co-riparian states at an early stage in the planning process; and thus provide the basis for meaningful consultations and negotiations in case they are deemed necessary (see Article 17). This view has recently been shared by the ICJ in the Pulp Mills Case, where the Court stated in its judgement that notification should have taken place at a very early stage prior to the authorisation of the project on the Uruguay River.[270] Arguing in line with the due diligence requirements of the obligation not to cause significant (transboundary) harm, the Court rejected Uruguay's reasoning that 'the requirement to inform […] cannot occur in the very early stages of planning, because there would not be sufficient information available to the Commission for it to determine whether or not the plan might cause significant damage to the other state' and also denied that the point in time when the required information would be available 'may even be after the state concerned has granted an initial environmental authorisation'.[271] In its judgement the ICJ also distinguished between the duty to inform and a subsequent (and more extensive) duty to notify – as required by the treaty relevant in the case [272] – and concluded that Uruguay had to 'inform CARU [Administrative Commission of the River Uruguay] as soon as it is in possession of a plan which is sufficiently developed to enable CARU to make the preliminary assessment', even though 'the information provided will not necessarily consist of a full assessment of the environmental impact of the project'.[273]

270 Pulp Mills Case Judgement, para 99.
271 Ibid para 100.
272 Ibid para 104.
273 Ibid para 105 referring to Art 7 of the 1975 Statute.

12.1.4 Available technical data and information

The reference to 'available' technical data and information indicates that the state planning a measure is under no general obligation to conduct additional research at the request of a potentially affected watercourse state. It has to provide only the relevant data and information which has been gathered with regard to the planned measures and is readily accessible (see also Article 9 – Regular exchange of data and information). In case a state which has been notified requests data or information that is not readily available, but is accessible only to the notifying state, it is deemed appropriate for the former to cover the expenses incurred in producing the additional material.[274] However, as laid out in Article 31, the notifying state is not required to submit any data or information which is vital to its national defence or security.

274 1994 Draft Articles, Art 12 at 112, para 5.

12.1.5 Environmental impact assessment

Environmental impact assessment (EIA) is an important element of the planning process by which environmental considerations are integrated into decision-making procedures for measures that may have adverse (environmental) effects.[275] The overall aim of an EIA is to provide a basis by which to come to an informed decision through a thorough analysis of anticipated environmental impacts – revealing the main risks of the project and providing pathways for modifications of the plan to mitigate adverse (environmental) effects. The development of an EIA has been encouraged or demanded by various international instruments.[276] While the UN Watercourses Convention does not directly require the planning state to carry out an EIA, it nevertheless suggests that if a state which might be affected by the planned measure asks the planning state to provide an EIA, the latter would have to comply with this request if the former bears the costs.[277] Additionally, it could be maintained that the assessment and evaluation of possible environmental impacts of a new project on a transboundary watercourse is an inherent prerequisite for complying with the customary obligation not to cause significant transboundary harm[278] (see Article 7). The International Court of Justice (ICJ) supports this view in its judgement of the Pulp Mills Case by linking the interstate notification of planned measures to the satisfaction of the due diligence obligation to prevent significant transboundary harm. It established that EIA 'may now be considered a requirement under general international law' with regard to activities which 'may have a significant adverse impact in a transboundary context.[279]' The importance here is the argument of the court that the duty to notify, linked with the duty to conduct an EIA, exists in customary international law. Hence, it applies to all states – irrespective of the existence of such obligations in the relevant transboundary water agreements.[280] However, due to the fact that this obligation is rather open and imprecise, it leaves considerable room for debate as to which elements to include in an EIA.[281] An example of an international agreement which provides further information can be seen in the UNECE Convention on Environmental Impact Assessment in a Transboundary Context.[282]

275 DA Wirth, 'Hazardous Substances and Activities' in Bodansky D, Brunnée J and Hey E (eds), The Oxford Handbook of International Environmental Law (Oxford University Press 2007) at 420.

276 See, for example, 1991 UNECE Convention on Environmental Impact Assessment in a Transboundary Context (Espoo Convention); Article 8 of the 1997 IAEA Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management available at <http://www.iaea.org/Publications/Documents/Infcircs/1997/infcirc546.pdf> accessed 30 April 2012.

277 FX Perrez, Cooperative Sovereignty : From Independence to Interdependence in the Structure of International Environmental Law (Kluwer Law International 2000) at 308.

278 See O McIntyre, 'The World Court's Ongoing Contribution to International Water Law: The Pulp Mills Case between Argentina and Uruguay' (2011) 4 Water Alternatives 124.

279 Pulp Mills Case Judgement, para 204.

280 McIntyre, 'The World Court's Ongoing Contribution to International Water Law: The Pulp Mills Case between Argentina and Uruguay' at 124.

281 Perrez, Cooperative Sovereignty : From Independence to Interdependence in the Structure of International Environmental Law at 309.

282 Convention on Environmental Impact Assessment in a Transboundary Context (adopted 25 February 1991, entered into force 10 September 1997), available at <http://www.unece.org/env/eia/eia.html> accessed 30 April 2012.

12.2 Additional reading

Draft Articles on the Law of the Non-navigational Uses of International Watercourses, in Report of the International Law Commission on the Work of its Forty-Sixth Session, UNGAOR, 49th Sess, Supp (No. 10), UN Doc A/49/10 (1994) Art 12 at 111-113.

McCaffrey SC, The Law of International Watercourses (2nd edn, Oxford University Press 2007).

McIntyre O, 'The World Court's Ongoing Contribution to International Water Law: The Pulp Mills Case between Argentina and Uruguay' (2011) 4 Water Alternatives 124.

Rieu-Clarke A and Gooch G, 'Governing the Tributaries of the Mekong: The Contribution of International Law and Institutions to Enhancing Equitable Cooperation over the Sesan' (2010) 22 Pacific McGeorge Global Business & Development Law Journal 193.

Tanzi A and Arcari M, The United Nations Convention on the Law of International Watercourses: A Framework for Sharing (Kluwer Law International 2001).

Third Report on the Law of the Non-navigational Uses of International Watercourses, by Mr. Stephen C. McCaffrey, Special Rapporteur, in the Yearbook of the International Law Commission 1987, Vol II (Part 1) 15-46, document A/CN.4/406 and Corr.1 and Add.1 & 2.

Article 13 | Period for Reply to Notification

Convention text

Unless otherwise agreed:

(a) A watercourse state providing a notification under Article 12 shall allow the notified states a period of six months within which to study and evaluate the possible effects of the planned measures and to communicate the findings to it;

(b) This period shall, at the request of a notified state for which the evaluation of the planned measures poses special difficulty, be extended for a period of six months.

13.1 Commentary

The provisions of the previous Article on notification have two effects. Firstly, the period for reply to the notification starts to run (this Article); secondly, it imposes obligations specified under Article 14 on the notifying state.

Subparagraph (a) of Article 13 provides the notified state(s) with a period of six months for the study and evaluation of the possible effects of the planned measures. Its subparagraph (b) recognises that specific circumstances may cause the notified state to require additional time to reply. A state which has been notified and then seeks such an extension must cite the 'special difficulty' by which to justify the request.

During the period for reply to notification, Article 14 requires that the notifying state, inter alia, does not proceed with the implementation of its plans without the consent of the notified state. In any event, paragraph 1 of Article 15 requires the notified state to reply as early as possible, on the basis of good faith, and in the interest of the notifying state proceeding with its plans. Of course, the notified state may reply after the stipulated period has elapsed, but such a reply could not operate to prevent the notifying state from proceeding with the implementation of its plans, in view of the provisions of Article 16. The latter article allows the notifying state to proceed to implementation if it receives no reply within the six month period.

In drafting the UN Watercourses Convention, the ILC considered the option of using a general standard for the determination of the time given for the reply, such as 'a reasonable period of time' or 'timely' (see, for example, Article 12) rather than the fixed period.[283] However, the ILC came to the conclusion that the six month period would ultimately be in the interests

283 1994 Draft Articles at 114, Article 13, para 3; see also Art 8 of the 1975 Statute of the Uruguay River (Actos Internacionales, Uruguay-Argentina, 1830-1980 (1981) 593; stipulating a six month period.

of both the state planning the measure and its co-riparian(s). While a general standard would obviously be more flexible and allow for adaptation in different situations, its intrinsic uncertainty could lead to additional debates between the watercourse states.[284] In acknowledging the need for watercourse states to agree upon a period of time that is appropriate to the respective case, the opening clause of Article 13 – 'unless otherwise agreed' – intends to encourage states to agree upon an appropriate period themselves in cases where a six month period is deemed unfeasible. Hence, the initial period for reply as well as the possible extension only applies in the absence of a specific agreement between the states concerned dealing with this matter.

284 1994 Draft Articles at 114, Article 13, para 3.

13.2 Additional reading

Draft Articles on the Law of the Non-navigational Uses of International Watercourses, in Report of the International Law Commission on the Work of its Forty-Sixth Session, UNGAOR, 49th Sess, Supp (No. 10), UN Doc A/49/10 (1994) Art 13 at 113-114.

McCaffrey SC, The Law of International Watercourses (2nd edn, Oxford University Press 2007).

Tanzi A and Arcari M, The United Nations Convention on the Law of International Watercourses: A Framework for Sharing (Kluwer Law International 2001).

Third Report on the Law of the Non-navigational Uses of International Watercourses, by Mr. Stephen C. McCaffrey, Special Rapporteur, in the Yearbook of the International Law Commission 1987, Vol II (Part 1) 15-46, document A/CN.4/406 and Corr.1 and Add.1 & 2.

Article 14 | Obligations of the Notifying State During the Period for Reply

Convention text

During the period referred to in Article 13, the notifying state:

(a) Shall cooperate with the notified states by providing them, on request, with any additional data and information that is available and necessary for an accurate evaluation; and

(b) Shall not implement or permit the implementation of the planned measures without the consent of the notified states.

14.1 Commentary

Article 14 deals with the obligations of the notifying state during the period for reply (see 13). These are twofold: (1) an obligation of cooperation, which includes a duty to provide the notified states (at their request) 'with any additional data and information that is available and necessary for an accurate evaluation' of the possible impacts of the planned measures; and (2) that at least during the period of notification and consultation set out in Article 13, there is an obligation not to 'implement or permit the implementation of the planned measures without the consent of the notified states.' The obvious reason for the second obligation imposed by Article 14 is to help with the compliance of the general principle of equitable and reasonable utilisation. If the notifying state was to proceed with the planned project before the notified state has an opportunity to assess the potential impacts of the measures (and informs the notifying state of its findings), the notifying state would most certainly not be in a position - due to a lack of sufficient information - to determine whether it was in compliance with Articles 5 to 7.[285] For the interpretation of the terms 'available' and 'implement or permit the implementation' see sections 12.1.4 and 12.1.2 respectively.

285 Ibid.

14.2 Additional reading

Draft Articles on the Law of the Non-navigational Uses of International Watercourses, in Report of the International Law Commission on the Work of its Forty-Sixth Session, UNGAOR, 49th Sess, Supp (No. 10), UN Doc A/49/10 (1994) Art 14 at 114.

McCaffrey SC, The Law of International Watercourses (2nd edn, Oxford University Press 2007).

Tanzi A and Arcari M, The United Nations Convention on the Law of International Watercourses: A Framework for Sharing (Kluwer Law International 2001).

Third Report on the Law of the Non-navigational Uses of International Watercourses, by Mr. Stephen C. McCaffrey, Special Rapporteur, in the Yearbook of the International Law Commission 1987, Vol II (Part 1) 15-46, document A/CN.4/406 and Corr.1 and Add.1 & 2.

Article 15 | Reply to Notification

Convention text

The notified states shall communicate their findings to the notifying state as early as possible within the period applicable pursuant to Article 13. If a notified state finds that implementation of the planned measures would be inconsistent with the provisions of Articles 5 or 7, it shall attach to its finding a documented explanation setting forth the reasons for the finding.

15.1 Commentary

Article 15 deals with the obligations of the notified state(s) regarding their response to a notification of planned measures (see Article 12). Notified states are accordingly obliged to communicate their findings concerning possible effects of the planned measures to the latter 'as early as possible' – within the period provided for in Article 13. The requirement to inform the notifying state immediately of their findings can be considered as an extension of the principle of good faith (see Glossary of Terms) since it tries to, firstly, avoid any unnecessary delay of the project in case the findings conclude that the planned measures are consistent with Articles 5 and 7. Secondly, it provides a trigger for the consultation and negotiation process (see Article 17) as soon as possible, in case the findings suggest non-compliance with the principle of equitable and reasonable utilisation.

In case a notified state 'finds that implementation of the planned measures would be inconsistent with the provisions of Articles 5 or 7', it has to provide a 'documented explanation' of its reasoning. Hence, it must support its reply with an indication of the factual or other bases of its findings and clearly lay out the reasons for its conclusion that the implementation of the planned measures would constitute a violation of Articles 5 or 7. The 1975 Statute of the Uruguay River provides a similar requirement by stating that the communication of the notified party 'shall state which aspects of the works or of the mode of operation may cause appreciable harm to […] the regime of the river or the quality of its waters, the technical grounds for that conclusion and suggested changes in the project or the mode of operation'.[286]

286 Art 11 of the 1975 Statute of the Uruguay River.

The term 'would,' rather than 'might,' was used to indicate that the notified state must conclude that a violation of the principle of equitable and reasonable use (Articles 5 to 7) is more than just a mere possibility.[287] This rather strict obligation is due to the fact that a communication of the kind described here permits a notified state to request further suspension of the implementation of the planned measures in question (see Article 17 (3)). The strong effect of the communication, in combination with the principle of good faith, justifies the requirement that the notified state has to demonstrate its comprehensive assessment of the possible impacts of the planned measures. As noted in section 12.1.2, the term 'implementation' applies to measures[288] planned by both private parties and the state itself.

287 1994 Draft Articles at 115, Article 15, para 2.
288 Ibid.

15.2 Additional reading

Draft Articles on the Law of the Non-navigational Uses of International Watercourses, in Report of the International Law Commission on the Work of its Forty-Sixth Session, UNGAOR, 49th Sess, Supp (No. 10), UN Doc A/49/10 (1994) Art 15 at 114-115.

McCaffrey SC, The Law of International Watercourses (2nd edn, Oxford University Press 2007).

Tanzi A and Arcari M, The United Nations Convention on the Law of International Watercourses: A Framework for Sharing (Kluwer Law International 2001).

Third Report on the Law of the Non-navigational Uses of International Watercourses, by Mr. Stephen C. McCaffrey, Special Rapporteur, in the Yearbook of the International Law Commission 1987, Vol II (Part 1) 15-46, document A/CN.4/406 and Corr.1 and Add.1 & 2.

Article 16 | Absence of Reply to Notification

Convention text

1. If, within the period applicable pursuant to Article 13, the notifying state receives no communication under Article 15, it may, subject to its obligations under Articles 5 and 7, proceed with the implementation of the planned measures, in accordance with the notification and any other data and information provided to the notified states.
2. Any claim to compensation by a notified state which has failed to reply within the period applicable pursuant to Article 13 may be offset by the costs incurred by the notifying state for action undertaken after the expiration of the time for a reply which would not have been undertaken if the notified state had objected within that period.

16.1 Commentary

Article 16 concerns cases where the notifying state, during the period for reply (see Article 13), receives no communication under Article 15. Here, the notifying state may proceed with the implemention, or permit the implementation, of the planned measures. However, such a move is subject to two conditions: firstly, the plans must be implemented 'in accordance with the notification and any other data and information provided to the notified states' (see Articles 12 and 14); and, secondly, the implementation of the planned measures is consistent with the obligations of the notifying state under the principle of equitable and reasonable utilisation and the 'no-significant harm rule' (Articles 5 and 7).

While the arguments for the second condition are obvious, the reason for the first one is that the silence of a notified state with regard to the planned measures can only be regarded as tacit consent with regard to matters which were brought to its attention by the notifying state. Allowing the planned measures to progress in a specific case is an important element of the attempt to balance the interests of both notifying and notified states.[289]

Paragraph 2 of Article 16 establishes that the costs incurred by the notifying state, which relies on the absence of a reply from the notified state, in continuation with its planned measures can be off set against any future claims by a notified state which has failed to reply. In drafting the Convention, the ILC decided that to explicitly allow for counter claims by a notifying state could prove overly troublesome in some cases.[290]

289 1994 Draft Articles at 115, Article 16, para 2.
290 Ibid, para 3.

16.2 Additional reading

Draft Articles on the Law of the Non-navigational Uses of International Watercourses, in Report of the International Law Commission on the Work of its Forty-Sixth Session, UNGAOR, 49th Sess, Supp (No. 10), UN Doc A/49/10 (1994) Art 16 at 115.

McCaffrey SC, The Law of International Watercourses (2nd edn, Oxford University Press 2007).

Tanzi A and Arcari M, The United Nations Convention on the Law of International Watercourses: A Framework for Sharing (Kluwer Law International 2001).

Third Report on the Law of the Non-navigational Uses of International Watercourses, by Mr. Stephen C. McCaffrey, Special Rapporteur, in the Yearbook of the International Law Commission 1987, Vol II (Part 1) 15-46, document A/CN.4/406 and Corr.1 and Add.1 & 2.

Article 17 | Consultations and Negotiations Concerning Planned Measures

Convention text

1. If a communication is made under Article 15 that implementation of the planned measures would be inconsistent with the provisions of Articles 5 or 7, the notifying state and the state making the communication shall enter into consultations and, if necessary, negotiations with a view to arriving at an equitable resolution of the situation.
2. The consultations and negotiations shall be conducted on the basis that each state must in good faith pay reasonable regard to the rights and legitimate interests of the other state.
3. During the course of the consultations and negotiations, the notifying state shall, if so requested by the notified state at the time it makes the communication, refrain from implementing or permitting the implementation of the planned measures for a period of six months unless otherwise agreed.

17.1 Commentary

Article 17 deals with circumstances in which there has been a communication containing a finding by the notified state that 'implementation of the planned measures would be inconsistent with the provisions of Articles 5 or 7' – i.e. incommensurable with the general principle of equitable and reasonable utilisation.

The first paragraph of Article 17 calls for the notifying state to enter into consultations and, if necessary, negotiations with the state making such communication 'with a view to arriving at an equitable resolution of the situation.' The term 'if necessary' was included here since some members of the ILC drew a distinction between consultations and negotiations. In some cases, consultations can already resolve the issue(s) – and thus, do not always have to be followed by negotiations.[291] The 'situation' referred to is the finding of the notified state that implementation of the planned measures would be inconsistent with the principle of equitable and reasonable utilisation. The term 'equitable resolution' includes, among other things, modification to the initial plan so as to eliminate its potentially harmful elements, adjustment of other uses being made by either of the states, or the provision by the notifying state of compensation (monetary or other) acceptable to the notified state.[292]

291 1994 Draft Articles at 116, Article 17, para 2.
292 Ibid.

Consultations and negotiations are a requirement of a number of international agreements,[293] decisions of courts and tribunals,[294] and the need for such procedures has also been recognised in numerous publications by intergovernmental[295] and non-governmental organisations.[296]

Paragraph 2 of Article 17 concerns the manner in which the consultations and negotiations provided for in paragraph 1 are to be conducted. The text has been mainly inspired by the award of the tribunal in the Lac Lanoux Arbitration [297] and by the judgment of the International Court of Justice (ICJ) in the Fisheries Jurisdiction (United Kingdom v Iceland) Case.[298] The fashion in which states are to consult and negotiate was also addressed by the ICJ in another (non-freshwater-related) famous case: the North Sea Continental Shelf Case.[299] Further, the term 'legitimate interests' has been used in Article 3 of the Charter of Economic Rights and Duties of States[300] and is employed in paragraph 2 of Article 17 of the UN Watercourses Convention in order to limit the scope of 'interests'.

293 See, for example, the 1954 Convention between Yugoslavia and Austria concerning water economy questions relating to the Drava (United Nations, Treaty Series, vol. 227, p. 111), Art. 4; the 1960 Convention on the protection of Lake Constance against pollution (Legislative Texts, p. 438, Treaty No. 127), Art. 1, para. 3; the 1964 Agreement between Poland and the USSR concerning the use of water resources in frontier waters (United Nations, Treaty Series, vol. 552, p. 175), Art. 6; the 1964 Agreement concerning the Niger River Commission and the navigation and transport on the River Niger (ibid., vol. 587, p. 19), Art. 12; and the 1981 Convention between Hungary and the USSR concerning water economy questions in frontier waters (referred to in Environmental Protection and Sustainable Development. Legal Principles and Recommendations (Dordrecht, Martinus Nijhoff, 1987), p. 106), Arts. 3-5.

294 See also Lac Lanoux Arbitral Award and the North Sea Continental Shelf cases (Federal Republic of Germany v Denmark, and Federal Republic of Germany v Netherlands), Judgment of 20 February 1969, ICJ Reports 1969, 3, especially at 46-48, paras. 85 and 87.

295 See, for example, the Charter of Economic Rights and Duties of States (General Assembly resolution 3281 (XXIX) of 12 December 1974), Art. 3; General Assembly resolution 3129 (XXVIII) of 13 December 1973 on cooperation in the field of the environment concerning natural resources shared by two or more States; the "Principle of information and consultation" annexed to the 1974 OECD "Principles concerning transfrontier pollution" (Recommendation c (74) 224 adopted by the Council of OECD on 14 November 1974) OECD, OECD and the Environment (Paris, 1966), p. 142; and UNEP's 1978 "Draft principles of conduct" concerning shared natural resources (UNEP, Environmental Law: Guidelines and Principles: No. 2, Shared Natural Resources (Nairobi, 1978) (principles 5, 6 and 7)).

296 See, for example, the above-mentioned resolutions adopted by the Institute of International Law in 1961 (Annuaire de l'Institut de Droit International, 1961, vol. 49-II, pp. 381-384, Art. 6) and in 1979 (Annuaire de l'Institut de Droit International, 1979, vol. 58-II, pp. 196 et seq., art. VII); and the articles adopted by the ILA in 1980 (ILA, Report of the Fifty-second Conference, Helsinki, 1966, pp. 484 et seq., art. 8) and in 1982 (ILA, Report of the Sixtieth Conference, Montreal 1982, pp. 535 et seq. Art. 6).

297 See United Nations Reports of International Arbitral Awards, vol. XII, p 281.

298 See Judgment, United Nations Reports of International Arbitral Awards, Vol II at 921, para 78.

299 See Judgement, paras 85 and 87.

300 United Nations General Assembly resolution 3281 (XXIX) of 12 December 1974.

Paragraph 3, then, requires the notifying state – if requested by the notified state in its communication under Article 15 – to suspend implementation of the planned measures for six months. This seems reasonable, since proceeding with the planned measures during the period of consultations and negotiations would not be consistent with the concept of 'good faith' required by paragraph 2. Also in line with the idea of 'good faith,' however, consultations and negotiations should not suspend the implementation of the planned measures for longer than is deemed reasonable. The establishment of the appropriate length of the period is subject to agreement between the states concerned, as they are in the best position to consider all the particular circumstances. Only in case they cannot reach an agreement, paragraph 3 sets a period of six months; hence the use of the term 'unless otherwise agreed.' After this period has expired, the notifying state may proceed with implementation of its planned measures – subject, however, to its obligations under Articles 5 and 7 (the general principle of equitable and reasonable utilisation).

17.2 Additional reading

Draft Articles on the Law of the Non-navigational Uses of International Watercourses, in Report of the International Law Commission on the Work of its Forty-Sixth Session, UNGAOR, 49th Sess, Supp (No. 10), UN Doc A/49/10 (1994) Art 17 at 115-116.

McCaffrey SC, The Law of International Watercourses (2nd edn, Oxford University Press 2007).

Tanzi A and Arcari M, The United Nations Convention on the Law of International Watercourses: A Framework for Sharing (Kluwer Law International 2001).

Third Report on the Law of the Non-navigational Uses of International Watercourses, by Mr. Stephen C. McCaffrey, Special Rapporteur, in the Yearbook of the International Law Commission 1987, Vol II (Part 1) 15-46, document A/CN.4/406 and Corr.1 and Add.1 & 2

Article 18 | Procedures in the Absence of Notification

Convention text

1. If a watercourse state has reasonable grounds to believe that another watercourse state is planning measures that may have a significant adverse effect upon it, the former State may request the latter to apply the provisions of Article 12. The request shall be accompanied by a documented explanation setting forth its grounds.
2. In the event that the state planning the measures nevertheless finds that it is not under an obligation to provide a notification under Article 12, it shall so inform the other state, providing a documented explanation setting forth the reasons for such finding. If this finding does not satisfy the other state, the two states shall, at the request of that other state, promptly enter into consultations and negotiations in the manner indicated in paragraphs 1 and 2 of Article 17.
3. During the course of the consultations and negotiations, the state planning the measures shall, if so requested by the other state at the time it requests the initiation of consultations and negotiations, refrain from implementing or permitting the implementation of those measures for a period of six months unless otherwise agreed.

18.1 Commentary

Article 18 addresses cases where a watercourse state is aware of measures being planned in another state and believes they may have a significant adverse effect upon it, but has received no notification by the planning state. In such an instance, the former is allowed to initiate the procedure provided for under Articles 12-17.

While paragraph 1 allows any watercourse state which is in the above mentioned position to request the planning state 'to apply the provisions of Article 12,' this expression does not mean that the latter has automatically failed to comply with its obligations under Article 12.[301] It could well be the case that the planning state, during the initial assessment of the possibility of the planned measures to cause significant adverse effects upon other watercourse states, concluded in 'good faith' that no such impacts would result. This is why a watercourse state is allowed under this provision to request that the planning state takes another look at its assessment, and does not prejudge whether the planning state complied with its obligation to notify or not.[302]

In order to be warranted such a query, however, the requesting state has to meet two conditions. Firstly, it must have 'reasonable grounds to believe' that measures are being planned which may have a significant adverse effect upon it. Secondly, the requesting state must prepare a 'documented explanation setting forth its grounds'. These conditions, similar to the ones laid out in Article 15, are intended to require that the requesting state has more than a mere apprehension. This extension of the concept of 'good faith' demands for a serious and substantiated belief, which seems appropriate given the possibility that the planning state may be required to suspend implementation of its planned measures under paragraph 3 of Article 18.

301 See 1994 Draft Articles at 116, Article 18, para 2.
302 Ibid.

18.2 Application of Articles 12-18

The first sentence of paragraph 2 deals with the situation in which the planning state concludes, after taking another look at its planned measures as laid out in paragraph 1, that it is not under an obligation to notify (under Article 12). Here, the Convention aims to strike a fair balance between the interests of the parties by requiring the planning state to justify its findings in the same manner as was demanded from the requesting state under Paragraph 1.

The second sentence of paragraph 2 relates to the case where the finding of the planning state does not convince the requesting state. It demands the former to promptly enter into consultations and negotiations with the latter, if deemed necessary by the requesting state. The process of consultation and negotiation has to follow the manner described in Article 17 (1) and (2) – i.e. on the basis of 'good faith' and with the aim to reach 'an equitable resolution of the situation'.
Finally, paragraph 3 requires the planning state to refrain from implementing the planned measures for a period of six months – unless otherwise agreed. This provision resembles Article 17(3); the only difference being that here the period starts to run from the time of the request for consultations under paragraph 2 of Article 18.

A dispute has arisen between two states over the interpretation of the obligation to exchange data and information.

Upper riparian state A shares an international watercourse with lower riparian state B. State A is planning to authorise the construction of a large dye-work plant in close proximity to a wetland shared with state B. While state A acknowledges the risk the plant may pose on this pristine natural resource, in its view the economic benefits outweigh the potential environmental drawbacks. State A hopes that further companies will follow the dye-work plant and a new industrial park will eventually emerge – contributing to the economic prosperity of the region.

During a presentation at a meeting of the regional economic integration organisation, which both heads of state attend, the delegation of state A reveals the basic points of the plan and indicate that work will begin within the next three months.

After the rather surprising presentation, state B exchanges an official communiqué with state A, claiming that state A did not respect its international obligations. According to state B, state A has failed to comply with various provisions of Article 12 of the UNWC: (1) oral notification cannot be perceived as sufficient; (2) giving notice only three months before the beginning of work is not 'timely'; (3) an Environmental Impact Assessment (EIA) must be carried out and its findings have to be communicated to state B; and (4) a land-use plan should accompany the information to see the extent and type of industrial settlement planned in the area.

In its response, state A argues that the UN Watercourses Convention does not prescribe any form of notification, and thus its oral presentation of the planned measures was sufficient. It was also timely,

since the planning agency only recently finalised the details of the plan. Furthermore, an EIA would drive up the costs, making the whole project less viable economically. According to state A, such a complicated and time-consuming assessment will not be necessary, since state B can fully trust state A's judgement. State A further argues that the UN Watercourses Convention does not even require that an EIA be carried out; it merely requires that the results of such an assessment should be shared if it had been undertaken voluntarily. Finally, state A suggests state B buy a copy of the land-use plan, since its conception was rather expensive.

(1) The argument of state A regarding its oral notification will not hold. While it is correct that Article 12 does not mention a requirement for notifications concerning planned measures to be in writing, a presentation at a conference, or even a phone call, would (most likely) not suffice in communicating all relevant facts regarding any planned measure. Treaty practice supports this.[303]

(2) The reasoning of state A that it wanted to wait until all relevant data and information was available is equally weak. The requirement of 'timely' does not allow for delaying the notification; it rather tries to allow for a thorough evaluation of the possible impacts by all watercourse states at an early stage in the planning process; which is a prerequisite for meaningful consultations between the states. This line of argument has been strengthened by the ICJ in the judgement of the Pulp Mills Case,[304] where the court stated that notification should take place at a very early stage and distinguished between the duty to inform and a subsequent (and more comprehensive) duty to notify, even though the initial information provided might not include all relevant data. Given the fact that Article 13(a) of the Convention allows the notified state a period of six months during which the possible effects of the planned measures have to be evaluated, the three months before the start of construction works are clearly too short.

303 See, for example, Art XII (3) of the Columbia River Basin Treaty.

304 Case Concerning Pulp Mills on the River Uruguay (Argentina v. Uruguay), Judgment of 20 April 2010, para 99, citing art 7 of the 1975 Statute.

(3) While state A is correct in stating that the Convention does not specifically require the planning state to conduct an EIA; according to various scholars and recently also the ICJ, such an assessment is now an obligation under customary international law whenever a project may have adverse transboundary effects. This obligation is particularly clear in the case at hand, as the planned measure might have a significant adverse effect upon the wetland.

(4) Furthermore, state A will not be able to charge state B for the copy of the land-use plan, since state A has to submit all available technical data and information; and the land-use plan clearly falls into this category since it has already been finalised. The term 'available' points to cases where a state which has been notified requests more data or information that is not readily available and can only be gathered by the notifying state. It is only in such instances where it is deemed appropriate for the former to cover the expenses for the additional information.

After consulting with its international lawyers, state A – reluctantly – accepts the four points, conducts an EIA, and sends all technical data and information to its downstream neighbour state B. Five months into the evaluation process, state B requests an extension of the six months period for its reply – as provided for in Article 13(b) of the UN Watercourses Convention – arguing that the assessment of all the data and information 'poses special difficulty' due to translation problems, a mismatch in the approach of evaluating the EIA, and a lack of staff available to analyse the data. A lack of staff capable of evaluating the shared data alone would surely not qualify as posing 'special difficulty.' However, the two other grounds, i.e. different languages and variations in the standards of EIAs, may well suffice in reasoning for extending the review period for another six months – depending on the specific complexity of each case. This does not mean, however, that state B can use Article 13 for delaying tactics, since Article 15 demands the reply to be communicated to the notifying state (here state A) as early as possible.

While state A understands its obligation under Article 14 not to implement the planned measures without the consent of state B, it nevertheless begins work on the infrastructure for the industrial area. Realising this, state B requests state A immediately puts all construction projects on hold, until the two states have agreed on the terms of the planned measures. State A in turn argues that the infrastructural facilities (mainly roads at this stage) will have no impact on the transboundary watercourse and that state A will of course respect state B's period for reply during which time state A will not begin with the construction of the actual 'planned measure' – the dye-work plant. Here, state A's argument is convincing. Article 14(b) does not oblige state A to stop any works on its territory – only the implementation of the actual planned measures which may have a significant adverse (transboundary) effect. However, it would be wise for state A to await the outcome of state B's evaluation of the shared data and information and the potential following negotiations between the states. Otherwise, state A takes the risk that its infrastructure does not match the final project. Furthermore, state A has to be aware that Articles 5-7 of the Convention, i.e. the principle of equitable and reasonable utilisation, apply in any case – regardless of the notification and reply process.

Nine months after state A shared the data and information with its downstream neighbour, state B claims in its reply that the carrying capacity of the transboundary watercourse and the linked wetland is much lower than estimated by state A and demands the designated area for the industrial park to be scaled-down considerably. According to state B, if state A would proceed with the original plan, it would violate the principle of equitable and reasonable utilisation. State A on the other hand argues that the proposed dye-work plant and the planned industrial area are in line with the sustainable management of the river; and thus comply with Articles 5-7 of the Convention.

A consultation and negotiation process follows according to Article 17 of the UN Convention. Both watercourse states have to try to reach an 'equitable resolution' of the conflicting views, based on the principle of good faith (see Glossary of Terms). Their ultimate goal is to arrive at a point where both states agree that the planned measure is consistent with Articles 5-7 – e.g. by amending the initial plan or paying compensation. In the case at hand one could think of downscaling the size of the dye-work plant, imposing strict environmental regulation or standards on the industrial development in the area, or payment by state A for environmental protection measures in the transboundary wetland.

18.3 Additional reading

Draft Articles on the Law of the Non-navigational Uses of International Watercourses, in Report of the International Law Commission on the Work of its Forty-Sixth Session, UNGAOR, 49th Sess, Supp (No. 10), UN Doc A/49/10 (1994) Art 18 at 116-117.

McCaffrey SC, The Law of International Watercourses (2nd edn, Oxford University Press 2007).

Tanzi A and Arcari M, The United Nations Convention on the Law of International Watercourses: A Framework for Sharing (Kluwer Law International 2001).

Third Report on the Law of the Non-navigational Uses of International Watercourses, by Mr. Stephen C. McCaffrey, Special Rapporteur, in the Yearbook of the International Law Commission 1987, Vol II (Part 1) 15-46, document A/CN.4/406 and Corr.1 and Add.1 & 2.

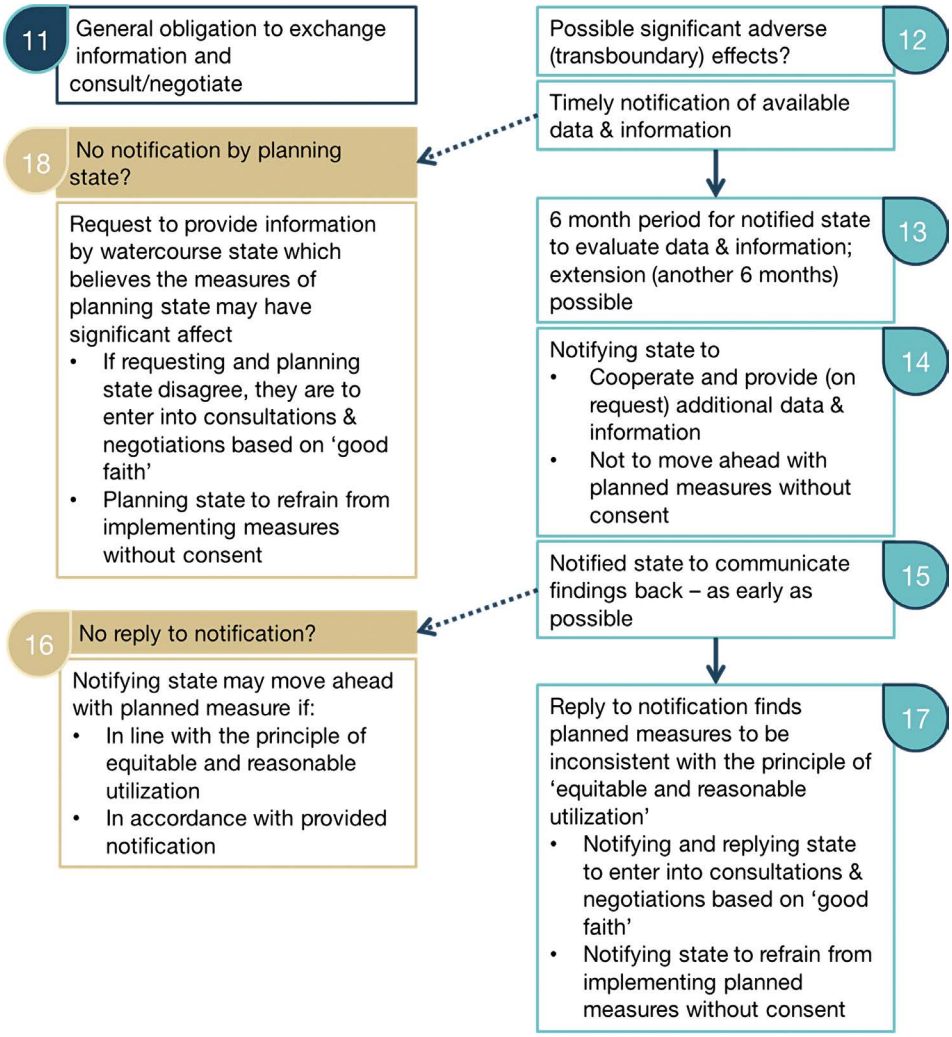


Figure 3.1 |
Planned Measures (Source Authors)

Article 19 | Urgent Implementation of Planned Measures

Convention text

1. In the event that the implementation of planned measures is of the utmost urgency in order to protect public health, public safety or other equally important interests, the state planning the measures may, subject to Articles 5 and 7, immediately proceed to implementation, notwithstanding the provisions of Article 14 and paragraph 3 of Article 17.
2. In such case, a formal declaration of the urgency of the measures shall be communicated without delay to the other watercourse states referred to in Article 12 together with the relevant data and information.
3. The state planning the measures shall, at the request of any of the states referred to in paragraph 2, promptly enter into consultations and negotiations with it in the manner indicated in paragraphs 1 and 2 of Article 17.

19.1 Commentary

Article 19 of the UN Watercourses Convention addresses planned measures which are of the 'utmost urgency in order to protect public health, public safety or other equally important interests'. Those measures should not be confused with 'emergency situations', which are dealt with under Article 28. Article 19 concerns highly exceptional cases in which interests of overriding importance require the immediate implementation of planned measures – without the need to wait for the expiry of the periods established for the reply to notification and for consultations and negotiations.[305] The language of the Article is supposed to guard against potential abuse of the narrow exception it lays down.

Paragraph 1 refers to the kinds of interests that must be involved in order for a state to be entitled to proceed to implementation under Article 19. The interests in question are those of the highest order of importance, such as protecting the population from the danger of flooding or issues of vital national security. Paragraph 1 also contains a waiver of the waiting periods provided for under Articles 14 and 17(3). The right of the state to proceed to implementation is, however, subject to its obligations under paragraphs 2 and 3.

Paragraph 2 requires a state which proceeds with the measures to immediately provide the 'other watercourse states referred to in Article 12' with a formal communication of the urgency of such measures, together with all relevant data and information. Again, these requirements are intended to adhere to the principle of 'good faith' when a state proceeds to implementation, as well as ensuring that the other states are informed as fully as possible at the particular point in time of the potential impacts of the measures. The 'other watercourse states' are those upon which the measures 'may have a significant adverse effect' under Article 12.

305 1994 Draft Articles at 118, Article 19, para 1.

The last paragraph of Article 19 requires that the state which proceeds to immediate implementation enters 'promptly' into consultations and negotiations with the other state(s) concerned, if and when requested to do so by those states.[306] Again, the process of consultations and negotiations has to be carried out in the fashion indicated in Article 17 (1) and (2) – i.e. on the basis of 'good faith' and with the goal to achieve 'an equitable resolution of the situation'.

306 1994 Draft Articles at 118, Article 19, para 3.

19.2 Application

19.2.1 Scenario 1

State A (upstream) and state B (downstream) share a transboundary river. State A is a small developing country with low GDP but it has considerable deposits of rare earth minerals. Mining company X is contemplating a huge investment in state A to develop these resources. This investment would result in an enormous economic boom for state A, but the water-hungry operation would require a substantive reservoir to be built.

During the initial negotiation, company X is making it clear that it will only invest in state A if the necessary water infrastructure will be in place. Since there are other countries state X could exploit the minerals in, the company pushes state A to initiate the construction of a dam as soon as possible in order not to lose the lucrative business.

State A, aware of its legal obligations, immediately submits a declaration of urgency to state B, arguing that the dam will have to be built immediately, since the time frame given by company X is very limited.

In this case, however, the economic pressures do not satisfy the requirements for 'urgent implementation,' which only come into play where public health or safety is at risk. Hence, state A and state B would have to follow the procedures of Articles 13-18.

19.2.2 Scenario 2

State A (upstream) and state B (downstream) share a transboundary river. State A, a small developing country, has a significant agricultural base supporting its people, 80% of which live below the poverty level and depend upon subsistence farming.

State A depends heavily on the shared river for irrigation, since it does not have any alternative freshwater resources and the climate does not allow for rain-fed agriculture. Due to a change of climate, the level of snowfall which feeds the headwaters of the international watercourse was remarkably lower this winter compared to previous years.

In order to avoid famine, state A is now rushing to upgrade its reservoirs, allowing for more storage capacity. It argues that the exceptional circumstances allow for procedures under Article 19 of the Convention, since there is little time left to avoid a widespread humanitarian disaster in the region.

In this case, state A would likely be allowed to immediately start implementation, without having to wait for the expiry of the periods in place for the reply of state B to its notification and potential consultations and negotiations – subject to being confident that its (state A) actions are consistent with Articles 5-7 of the Convention.

19.3 Additional reading

Draft Articles on the Law of the Non-navigational Uses of International Watercourses, in Report of the International Law Commission on the Work of its Forty-Sixth Session, UNGAOR, 49th Sess, Supp (No. 10), UN Doc A/49/10 (1994) Art 19 at 117-118.

McCaffrey SC, The Law of International Watercourses (2nd edn, Oxford University Press 2007).

Tanzi A and Arcari M, The United Nations Convention on the Law of International Watercourses: A Framework for Sharing (Kluwer Law International 2001).

Third Report on the Law of the Non-navigational Uses of International Watercourses, by Mr. Stephen C. McCaffrey, Special Rapporteur, in the Yearbook of the International Law Commission 1987, Vol II (Part 1) 15-46, document A/CN.4/406 and Corr.1 and Add.1 & 2.

Part IV | Protection, Preservation and Management (Articles 20-26)

Article 20 | Protection and Preservation of Ecosystems

Key points

- States are obliged to protect and preserve the ecosystem of international watercourses as an extension of the general principle of equitable and reasonable utilisation and participation.
- States are under a due diligence obligation to prevent new sources of pollution, and reduce and control existing sources consistent with the principle of equitable and reasonable utilisation and participation.
- States must take all necessary measures to prevent the introduction of species, alien or new, that may have detrimental effects on an ecosystem of an international watercourse resulting in significant harm to other watercourse states.
- The UN Watercourses Convention obliges states to cooperate with other states to protect and preserve the marine environment.
- Pursuant to the Convention, states are under an obligation to enter into consultations with a view to establishing joint institutional arrangements for the management of international watercourses. In many circumstances, joint arrangements will be the most appropriate means by which to ensure the provisions of the Convention are implemented.
- States must cooperate where necessary to regulate the flow of an international watercourse, and maintain installations.
- Articles 20-25 collectively provide the basis by which an ecosystem approach has been reflected within the UN Watercourses Convention.

Convention text

Watercourse states shall, individually and, where appropriate, jointly, protect and preserve the ecosystems of international watercourses

What is an 'ecosystem'?

'ecosystem' - '…a dynamic complex of plant, animal, and micro-organism communities and their non-living environment interacting as a functional unit' (Article 2, UN Convention on Biological Diversity (adopted 5 June 1992, entered into force 29 December 1992) (1992) 31 International Legal Materials 822)

'ecosystem' – 'a system of plants, animals and micro-organisms together with the non-living components of the environment' (Experts Group on Environmental Law, Legal Principles and recommendations (WCED 1987))

'water-related ecosystems' - 'ecosystems such as forests, wetlands, grasslands and agricultural land that play vital roles in the hydrological cycle through the service they provide' (UN ECE, Recommendations on Payments for Ecosystem Services in Integrated Water Resources Management (UN ECE 2007), 2)

20.1 Commentary

The need to protect and preserve ecosystems is increasingly recognised throughout the world. Major consumptive uses, such as irrigation, municipal or industrial uses; and non-consumptive uses, including hydropower and navigation, constitute direct drivers of ecosystem degradation.[307] The Millennium Ecosystem Assessment (MEA) estimated that water withdrawn from inland waters system has increased by at least 15 times over the past two centuries; with humans now controlling and using more than half the world's accessible runoff.[308] Increased uses of water have also impacted on water quality, with major pollutants, such as nutrients, heavy metals, nitrogen, organic compounds, suspended participles, contaminants and salinity, affecting aquatic ecosystems.[309] In this regard, the World Water Commission has estimated that half of the world's major rivers are seriously polluted.[310]

Article 20, described as, 'a simple, but potentially powerful, provision', seeks to address the challenges faced by the existing and potential degradation of ecosystems of international watercourses.[311]
The provision, modelled on Article 192 of the UN Law of the Sea, sets out a general obligation on states to protect ecosystems of international watercourses,[312] and is considered to reflect an emerging principle of customary law.[313]

When drafting the text of the UN Watercourses Convention, the ILC preferred the term 'ecosystem' over 'environment' as they felt that the latter term could be interpreted quite broadly; thus covering areas that, 'have minimal bearing on the protection and preservation of the watercourse itself'.[314]
An 'ecosystem' was defined by the ILC as being, 'an ecological unit consisting of living and non-living components that are interdependent and function as a community'[315] [emphasis added] (see page 165 for additional definitions).

Article 20 requires watercourse states to 'protect' and 'preserve' the ecosystems of international watercourses. The obligation to 'protect' ecosystems of international watercourses' can be seen as an extension of Article 5 of the Convention, plus the obligation that states must use and develop an international watercourse, 'in a manner that is consistent with adequate protection thereof' (Article 5 (1). Adequate protection encompasses measures relating to conservation, security, and water-related disease, as well as technical and hydrological 'control' mechanisms, such as the regulation of flow, floods, pollution, erosion, drought and saline intrusion.[316]
Some of these aspects, such as pollution and regulation of flow, are covered in more detail in Part IV of the Convention (see below).
Additionally, the obligation to protect includes the duty

307 B Aylward, and others 'Freshwater Ecosystem Services', in R Hassan, R Scholes and A Neville, Ecosystems and Human Well-being: current state and trends (Island Press 2005), 216.

308 Ibid.

309 Ibid.

310 World Water Commission, A Water Secure World: Vision for Water, Life and the Environment (World Water Council 1999), at 13.

311 SC McCaffrey, 'An Overview of the U.N. Convention on the Law of the Non-navigational Uses of International Watercourses' (2000) 20 Journal of Land Resources and Environmental Law 57, 66.

312 UN Convention on the Law of the Sea (adopted 10 December 1982, entered into force 16 November 1994) (1994) 21 International Legal Materials 1261: Article 192 provides that, 'States have the obligation to protect and preserve the marine environment'.

313 See McCaffrey, 'An Overview of the U.N. Convention on the Law of the Non-navigational Uses of International Watercourses', at 70.

314 1994 Draft Articles at 119.

315 Ibid.

316 Ibid.

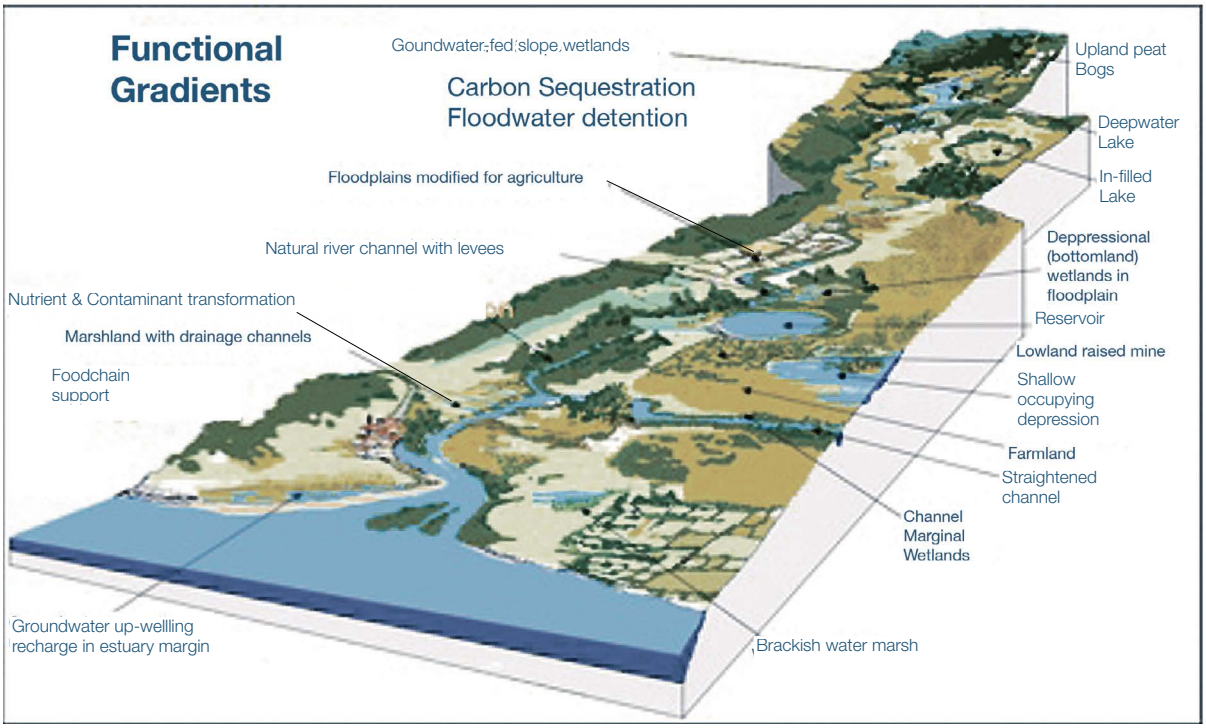


Figure 4.1 |
Ecosystem Services and Rivers (Source UK MEA 2011)

to shield ecosystems from a significant threat of harm.[317] Inherent in the notion of protection is therefore the need to adopt a precautionary approach. Such an approach provides that where there are threats of serious or irreversible damage, lack of full scientific certainty cannot be used to justify not imposing cost-effective measures to prevent environmental degradation.[318] Pursuant to the precautionary principle, a proportionate approach should be adopted that weighs up the degree of harm vis-à-vis the level of scientific certainty. Where full scientific certainty is lacking, but the degree of harm is potentially imminent, serious or irreversible, precautionary measures might therefore be justified.[319] The precautionary principle is widely reflected in treaty practice related to transboundary harm.[320]

The obligation to 'preserve' ecosystems of international watercourses applies to freshwater ecosystems in a 'pristine or unspoiled condition'[321] , and can be seen as subordinate to the obligation to protect. Schwebel introduced the notion within the work of the ILC through his discussion of 'wild and scenic watercourses'.[322] He noted that preservation, 'involves the setting aside of a portion, or the entirety, of a stream, selected for its aesthetic beauty or its condition of being relatively unmodified by man: the native flora and fauna are typically abundant. Such free-

317 Ibid.

318 Declaration of the UN Conference on Environment and Development' (Rio de Janeiro) (13 June 1992) UN Doc A/CONF.151/26 (Vol I).

319 P Sands, Principles of International Environmental Law (2nd edn, Oxford University Press 2003), 269.

320 Owen McIntyre, Environmental Protection of International Watercourses under International Law (Ashgate 2007), 265-283. McIntyre observes that the principle is likely to represent customary international law, given its 'prevalence … in recent environmental treaties, declarations and resolutions as well as its inclusion in the Rio Declarations and the UNCED treaties', 272.

321 Ibid.

322 ILC, 'Third Report on the Law of the Non-navigational Uses of International Watercourses, by Mr Stephen M Schwebel, Special Rapporteur', UN Doc A/CN.4/348 and Corr. 1, 190.

running and unspoiled watercourses, so designated, will thus still be able to be experienced by future generations'.[323] Schwebel therefore proposed that, 'the Commission's articles on the non-navigational uses of international water-courses could be cast in such a way as to contemplate this emerging practice and to comprehend such preservation regimes as an element of a State's equitable participation in the development, use, protection and control of international watercourse systems'.[324]

However it should be noted that, on the basis of equity, the ultimate decision whether or not to preserve a particular ecosystem in a 'pristine or unspoiled condition' will be weighed against all relevant factors, including the social and economic needs of watercourse states. In weighing up such factors, Utton and Utton point out that, 'for many states, the preservation of wild and scenic watercourses would prove too great a development sacrifice'. [325] However, the latter authors also point out that, 'where politically feasible, such a strategy should be employed to protect what few unspoiled stretches of rivers remain today. Depending upon the usages allowed under a wild and scenic watercourse regime, the economic advantages of a pristine river system may make up for the sacrificed developmental usages'.[326] Recognition of the economic benefits of ecosystems is embodied in the notion of 'ecosystem services' (figures 4.1).

Adopting such an ecosystem services approach may even provide alternative financial incentives through the concept of payment for ecosystem services. For instance, Sadoff and others observe that:

'While payment for ecosystem services is increasingly popular in national contexts, it has not yet been pursued as a strategy in financing or developing transboundary water management institutions. One possible avenue from a developing country perspective is to label the outcomes of cooperative management as international public goods – in terms of positive environmental outcomes, regional security or other factors – for which international, non-basin actors could choose to contribute. Such a 'payment for ecosystem and security services' approach could help move financing from the paternalistic donor-recipient model to a service provider-customer model made up of equal partners. However, it is critical that a broad range of local stakeholders are involved in the decision-making process to ensure that the resulting agreements and financial flows have broad support'.[327]

Central to the protection of ecosystems of international watercourses is the concept of 'environmental flows'.[328] While Article 20 does not explicitly mention environmental flows, the need to 'ensure stream flows adequate to protect the biological, chemical, and physical integrity of international watercourses, including their estuarine zones'[329] can be considered as inherent in the obligation to protect ecosystems of international watercourses. Considerable treaty practice and international policy has reflected the notion of environmental flows.[330] For instance, the 2002 Inco-

323 Ibid.

324 Ibid.

325 Albert E Utton and John Utton, 'Adequate Stream Flows' in Slavko Bogdanovic (ed), International Law of Water Resources – Contribution of the International Law Association (1954-2000) (Kluwer Law International 2001), 405.

326 Ibid.

327 C Sadoff, T Greiber, M Smith and G Bergkamp, Share: managing waters across boundaries (IUCN 2008), 78.

328 McIntyre O., Environmental Protection of International Watercourses under International Law (Ashgate 2007), 292.

329 AE Utton and J Utton, 'Adequate Stream Flows', in Slavko Bogdanovic (ed), International Law of Water Resources – Contribution of the International Law Association (1954-2000), 387.

330 See J Scanlon and A Iza, 'International Legal Foundations for Environmental Flows', (2003) 14 Yearbook of International Environmental Law 81. See also Article 19 of the Draft International Covenant on Environment and Development, which stipulates that 'parties must take all appropriate measures, in particular through conservation and management of water resources, to ensure the availability of a sufficient quantity of water to satisfy basic human needs and to maintain aquatic systems', <http://www.i-c-e-l.org/indexen.html> accessed 24 October 2011.

Maputo Agreement provides details pertaining to flow regimes, and recognises, 'the need to ensure water of sufficient quantity with acceptable quality to sustain the watercourse and their associated ecosystem'.[331] Also the 1995 Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin obliges states to maintain, 'acceptable minimum monthly flows' to protect the ecological integrity of the Mekong.[332] Additionally, the need to protect 'environmental flows' can be found in national legislation. For instance, the 1998 South African Water Act utilises the concept of the 'reserve', which is defined as being, 'the quantity and quality of water required … to protect aquatic ecosystems in order to secure ecologically sustainable development and use of the relevant water resource'.[333]

A further important aspect of Article 20 is the inclusion of the phrase, 'individually and, where appropriate, jointly'. This phrase recognises that in certain circumstances, states will not be able to act alone in protecting the ecosystem of international watercourses, but must work with states sharing a particular watercourse on an equitable basis. The requirement to act jointly where appropriate can therefore be seen as an extension of the obligation contained in Article 5(2) for watercourse states to, 'participate in the use, development and protection of an international watercourse in an equitable and reasonable manner [emphasis added]'; and the requirement under Article 8 that watercourse states cooperate in order to attain optimal utilisation and adequate protection of international watercourses.' [334] In summarising this obligation, the ILC stipulates that:

'The duty to participate equitably in the protection and preservation of the ecosystems of an international watercourse is not to be regarded as implying an obligation to repair or tolerate harm that has resulted from another watercourse state's breach of its obligations under the draft articles. But the general obligation of equitable participation demands that the contributions of watercourse states to joint protection and preservation efforts be at least proportional to the measure in which they have contributed to the threat or harm to the ecosystems in question'.[335]

Joint action may therefore be necessary within the case of contiguous watercourses, but may not be required where the cause and effect of a particular use can be solely attributable to one watercourse state.

A further issue that should be considered in connection with Article 20 is the extent of the obligation to protect. Article 20 is 'not qualified', unlike Articles 7, 21 or 22 for example, which make reference to 'other watercourse states'. A question arising is therefore whether the obligation to protect ecosystems under Article 20 would apply where such harm only arises in one states, or whether there is more harm to the ecosystems of other states sharing a particular international watercourse.[336] Most commentators believe that Article 20 should be interpreted as being consistent with the overarching principles of Articles 5-7. Article 20 is therefore considered an obligation to

331 Tripartite Interim Agreement for Co-operation on the Protection and Sustainable Utilisation of the Water Resources of the Incomati and Maputo Watercourse (adopted 29 August 2002), Article 9, 'the need to ensure water of sufficient quantity with acceptable quality to sustain the watercourse and their associated ecosystems'.

332 Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin, Article 6, requires parties to provide for 'acceptable minimum monthly flows' to protect the ecological integrity of the Mekong.

333 National Water Act, No. 36 of 1998, 20 August 1998,<ftp://ftp.hst.org.za/pubs/govdocs/acts/1998/act36.pdf>, accessed 24 October 2011.

334 Refer to Part II of User's Guide 100-133

335 1994 Draft Articles at 119.

336 SC McCaffrey, 'An Overview of the U.N. Convention on the Law of the Non-navigational Uses of International Watercourses', at 66.

An Ecosystem Services approach

The MEA identifies a range of services that ecosystems provide including provisioning, supporting, regulating and cultural services (Millennium Ecosystem Assessment, Ecosystems and Human Well-being: A Framework for Assessment (Island Press 2003)). Water-related ecosystems services are defined by the UN ECE to include:

'…services such as flood prevention, control and mitigation; regulating runoff and water supply; improving the quality of surface waters and groundwaters; withholding sediments, reducing erosion, stablilising river banks and shorelines and lowering the potential of landslides; improving water infiltration and supporting water storage in the soil; and facilitating groundwater recharge. Water-related ecosystem services also include cultural services, such as recreational, aesthetic and spiritual benefits of forests and wetlands' (UNECE, Recommendations on Payments for Ecosystem Services in Integrated Water Resources Management, available at <http://www.unece.org/fileadmin/DAM/env/water/publications/documents/PES_Recommendations_web.pdf> accessed 30 April 2012).

The advantage of an ecosystem services approach is that it provides a powerful instrument by which to justify the protection of ecosystems. As noted by Salzman, 'while a wetland surely provides existence and option values to some people, the benefits provided by the wetland's nutrient retention and flood protection services are both universal and undeniable. Tastes may differ over beauty, but they are in firm accord over the high costs of polluted water and flooded homes' (James Salzman, Barton H. Thompson Jr and Gretchen C Dailey, 'Protecting Ecosystem Services: Science, Economics and Law' (2001) 20 Stanford Environmental Law Journal 309, 312). Similarly, Tarlock observes that, 'much energy has been devoted to the development of environmental ethics, but the strongest case for environment protection can be justified by hard numbers'; and 'because ecosystem services provision is either tied to a market or to government subsidies, it can be a fair and equitable way of reallocating resources' (Dan Tarlock, 'Ecosystem Services in the Klamath Basin: Battlefield Causalities or the Future?' (2007) Journal of Land Use 207, 217).

An ecosystem services approach has yet to become widely implemented within the context of international watercourses, however, examples of such an approach do exist within the context of the Red River, the Okavango Rive and the La Plata Basin (see Dimple Roy, Jane Barr and Henry David Venema, Ecosystem Approaches in Integrated Water Resources Management – A Review of Transboundary River Basins (UNEP 2011)).

exercise due diligence to protect and preserve water ecosystems.[337] Tanzi and Arcari therefore claim that, 'although no express indication is provided either in Article 20, or in the relevant ILC commentary, it may be excluded that this obligation is one of an absolute character.'[338] In this regard, the ILC's commentary to Article 21(2) states that, 'as with the obligation to "protect" ecosystems under Article 20, the obligation to prevent pollution "that may cause significant harm" includes the duty to exercise due diligence to prevent the threat of such harm' [emphasis added].[339]

An additional aspect which is important to point out is the implication of the obligation. McCaffrey maintained that, 'there would seem to be little danger of states making frivolous claims in respect of this obligation, despite the lack of a requirement of resulting transboundary harm. States do not normally make claims against other states unless they consider that they have been injured or are threatened, and there is no reason to believe that their behaviour in respect of this obligation would be any different'.[340] Along similar lines, a causal link must be established between a state's activities and the existing or potential damage. The ability of states to prove ecosystem damage, which may not necessarily manifest itself immediately, might also act as a barrier to states making claims against other states.[341]

337 Ibid, 66.

338 A Tanzi and M Arcari, The United Nations Convention on the Law of International Watercourses (Kluwer Law International 2001), 246. See also O McIntyre, 'The Emergence of an 'Ecosystem Approach' to the Protection of International Watercourses under International Law' (2004) 13(1) Review of European Community and International Environmental Law 1, 9.

339 1994 Draft Articles at, 291.

340 SC McCaffrey, The Law of International Watercourses (2nd edn, Oxford University Press), 459.

341 D Tarlock, 'Ecosystems', in D Bondansky, J Brunnée and E Hey, (eds.), The Oxford Handbook of International Environmental Law (Oxford University Press 2007), 583.

20.2 Application

20.2.1 Transboundary conservation areas and protection of ecosystems

State A and state B share a river that flows through a number of conservation areas which have been afforded protected area status under national legislation within the two states. The states take the decision to preserve the ecosystems of this international watercourse by designating the entire river basin as a transboundary protected area.

State A receives a planning proposal to drain a wetland in order to develop the land for agricultural purposes. However, joint studies demonstrate that draining the wetland would increase the severity of floods downstream in state B. Studies also show there are significant recreational and cultural benefits associated with the wetland, such as the unique flora and fauna, and the site is popular with walkers, cyclists and kayakers who contribute significantly to the local economy. An analysis of the costs and benefits of maintaining the site as a natural wetland therefore demonstrate that any draining of the wetland would be inequitable and unreasonable.

20.2.2 Protection of salmon fisheries

State A upstream is reliant on salmon fisheries to support its tourist economy. Anglers travel from far and wide, paying significant premiums to fish for salmon in the headwaters of the river X. However, downstream state B plans to build a hydropower plant which would threaten the migratory routes of the salmon, and have a devastating effect on the salmon population upstream, the supporting ecosystems, and the local economy. Such activities are considered inconsistent with the obligation to protect the ecosystems of international watercourses, and the states must work together to mitigate the impacts that the planned hydropower developments downstream will have on upstream state A, for example through the use of fish ladders.

20.3 Additional reading

Brels S, Coates D and Loures F, Transboundary Water Resources Management: the role of international watercourse agreements in implementation of CBD (CBD 2008).

Brunnée J and Toope SJ, 'Environmental Security and Freshwater Resources: Ecosystem Regime Building', (1997) 91 American Journal of International Law 26.

Brunnée J and Toope SJ, 'Environmental Security and Freshwater Resources: A Case for International Ecosystem Law' in Yearbook of International Environmental Law (Oxford University Press 2004).

Dyson M, Bergkamp G and Scanlon J (eds.), Flow – The essentials of environmental flows (2nd Ed, IUCN 2008).

ILC, 'Draft Articles on the Law of the Non-Navigational Uses of International Watercourses', UN Doc A/CN.4/L.493 and Add.1 and 2, 118-121.

McCaffrey SC, The Law of International Watercourses (2nd edn, Oxford University Press 2007), 446-463.

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

Sadoff C, Greiber T, Smith M and Bergkamp, G, Share – Managing Water Across Boundaries (IUCN 2008).

Tanzi A and Arcari M, The United Nations Convention on the Law of International Watercourses (Kluwer Law International 2001), 237-245.

Tarlock D, 'Ecosystems' in Bodansky D, Brunnée J and Hey E, The Oxford Handbook of International Environmental Law (Oxford 2007).

Tarlock D, 'Ecosystem Services in the Klamath Basin: Battlefield Causalities or the Future?' (2007) Journal of Land Use 207.

Tarlock D, 'International Water Law and the Protection of River Ecosystem Integrity' (1996) 10 Brigham Young University Journal of Public Law 181.

UNECE, Guidelines on the Ecosystem Approach in Water Management, <http://www.unece.org/index.php?id=12847> accessed 30 April 2012.

UNECE, Recommendations on Payments for Ecosystem Services in Integrated Water Resources Management, <http://www.unece.org/fileadmin/DAM/env/water/publications/documents/PES_Recommendations_web.pdf> accessed 30 April 2012.

UNEP, The Greening of Water Law – Managing Freshwater Resources for People and the Environment (UNEP 2010), 58-63.

Utton AE and J Utton, 'The International Law of Minimum Stream Flows' (1999) 10 Colorado Journal of International Law and Policy 7.

Article 21 | Prevention, Reduction and Control of Pollution

Convention text

1. For the purpose of this article, 'pollution of an international watercourse' means any detrimental alteration in the composition or quality of the waters of an international watercourse which results directly or indirectly from human conduct.
2. Watercourse states shall, individually and, where appropriate, jointly, prevent, reduce and control the pollution of an international watercourse that may cause significant harm to other watercourse states or to their environment, including harm to human health or safety, to the use of the waters for any beneficial purpose or to the living resources of the watercourse. Watercourse states shall take steps to harmonise their policies in this connection.
3. Watercourse states shall, at the request of any of them, consult with a view to arriving at mutually agreeable measures and methods to prevent, reduce and control pollution of an international watercourse, such as:

(a) Setting joint water quality objectives and criteria;

(b) Establishing techniques and practices to address pollution from point and non-point sources;

(c) Establishing lists of substances, the introduction of which into the waters of an international watercourse is to be prohibited, limited, investigated or monitored.

21.1 Commentary

Pollution constitutes a major challenge for the world's international watercourses. UNEP estimates that every day millions of tons of inadequately treated sewage and industrial and agricultural wastes enter the world's water sources, resulting in negative impacts on human health, food production such as fisheries, and as inland and coastal ecosystems.[342] Similarly, the Global International Waters Assessment (GIWA) found that transboundary pollution is the top priority concern in most regions of the world.[343]

Article 21 of the UN Watercourses Convention addresses transboundary pollution, which is defined as being 'any detrimental alteration in the composition or quality of the waters of an international watercourse which results directly or indirectly from human conduct'. The intention of this definition is to provide a general, factual definition which does not mention particular types of pollution or polluting agents.[344] Additionally, the definition covers 'any detrimental alteration', leaving questions over the threshold of pollution under Article 21(2). Also, the types of detrimental effects, for example harm to human health, property, or living resources, are not explicitly listed in this definition.[345] By focusing on a factual definition of pollution, rather than stipulating legal parameters, the approach adopted by the UN Watercourses Convention is consistent with the 1966 Helsinki Rules, which defines pollution as, 'any detrimental change resulting from human conduct in the natural composition, content, or quality of the waters of an international drainage basin'[346]

342 UNEP and Pacific Institute, Clearly the Waters – A focus on water quality solutions (UNEP 2010).

343 Global International Waters Assessment, Challenges to International Waters – Regional Assessments in a Global Perspective (UNEP, 2006), 36-53.

344 1994 Draft Articles at 121.

345 Ibid.

346 Slavko Bogdanovic (ed), International Law of Water Resources – Contribution of the International Law Association (1954-2000), 109.

Water quality criteria, objectives and standards under the 1992 UN ECE Water Convention

Water quality criteria: The UN ECE Guide to implementation defines 'water quality criteria' as being, the 'minimum concentration levels for oxygen and maximum concentration levels for substances in water that do not harm a specific single form of water use (e.g. drinking water use, use of water for livestock watering, irrigational water use, water use for recreational purposes, use of water by aquatic life)'. Water quality objectives are described as constituting a numerical concentration or narrative statement that has been established to support and protect designated uses of water.

Annex III of the 1992 UN ECE Water Convention contains guidance on the establishment of water quality objectives and criteria, which should:

(a) Take into account the aim of maintaining and, where necessary, improving the existing water quality;

(b) Aim at the reduction of average pollution loads (in particular hazardous substances) to a certain degree within a certain period of time;

(c) Take into account specific water-quality requirements (raw water for drinking-water purposes, irrigation, etc);

(d) Take into account specific requirements regarding sensitive and specially protected waters and their environment e.g. lakes and groundwater resources;

(e) Be based on the application of ecological classification methods and chemical indices for the medium- and long-term review of water quality maintenance and improvement;

(f) Take into account the degree to which objectives are reached and the additional protected measures, based on emission limits, which may be required in individual cases.

The 1992 UN ECE Water Convention also provides further guidance on 'techniques and practices to address pollution from point and non-point sources'. Pursuant to the latter Convention, such techniques and practices include the establishment of water discharge limits based on best available technology; biological treatment or equivalent processes should be applied to municipal wastewater; appropriate measures should be taken, such as the application of best available technology, in order to reduce nutrient inputs from industrial and municipal sources; and appropriate measures and best environmental practices should be developed and implemented for the reduction of inputs of nutrients and hazardous substances from diffuse sources, especially where the main sources are from agricultures.

Annex I of the 1992 UN ECE Water Convention defines 'best available technology' as being:

'…the latest stage of development of processes, facilities or methods of operation which indicate the practical suitability of a particular measure for limiting discharges, emissions and waste. In determining whether a set of processes, facilities and methods of operation constitute the best available technology in general or individual cases, special consideration is given to:

(a) Comparable process, facilities or methods of operation which have recently been successful tried out;

(b) Technological advances and changes in scientific knowledge and understanding;

(c) The economic feasibility of such technology;

(d) Time limits for installation in both new and existing plants;

(e) The nature and volume of the discharge and effluents concerned;

(f) Low- and non-waste technology'

The Annex to the Convention goes on to comment that, 'what is "best available technology" for a particular process will change with time in the light of technological advances, and economic and social factors, as well as in the light of changes in scientific knowledge and understanding.'

Additionally, the Annex to the Convention provides guidelines for development of best environment practices, thus stipulating that the following measures should be considered,

(a) Provision of information and education to the public and to users about the environmental consequences of the choice of particular activities and products, their use and ultimate disposal;

(b) The development and application of codes of good environmental practice which cover all aspects of the product's life;

(c) Labels informing users of environmental risks related to a product, its use and ultimate disposal;

(d) Collection and disposal systems available to the public;

(e) Recycling, recovery and reuse;

(f) Application of economic instruments to activities, products or groups of products;

(g) A system of licensing, which involves a range of restrictions or a ban.

When determining the suitability of such practices, factors that should be taken into account include:

(a) the environmental hazard of the product, its production, use or ultimate disposal;

(b) substitution by less polluting processes or substances;

(c) scale of use;

(d) potential environmental benefit or penalty of substitute materials or activities;

(e) advances and changes in scientific knowledge and understanding;

(f) time limits for implementation; and (g) social and economic implications.

For more information see: The UN ECE Water Convention - http://www.unece.org/env/water.html

In justifying a broad approach to the definition of pollution, the ILA felt that the nature and effect of pollutants are likely to change over time, so it was better to provide a broad definition, for example 'any detrimental change resulting from human conduct', irrespective of the effects on subsequent users[347] - effects are covered in Article 21(2). The explicit reference to 'human conduct' in Article 21(1) is intended to distinguish between natural and anthropogenic changes, and refers to both acts and omissions, or failures to act.[348]

In obliging states to prevent, reduce and control pollution, 'that may cause significant harm'; Article 21(2) incorporates pollution issues within the general substantive obligation to prevent significant harm contained in Article 7. Certain harm, even leading to significant pollution, may therefore be tolerated if the polluting watercourse state is making its 'best efforts to reduce the pollution to a mutually acceptable level.'[349] The rationale behind such a condition, is to prevent 'undue hardship' or inequitable results, whereby the detriment to the watercourse state experiencing harm is 'grossly disproportionate' to the benefit gained by the polluting watercourse state.[350] However, it should be remembered that the polluting watercourse state is still under an obligation to exercise 'due diligence' (see Glossary of Terms) in the reduction of pollution to an acceptable level, and ensure consistency with Article 20 and other obligations to protect the long-term viability of a renewable resource.

347 Ibid, 11.
348 Ibid, 111.
349 1994 Draft Articles at 122.
350 Ibid.

According to Article 21(2) states are obliged to 'prevent' new pollution, and 'reduce and control' existing pollution that may cause significant harm. The use of the term 'may' in Article 21(2) also recognises a precautionary approach (see Glossary of Terms).[351]

Article 21(2) goes further than Article 7 in one respect, namely that harm may be to 'other watercourse States or to their environment'. As stipulated in Article 21(2) such harm may include harm to 'human health or safety', or the use of water for any beneficial purpose. The choice of the term 'environment' – broader than the concept of 'ecosystem' – was used to cover impacts such as those on 'the living resources of the watercourse', 'flora and fauna dependent upon the watercourse, and the amenities connected with it'.[352]

Like the obligation to protect the ecosystems of international watercourses under Article 20, Article 21(2) requires states to adopt joint measures 'where appropriate'.[353]

Closely aligned with the obligation to take joint measures is the obligation 'to take steps' to harmonise policies relating to pollution. The obligation to harmonise policies, 'addresses the problems that often arise when states adopt divergent policies, or apply different standards, concerning the pollution of international watercourses'.[354] Article 21(3) expands on the need to harmonise polices relating to pollution between states by requiring that, watercourse states consult over joint measures, such as setting joint water quality objectives and criteria; establishing techniques and practices to address point and non-point source

351 Also refer to Article 20 at page 165
352 1994 Draft Articles at 122.
353 See section 20.1 at page 169
354 1994 Draft Articles at 123.

pollution; and establish a list of potentially dangerous substances.

The obligation contained in Article 21(3) is one of consultation, in good faith[355] (see Glossary of Terms), consistent with the general obligation to cooperate. Although the establishment of such standards will often be critical to ensuring that the substantive obligations to prevent, reduce and control pollution are met.

355 Refer to section 3.1.4 at page 91.

The World Health Organisation and Water Quality Standards

The World Health Organisation (WHO) has produced a number of international standards related to water quality and human health. The 2011 Guidelines for Drinking-water Quality provide recommendations for managing risk from hazards that may compromise the safety of drinking-water. The guidelines can be accessed at: http://whqlibdoc.who.int/

An Overview of the Guidelines

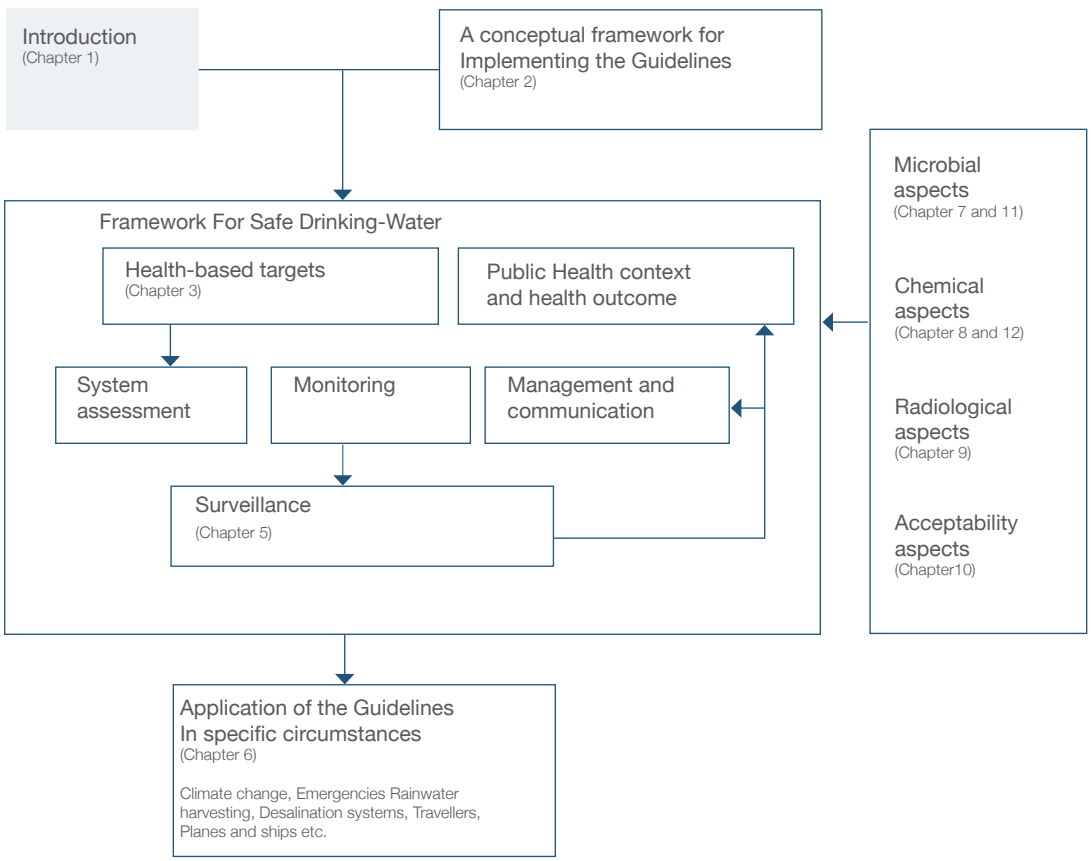


Figure 4.2 |
The World Health Organisation
Water Quality Standards

21.2 Application

21.2.1 Transboundary impacts

A small-scale farmer in state A waters his cattle within the waters of an international watercourse, which results in waste causing detrimental change to the composition and quality of the water. However, such harm is localised and therefore of no harm to human health or safety, or to downstream beneficial uses or living resources of the watercourse in downstream state B. The actions of the farmer in state A do not therefore fall within the scope of the Convention.

21.2.2 Natural vis-à-vis human conduct

Underground percolation of water in state A washes minerals into the waters of an international river, causing a detrimental change in the composition and quality of the water. Such a change is not pollution within the definition contained in Article 21 given that it is naturally occurring.[356]

356 See S Bogdanovic (ed), International Law of Water Resources – Contribution of the International Law Association (1954-2000), 111.

21.3 Additional reading

Bogdanovic S (ed), International Law of Water Resources – Contribution of the International Law Association (1954-2000), 313-326.

ILC, 'Draft Articles on the Law of the Non-Navigational Uses of International Watercourses', UN Doc A/CN.4/L.493 and Add.1 and 2, 121-123.

Lammers JG, Pollution of International Watercourses – Search for Substantive Rules and Principles of Law (Martinus Nijhoff 1984).

McCaffrey SC, The Law of International Watercourses (2nd Ed., Oxford University Press 2007), 448-453.

McIntyre O, Environmental Protection of International Watercourses under International Law (Asgate 2007), 198-221.

Nollkaemper A, The Regime for Transboundary Water Pollution: Between Discretion and Constraint (Martinus Nijhoff 1993).

Tanzi A and Arcari M, The United Nations Convention on the Law of International Watercourses (Kluwer Law International 2001), 246-270.

Article 22 | Introduction of Alien or New Species

Convention text

Watercourse states shall take all measures necessary to prevent the introduction of species, alien or new, into an international watercourse which may have effects detrimental to the ecosystem of the watercourse resulting in significant harm to other watercourse States.

22.1 Commentary

Alien or new species that become invasive are considered to be a major direct driver of biodiversity loss across the globe.[357] The socio-economic costs of prevention, control and mitigation, as well as the indirect impact on ecological services, can be extremely high.[358] However, it should be pointed out that not all alien or new species would have a detrimental effect on ecosystems of international watercourses. As noted by Davis and others, 'increasingly, the practical value of the native-versus-alien species dichotomy in conservation is declining'.[359] The latter authors call for a more considered assessment of the environmental impact of new or alien species, and observe that, 'the effects of non-native species may vary with time, and species that are not causing harm now might do so in the future. But the same is true of natives, particularly in rapidly changing environments'.[360]

The text of Article 22 is sensitive to the latter concerns in that it does not completely ban the introduction of alien or new species. Instead the Article requires states to take all measures necessary to prevent the introduction of alien or new species, 'which may have effects detrimental to the ecosystem of the watercourses resulting in significant harm to other watercourse states'.

The obligation in Article 22 therefore firstly incorporates a precautionary approach through the use of the term 'may', and secondly sets the threshold at 'detrimental effects resulting in significant harm to other watercourse states'.

357 Convention on Biological Diversity, 'Invasive Alien Species – Status, impacts and trends of alien species that threaten ecosystems, habitats and species' (26 February 2001), UN Doc. UNEP/CBD/SBSTTA/6/INF/11, 7.

358 JA McNeely and others (eds.), A Global Strategy on Invasive Alien Species (IUCN 2001).

359 MA Davis, 'Don't Judge Species on their Origin' (2011) 474 Nature 153, 153.

360 Ibid.

Additionally, as with the obligation contained in Article 21, the obligation in Article 22 is one of due diligence, thus requiring states to take all 'appropriate' measures necessary to prevent the introduction of alien or new species (see figure 4.6).

'Species' is defined by the ILC as including, 'both flora and fauna, such as plants, animals and other living organisms.'[361] 'Alien' relates to 'species that are non-native', while 'new' covers, 'species that have been genetically altered or produced through biological engineering.'[362] The provision is intended to cover the introduction of species into the watercourse itself, rather than fish farming or other activities conducted outside the watercourse, with no detrimental impact on the latter. [363]

361 Ibid.
362 Ibid.
363 Ibid.

22.2 Application

State A (upstream) has allowed invasive non-native species, including Himalayan balsam and Japanese knotweed, to develop within the upper reaches of river X. This has resulted in native species being crowded out and, where such species have died down in the winter, river banks have become bare resulting in increased soil erosion. The build up of sedimentation due to the soil erosion has had significant impacts downstream. Most notably, the capacity of storage dams – used for agricultural purposes downstream – has been reduced considerably due to the build up of sedimentation in the dams. Given that state A has not taken any measures to prevent the build up of the alien species within river X, they are deemed to be in violation of Article 22 of the Convention.

Guiding Principles for the Prevention, Introduction and Mitigation of Impacts of Alien Species That Threaten Ecosystems, Habitats or Species, Decision V1/23, Conference of Parties to the 1992 Convention on Biological Diversity

A. General

Guiding Principle 1 – Precautionary Approach:
Given the unpredictability of the pathways and impacts on biological diversity of invasive alien species, efforts to identify and prevent unintentional introductions as well as decisions concerning intentional introductions should be based on the precautionary approach, in particular with reference to risk analysis, in accordance with the guiding principles below. The precautionary approach is that set forth in principle 15 of the 1992 Rio Declaration on Environment and Development and in the preamble of the Convention on Biological Diversity. The precautionary approach should also be applied when considering eradication, containment and control measures in relation to alien species that have become established. Lack of scientific certainty about the various implications of an invasion should not be used as a reason for postponing or failing to take appropriate eradication, containment and control measures.

Guiding Principle 2 – Three-stage hierarchical approach:

(1) Prevention is generally far more cost-effective and environmentally desirable than measures taken following introduction and establishment of an invasive alien species.

(2) Priority should be given to preventing and introduction of invasive alien species, between and within states. If an invasive alien species has been introduced, early detection and rapid action are crucial to prevent its establishment. The preferred response is often to eradicate the organisms as soon as possible (principle 13). In the event that eradication is not feasible or resources are not available for its eradication, containment (principle 14) and long-term control measures (principle 15) should be implemented. Any examination of benefits and costs (environment, economic and social) should be done on a long-term basis.

Guiding principle 3: Ecosystem approach:
Measures to deal with invasive alien species should, as appropriate, be based on the ecosystem approach, as described in decision V/6 of the Conference of the Parties.

Guiding principle 4: The role of states:

(1) In the context of invasive alien species, states should recognize the risk that activities within their jurisdiction or control may pose to other states as a potential source of invasive alien species, and should take appropriate individual and cooperative actions to minimise that risk, including the provision of any available information on invasive behaviour or invasive potential of a species.

(2) Examples of such activities include:

(a) The intentional transfer of an invasive alien species to another state (even if it is harmless in the state of origin); and

(b) The intentional introduction of an alien species into their own state if there is a risk of that species subsequently spreading (with or without a human vector) into another state and becoming invasive;

(c) Activities that may lead to unintentional introductions, even where the introduced species is harmless in the state of origin.

(3) To help states minimise the spread and impact of invasive alien species, states should identify, as far as possible, species which could become invasive and make such information available to other states.

22.3 Additional reading

Convention on Biological Diversity, 'Invasive Alien Species – Status, impacts and trends of alien species that threaten ecosystems, habitats and species' (26 February 2001), UN Doc UNEP/CBD/SBSTTA/6/INF/11.

Convention on Biological Diversity, 'Alien Species That Threaten Ecosystems, Habitats or Species', Conference of the Parties Decision VI/23, <http://www.cbd.int/decision/cop/?id=7197> accessed 24 October 2011.

ILC, 'Draft Articles on the Law of the Non-Navigational Uses of International Watercourses', UN Doc A/CN.4/L.493 and Add.1 and 2, 123-124.

McNeely JA and others (eds.), A Global Strategy on Invasive Alien Species (IUCN 2001).

Tanzi A and Arcari M, The United Nations Convention on the Law of International Watercourses (Kluwer Law International 2001), 271-274.

Article 23 | Protection and Preservation of the Marine Environment

Convention text

Watercourse states shall, individually and, where appropriate, in cooperation with other states, take all measures with respect to an international watercourse that are necessary to protect and preserve the marine environment, including estuaries, taking into account generally accepted international rules and standards.

23.1 Commentary

Land-based pollution is considered to be the single most important cause of marine pollution, contributing an estimated 80 percent of all marine pollution.[364] Various land-based sources may causes pollution, including municipal, industrial and agricultural practices. These sources may reach the marine environment from the coast, the atmosphere, and via international watercourses.[365] Economic development, coupled with a greater scientific understanding of the linkages between freshwater and marine ecosystems, has meant that there is now a greater recognition of the fact that the status of the marine environment is largely dependent on the behaviour of states that may not even belong to a particular maritime region.[366] Those states may be land-locked and not necessarily affected by the marine pollution.[367]

Article 23 seeks to address this situation by providing a bridge between two legal regimes, the law of international watercourses and the law of the sea.[368] In so doing, the Article complements provisions contained in various treaties dealing with marine environments. Such treaties include the UN Convention on the Law of the Sea, which requires states to, 'adopt laws and regulations to prevent, control and reduce pollution of the marine environment from land-based sources, including rivers, estuaries, pipelines and outfall structures, taking into account internally agreed rules, standards and recommended

364 UN General Assembly, 'Oceans and the Law of the Sea, Report of the Secretary-General,' (18 August 2004), UN Doc A/59/62/Add.1, 29.

365 Y Tanaka, 'Regulation of Land-based Marine Pollution in International Law: A Comparative Analysis Between Global and Regional Legal Frameworks' (2006) 66 Heidelberg Journal of International Law 533.

366 S Vinogradov, 'Marine Pollution via Transboundary Watercourses – An Interface of the 'Shoreline' and 'River-Basin' Regimes in the Wider Black Sea Region', (2007) 22(4) The International Journal of Marine and Coastal Law 585, 585-586.

367 Ibid.

368 A Chircop, 'Marine Pollution from Land-Based Activities: Legal Regimes and Management Frameworks', in D Vidas and W Ostreng, eds., Order for the Oceans at the Turn of the Century (Kluwer Law International 1999), 174.

practise and procedures'.[369] The latter Convention goes on to stipulate that, 'states, acting especially through competent international organisations or diplomatic conference, shall endeavour to establish global and regional rules, standards and recommended practices and procedures to prevent, reduce and control pollution of the marine environment from land-based sources'.[370]

While there is no legally-binding global instrument dealing exclusively with land-based pollution, a non-binding set of recommendations and guidelines have been adopted by UNEP's Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA) (see figure 20.6).[371] At the regional level a number of legally-binding instruments deal with land-based sources of pollution. While most regional regimes only include coastal states within their membership, some allow for non-coastal states to become party.[372] In its reference to taking into account, 'generally accepted rules and standards relating to the protection and preservation of the marine environment', Article 23 seeks to ensure that watercourse state practice reflects these global and regional instruments. In reference to the obligation to 'take into account', Tanzi and Arcari comment that the obligation, 'is not to impose on watercourse states the straightforward application of rules and standards drawn from different agreements, but, more modestly, that of ensuring that the measures that states are planning or implementing on an international watercourse under Article 23 of the Convention be at least consistent with the pertinent rules and standards governing the protection and preservation of the marine environment.'[373]

Additionally, through the use of the term 'take all measures… that are necessary to protect and preserve', Article 23 adopts the same standard of responsibility contained, and discussed, under Article 7, namely that of due diligence (see Glossary of Terms). What may be deemed as appropriate can be gleaned from the global and regional instruments noted above. Measures that might be considered 'appropriate' could therefore include environmental impact assessments, monitoring, notification, information exchange and consultation, scientific and technical cooperation, assistance to developing countries, development of control strategies, and so forth.[374]

The same standards to protect and preserve are also included, which would incorporate the precautionary approach (see Glossary of Terms). Additionally, the same requirement as contained in Article 20 is included, namely to cooperate, 'where appropriate', with other states.[375] However, a slight variation occurs in reference to 'other states' rather than 'watercourse states'. This deviation reflects that scenario whereby states sharing a particular marine environment, but not necessarily the same watercourse, may find it advantageous to cooperate.

The ILC Commentary makes it clear that the obligation set forth in this Article is not an obligation to protect the marine environment in the strict sense of the term, but rather a more precise one to take measures with respect to an international watercourse that are necessary to protect the marine environment.[376] The latter commentary also makes it clear that

369 UN Convention on the Law of the Sea, Article 207.

370 UN Convention on the Law of the Sea, Article 207(4).

371 UNEP, 'Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities' (5 December 1995), UN Doc UNEP(OCA)/LBAIIG.2/7.

372 S Vinogradov, 'Marine Pollution via Transboundary Watercourses – An Interface of the 'Shoreline' and 'River-Basin' Regimes in the Wider Black Sea Region', 590-591.

373 A Tanzi and M Arcari, The United Nations Convention on the Law of International Watercourses, 278.

374 See generally, Y Tanaka, 'Regulation of Land-based Marine Pollution in International Law: A Comparative Analysis Between Global and Regional Legal Frameworks'; Also see UNEP, 'Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities'.

375 See section 20.1

376 Refer 1994 Draft Articles at 124-125.

The Global Programme of Action for the Protection of the Marine Environment from Land-based Sources recommends that states:

A. Identify and assess problems related to the:

(1) nature and severity of problems in relation to: food security and poverty alleviation; public health; coastal and marine resources and ecosystem health, including biological diversity; and economic and social benefits and uses, including cultural values.

(2) severity and impacts of contaminants including sewage, persistent organic pollutants, radioactive substances, heavy metals, oils, nutrients, sediment mobilisation and litter.

(3) physical alteration, including habitat modification and destruction, in areas of concern.

(4) sources of degradation, including: coastal and upstream point sources; coastal and upstream non-point (diffuse) sources; and atmospheric deposition caused by transportation, power plants and industrial facilities, incinerators and agricultural operations.

(5) the affected or vulnerable areas of concern such as critical habitats, habitats of endangered species, ecosystem components, shorelines, coastal watersheds, estuaries, special protected marine and coastal areas, and small islands.

B. Establish priorities for action by assessing the five factors above, reflecting the relative importance of impacts upon food security, public health, coastal and marine resources, ecosystem health, and socio-economic benefits, including cultural values in relation to

(i) source categories,

(ii) the area affected

(iii) the costs, benefits and feasibility of options for action. In the process of establishing priorities, states should (amongst others):

(1) apply integrated coastal area management approaches, including provisions to involve stakeholders.

(2) recognise the basic linkages between the freshwater and marine environment through application of watershed management.

(3) recognise the basic linkages between sustainable development of coastal and marine resources, poverty alleviation and protection of the marine environment.

(4) apply environmental impact assessment procedures in assessing options. (5) integrate national action with any relevant regional and global priorities, programmes and strategies.

C. Set management objectives for priority problems for source categories and areas affected on the basis of established priorities.

D. Identify, evaluate and select strategies and measures to achieve these objectives.

E. Develop criteria for evaluating the effectiveness of strategies and measures.

For more information see http://www.gpa.depiweb.org.

the requirement in Article 23 is separate from the obligations contained in Articles 20-22. Activities that cause pollution to an estuary may therefore not meet the threshold of significant harm, as stipulated for in Article 21, but could still be deemed to have breached the requirement contained in this article to protect and preserve an estuary.[377]

377 1994 Draft Articles at 124.

23.2 Application

In recent years a coral reef ecosystem shared between the coastal states B and C has become severely degraded. It is difficult to pinpoint one factor that has led to the degradation of the coral reef, but likely causal factors include excessive sediment, nutrient, toxins, and pathogen loads. State A, a land-locked country, is heavily reliant on agricultural practices. State A has also in recent years exploited its forests for additional income. As well as its contribution to pollution loads, these upstream activities have resulted in high levels of sedimentation – which is acknowledged as one of the primary causes of coral reef ecosystem degradation. While states B and C are parties to an agreement that seeks to protect the coral reef ecosystem, there is no provision for allowing additional states to become party to the agreement. States B and C therefore amend the agreement to allow in-land states to become party to it, where the activities of those states impact on the status of the coral reef. State A then become a party to the wider agreement and its activities are aligned with that of Article 23 of the UN Watercourses Convention.

Regional Sea Conventions Addressing Land-based Pollution

- Convention for the Protection of the Mediterranean Sea Against Pollution (adopted 16 February 1976, entered into force 1978), and Protocol on Land-Based Sources (adopted 17 May 1980, entered into force 17 June 1983)
- Kuwait Regional Convention for Cooperation on the Protection of the Marine Environment From Pollution (adopted 24 April 1978, entered into force 1 July 1979), and Protocol for the Protection of the Marine Environment Against Pollution from Land-based Sources (adopted 1990, entered into force 2 January 1993)
- Convention for Cooperation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region (adopted March 1981, entered into force 5 August 1984)
- Convention for the Protection of the Marine Environment and Coastal Area of the South-East Pacific (adopted 12 November 1981, entered into force 19 May 1986), and Protocol for the Protection of the South-east Pacific Against Pollution from Land-based Sources (adopted 23 July 1983, entered 21 September 1986)
- Regional Convention for the Conservation of the Red Sea and Gulf of Aden Environment (adopted 14 February 1982, entered into force 20 August 1985)
- Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (adopted 24 March 1983, entered into force 11 October 1986), and Protocol on the Prevention, Reduction and Control of Land-based Sources and Activities (6 October 1999, entered into force 13 August 2010)
- The Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region (adopted 21 June 1985, entered into force 1986)
- Convention for the Protection of Natural Resources and Environment of the South Pacific Region (adopted 24 November 1986, entered into force 22 August 1990)
- Convention on the Protection of the Black Sea Against Pollution (adopted 21 April 1992, 15 January 1994), and Protocol on Protection of the Black Sea Marine Environment Against Pollution from Land-based Sources (adopted 17 April 2009, not yet in force)
- Convention for Cooperation in the Protection and Sustainable Development of Marine and Coastal Environment of the Northeast Pacific (adopted 18 February 2002, not yet in force)
- The Convention for the Protection of the Marine Environment of the North-east Atlantic (adopted 22 September 1992, entered into force 25 March 1998)

23.3 Additional reading

Boyle A, 'The Law of the Sea and International Watercourses: An emerging cycle' (1990) 4 Marine Policy 151.

Burchi S, 'International Legal Aspects of Pollution of the Sea from Rivers' (1977) 3 Italian Yearbook of International Law 115.

Chircop A, 'Marine Pollution form Land-Based Activities: Legal regimes and management frameworks' in Vidas, D and Ostreng W, eds, Order for the Oceans at the Turn of the Century (Kluwer Law International 1999).

ILA, 'Marine Pollution of Continental Origin', Report of the Fifty-fifth Conference, New York 1971, in Slavko Bogdanovic (ed), International Law of Water Resources – Contribution of the International Law Association (1954-2000) (Kluwer Law International 2001).

ILC, 'Draft Articles on the Law of the Non-Navigational Uses of International Watercourses', UN Doc A/CN.4/L.493 and Add.1 and 2, 124-125.

Kirk E, 'Non-compliance and the Development of Regimes Addressing Marine Pollution from Land-Based Activities' (2008) 39(3) Ocean Development and International Law 235.

Villenueuve C, 'The Contribution of Regional River Treaties to the Protection of the North Sea' (1998) 13 The International Journal of Maritime and Coastal Law 373.

Vander Zwaag DL and Powers A, 'The Protection of the Marine Environment from Land-Based Pollution and Activities: Gauging the Tides of Global and Regional Governance' 23(3) The International Journal of Marine and Coastal Law 423.

Vinogradov S and Kirk E, Implementation of the GPA at Regional Level – the role of the regional sea conventions and their protocols (UNEP/GPA 2006).

Vinogradov S, 'Marine Pollution via Transboundary Watercourses – An Interface of the 'Shoreline' and 'River-Basin' Regimes in the Wider Black Sea Region', (2007) 22(4) The International Journal of Marine and Coastal Law 585.

Article 24 | Management

Convention text

1. Watercourse states shall, at the request of any of them, enter into consultations concerning the management of an international watercourse, which may include the establishment of a joint management mechanism.
2. For the purposes of this article, 'management' refers, in particular, to: (a) planning the sustainable development of an international watercourse and providing for the implementation of any plans adopted; and (b) otherwise promoting the rational and optimal utilisation, protection and control of the watercourse.

24.1 Commentary

Article 24(1) can be seen as an extension of a number of articles contained within the Convention, most notably at the general level, the obligation to cooperate (Article 8) and the obligation of equitable participation in Article 5(2). 'Joint management mechanisms' may also be the most appropriate instrument to implement a range of specific provisions contained within the Convention, such as the need to regularly exchange data and information (Article 9), the requirement to notify and consult on planned measures (Articles 11-19), the obligation to protect and preserve ecosystems (Article 20, and Articles 21-23), regulate flow (Article 25), prevent and mitigate harmful conditions (Article 27), address emergency situations (Article 28), and settle disputes peacefully (Article 33).

The obligation contained in Article 24, consistent with Article 8, is to 'enter into consultations', concerning the management of an international watercourse, 'which may' include the establishment of a joint management mechanism. The result of any consultations is therefore left open, and there is no explicit obligation to actually establish such mechanisms. The UN Watercourses Convention therefore falls short of the stricter requirement contained in the 1992 UN ECE Water Convention which, pursuant to Article 9(2), explicitly requires riparian parties to establish 'joint bodies'.[378]

However, in his sixth ILC report as Special Rapporteur, McCaffrey observed that, 'the management of international watercourse systems through joint institutions is not only an increasingly common phenomenon, but also a form of co-operation between watercourse States that is almost indispensable if anything approaching optimum utilisation and protection of the system of waters is to

378 Convention on the Protection and Use of Transboundary Watercourses and International Lakes (adopted 17 March 1992, entered into force 6 October 1996), (1992) 31 International Legal Materials 1312.

be attained' [emphasis added].[379] Similar sentiments were voiced by the ILA, which observed that, 'the need for an institutionalised co-ordination of competitive and concurrent needs and interests is deeply felt by the international community and is evidenced by the considerable number of agreements concluded in this respect.' [380]Effective implementation of the Convention will therefore almost invariably rest on some degree of joint institutional arrangement being established between watercourse states.

What might constitute a 'joint management mechanism' is also quite open. In its commentary, the ILC suggested that the term 'joint management mechanism' might encompass not only formal organisational arrangements, but less formal means such as, 'the holding of regular meetings between the appropriate agencies or other representatives of the States concerned.' [381] The ILA adopted alternative terminology when it considered 'international water resource administrations', which were defined as, 'any form of institutional or other arrangement established by agreement among two or more Basin States', thus recognising the need to formalise the relationship. In adopting the latter approach, the ILA commented that, 'it is not possible in the abstract to suggest any particular type of administrative institution such as a single or several, ad hoc or permanent, technical or political, joint international, co-ordinating, policy-making, operational or regulatory commissions, committees, boards, authorities or agencies'.[382] Pursuant to the 1992 UN ECE Water Convention, 'Joint Bodies' are defined as, 'any bilateral or multilateral commission or other appropriate arrangements for cooperation between the riparian parties.'[383] The Guide to Implementing the Convention goes further by describing 'joint commissions' as, 'a collective term meant to cover also, for example, "joint water authority", "committee", "joint working group", etc'.[384]

Article 24(2) of the UN Watercourses Convention sets out the common features of 'management' including planning and implementation. Most of the specific terms contained in Article 24(2) are included in other provisions of the Convention, which can be read as an explicit attempt to align management activities with the substantive Articles 5-7. The ILC goes on to observe that, 'management' would include the functions of, 'planning of sustainable, multi-purpose and integrated development of international watercourses; facilitation of regular communication and exchange of data and information between watercourse states; and monitoring international watercourses on a continuous basis' (see Figure 20.8).[385]

The UNECE's Implementation Guide identifies some common features of commissions, including: (i) a permanent body meeting reasonably regularly; (ii) compromised of representations of riparian states, including officials from water and water-related authorities from national, regional and local authorities; (iii) with decision-making, executive and subsidiary bodies, such as working or expert groups, monitoring, data collection and processing unites; and (iv) often including a secretariat.[386]

379 ILC, 'Sixth Report on the Law of the Non-navigational Uses of International Watercourses, by Mr Stephen C McCaffrey, Special Rapporteur', UN Doc A/CN.4/436 and Corr 1, para. 7.

380 S Bogdanovic (ed), International Law of Water Resources – Contribution of the International Law Association (1954-2000), 251.

381 1994 Draft Articles at 125.

382 S Bogdanovic (ed), International Law of Water Resources – Contribution of the International Law Association (1954-2000), 253.

383 UN ECE, 'Draft Guide to Implementing the Convention, (31 August 2009), UN Doc ECE/MP.WAT/2009/L.2, 88-92

384 Ibid.

385 1994 Draft Articles at 125.

386 UN ECE, 'Draft Guide to Implementing the Convention, 89.

Roles and Responsibilities of 'Joint Bodies' under the 1992 UN ECE Water Convention

The 1992 UN ECE Water Convention identifies a number of tasks that 'joint bodies' should conduct including,

(a) To collect, compile and evaluate data in order to identify pollution sources likely to cause transboundary impact;

(b) To elaborate joint monitoring programmes concerning water quality and quantity;

(c) To draw up inventories and exchange information on the pollution sources;

(d) To elaborate emission limits for waste water and evaluate the effectiveness of control programmes;

(e) To elaborate joint water-quality objectives and criteria, and to propose relevant measures for maintaining and, where necessary, improving the existing water quality;

(f) To develop concerted action programmes for the reduction of pollution loads from both point sources (e.g. municipal and industrial sources) and diffuse sources (particularly from agriculture);

(g) To establish warning and alarm procedures;

(h) To serve as a forum for the exchange of information on existing and planned uses of water and related installations that are likely to cause transboundary impact;

(i) To promote cooperation and exchange of information on the best available technology, as well as to encourage cooperation in scientific research programmes;

(j) To participate in the implementation of environmental impact assessments relating to transboundary waters, in accordance with appropriate international regulations.

For more information see 'UNECE, River basin commissions and other institutions for transboundary water cooperation' (2009),http://www.unece.org/fileadmin/DAM/env/water/documents/CWC_publication_joint_bodies.pdf> accessed 18 May 2012.

In its Guidelines for the Establishment of an International Water Resources Administration,the ILA goes further by recommending that such institutions serve a range of functions, including (i) advisory, consultative, co-ordinating, or policy-making; (ii) executive, such as carrying out studies, exploration, investigation and surveys, preparation of feasibility reports, inspection and control construction, operation, maintenance and financing; (iii) regulatory function, including implementation of decisions of the administration, as well as law-making; and (iv) judicial, including arbitration and final dispute settlement. In terms of objects and purposes, the ILA Guidelines suggest that such institutions should: (i) collect and exchange information and data; (ii) formulate, co-ordinate and exchange joint and national plans; (iii) construct, operate and maintain waterworks; (iv) control one or more beneficial uses of water; (v) control the harmful effects of water; and (vi) control water quality. Similarly, the 1992 UN ECE Water Convention provides specific tasks that joint bodies must carry out.

24.2 Application

State A, B and C share river X. The catchment of the river is largely within the territory of states B and C, although state A's territory contributes part of the flow of the river. States B and C have entered into a treaty arrangement for the joint use, development and protection of river X. The arrangement sets up a sophisticated institutional arrangement which includes a joint commission encompassing a secretariat, working groups, and so forth. The activities of the commission include joint monitoring of the river, joint infrastructure development, stakeholder participation, and compliance and enforcement mechanisms. State B and State C consider that the commission has been an effective means by which to use, develop and protect river X in a collective manner. Given the success of the institutional arrangement, States B and C would like state A to become party to the institutional arrangement. State A is not willing to become party to the institutional arrangement. While state A is keen to cooperate with states B and C in the sharing of data and information, monitoring, development plans, and so forth it feels that the financial costs of joining such a sophisticated institutional arrangement as the commission outweigh the benefits. States B and C argue that state B has an obligation to join the commission given the explicit and implicit requirements under Article 24 of the UN Watercourses Convention. As no agreement can be made, and in an endeavour to maintain good relations between the states, the parties submit their dispute to a tribunal. The court supports state A's position on the basis that its contribution and use of the river is negligible compared to States B and C, and it is therefore able to satisfy the requirements of the Convention in relation to river X without entering into any institutional arrangement.

24.3 Additional reading

Burchi S and Spreij M, Institutions for International Freshwater Management (UNESCO 2003).

Dombrosky I, Conflict, Cooperation and Institutions in International Water Management: An Economic Analysis (Edward Elgar 2007).

Ely N and Wolman A, 'Administration', in Garretson, AH, Hayton RD and Olmstead CJ (eds.), The Law of International Drainage Basins (Oceana Publications 1968).

ILA, 'Administration of International Watercourses', in S Bogdanovic (ed), International Law of Water Resources – Contribution of the International Law Association (1954-2000) (Kluwer Law International 2001), 245-268.

ILC, 'Draft Articles on the Law of the Non-Navigational Uses of International Watercourses', UN Doc A/CN.4/L.493 and Add.1 and 2, 125-127.

'International River Basin Organisations' <http://www.transboundarywaters.orst.edu/research/RBO> accessed 25 October 2011.

Tanzi A and Arcari M, The United Nations Convention on the Law of International Watercourses (Kluwer Law International 2001), 214-216.

UN ECE, 'Draft Guide to Implementing the Convention, (31 August 2009), UN Doc ECE/MP.WAT/2009/L.2, 88-92.

Article 25 | Regulation

Convention text

1. Watercourse states shall cooperate, where appropriate, to respond to the needs or opportunities for regulation of the flow of the waters of an international watercourse.
2. Unless otherwise agreed, watercourse states shall participate on an equitable basis in the construction and maintenance or defrayal of the costs of such regulation works as they may have agreed to undertake.
3. For the purposes of this article, 'regulation' means the use of hydraulic works or any other continuing measure to alter, vary or otherwise control the flows of the waters of an international watercourse.

25.1 Commentary

The ILA justifies the need for regulation on that basis that, 'under natural conditions, the periodic changes of the flow of water of an uncontrolled watercourse may lead to damage during high flood-flows, and on the other hand may lead to scarcity of water during a dry period.'[387] A strong link therefore exists between this Article and Article 20. As noted previously, Article 20 implies the need to recognise a 'minimum flow.'[388] On this point, Utton and Utton maintain that, 'river regulation directly mandates the maintenance of minimum flows for the dilution of pollutants and for other reasons.'[389]

Article 25(3) defines 'regulation' as meaning 'the use of hydraulic works or any other continuing measures to alter, vary or otherwise control the flows of the waters of an international watercourse.' Such measures might include 'dams, reservoirs, weirs, canals, embankments, dykes, and river ban fortifications'.[390] A similar approach is adopted by the ILA, which define regulation as, 'continuing measures intended for controlling, moderating, increasing and otherwise modifying the flow of the waters in an international watercourse for any purpose; such measures may include storing, releasing and diverting of water by means such as dams, reservoirs, barrages and canals'[391].

As well as defining the scope of regulation activities, Article 25 also sets out the obligations incumbent upon states, which can be seen as an extension of the requirements found elsewhere in the Convention, such as the substantive requirements under Articles 5 and 7 to utilise an international watercourse in an equitable reasonable manner, and under Article 8 the

387 S Bogdanovic (ed), International Law of Water Resources – Contribution of the International Law Association (1954-2000), at 253.

388 See pages 167-168.

389 AE Utton and J Utton, 'The International Law of Minimum Stream Flows' (1999) 10 Colorado Journal of International Law and Policy 7, 36.

390 1994 Draft Articles at 127.

391 S Bogdanovic (ed), International Law of Water Resources – Contribution of the International Law Association (1954-2000), 274.

obligation to cooperate. Article 25(1) therefore sets out the obligation that, 'where appropriate' states should cooperate in the regulation of international watercourses. The importance of such cooperation is clearly spelled out by the ILA which states:

'The regulation of a border-river is hardly possible without the co-operation or consent of the state on the other side of the river. As regards watercourses crossing state borders, efficient regulation of activities likewise require the close co-operation of the states concerned. There are often important reasons which speak in favour of a joint venture but also in other cases it is obvious that legal questions relating to the regulation of an international watercourse must be settled by an agreement between the states concerned.'[392]

The ILA also points out that, 'planning and the realisation of regulation may be a very complicated undertaking. Different kinds of information, particularly meteorological and hydrological data, must be collected, technical possibilities and economic factors must be evaluated, and the legal conditions of the undertaking must be cleared up and settled.'[393]

Clearly, within an international watercourse, such activities require a strong level of cooperation between watercourse states.
Cooperative activities are likely to include:

(i) the collection and exchange of data;

(ii) the preparation and mutual exchange of surveys, investigations and studies;

(iii) planning and designing of relevant measures;

(iv) operation and maintenance of works;

(v) sharing expenses; and

(vi) forecasting and communication of relevant hydrological data.[394]

However, the ILC is keen to point out that the use of the term 'where appropriate' implies that states are not under a strict obligation to identify needs and opportunities for regulation, but rather to 'respond to those that exist.'[395]

Consistent with Article 5(2) of the UN Watercourses Convention any form of cooperation between watercourse states will be agreed on an equitable basis. Where the construction and maintenance of regulation works has taken place, the costs and benefits of such activities will therefore be allocated on an equitable basis. If one state derives all the benefits from regulation, on the basis of equity, they should bear the full costs.[396]

392 Ibid, 271.
393 Ibid, 271.
394 Ibid, 280.
395 1994 Draft Articles at 126.
396 Ibid, 127.

25.2 Application

State A, an upstream state, has developed a dam upstream on river X, which is primarily used for hydropower generation, although water is stored within the reservoir for the benefit of agricultural needs within the state. State A is a relatively poor state compared to its downstream neighbour state B. State A wishes to store more water in the reservoir in order to provide increased supplies of water for agricultural purposes throughout the year. However, state B argues that such water storage will have a detrimental effect on their downstream agricultural needs. Having jointly commissioned a joint options appraisal, the parties agree to jointly cooperate over the regulation of the river. Annual, seasonal and monthly flow regimes are therefore worked out, which allow for agricultural needs in upstream state A, as well has hydropower generation. State B is able to benefit from relatively stable water flows to satisfy its basic agricultural requirements. While there is not enough water for state B to expand its agricultural industry in the river basin, it is able to rely on favourable prices for the sale of energy from the hydropower generation in upstream state A, which benefits industrial development in the region.

25.3 Additional reading

ILA, 'Regulation of the Flow of Water of International Watercourses, in S Bogdanovic (ed), International Law of Water Resources – Contribution of the International Law Association (1954-2000) (Kluwer Law International 2001), 269-292.

ILC, 'Draft Articles on the Law of the Non-Navigational Uses of International Watercourses', UN Doc A/CN.4/L.493 and Add.1 and 2, 126-127.

'International River Basin Organisations' <http://www.transboundarywaters.orst.edu/research/RBO> accessed 25 October 2011.

Tanzi A and Arcari M, The United Nations Convention on the Law of International Watercourses (Kluwer Law International 2001), 214-216.

Article 26 | Installations

Convention text

1. Watercourse states shall, within their respective territories, employ their best efforts to maintain and protect installations, facilities and other works related to an international watercourse.
2. Watercourse states shall, at the request of any of them which has reasonable grounds to believe that it may suffer significant adverse effects, enter into consultations with regard to: (a) The safe operation and maintenance of installations, facilities or other works related to an international watercourse; and (b) the protection of installations, facilities or other works from wilful or negligent acts or the forces of nature.

26.1 Commentary

Article 26 of the UN Watercourses Convention concerns 'installations, facilities and other works' which are defined by the ILC as including, 'dams, barrages, dykes and weirs.'[397] As stipulated in Article 26(1), and consistent with the due diligence obligations (see Glossary of Terms) found elsewhere in the Convention, states are under an obligation to employ their 'best efforts' to maintain and protect installations, facilities and other works. The question of whether or not a state has fulfilled this obligation will therefore rest on examination of its capacity. As noted by the ILC:

'A watercourse state should exercise due diligence to maintain a dam, that is to say, keep it in good order, such that it will not burst, causing significant harm to other watercourse states. Similarly, all reasonable precautions should be taken to protect such works from foreseeable kinds of damage due to forces of nature, such as floods, or to human acts, whether wilful or negligent. The wilful acts in question would include terrorism and sabotage, while negligent conduct would encompass any failure to exercise ordinary care under the circumstances which resulted in damage to the installation in question.'[398]

397 1994 Draft Articles at 127.
398 Ibid, 128.

Article 26(2) requires states to enter into consultations, where one state has, 'reasonable grounds' to believe that they may suffer significant adverse effects. As noted above,[399] in the use of the term 'may suffer significant adverse effects', the threshold is set at a lower level than significant harm. Article 26(2) envisages two scenarios in which consultations might arise. Firstly, in relation to operation and maintenance; and secondly, where 'wilful or negligent acts or forces of nature' arise. This Article should be contrasted with Article 28 dealing with emergency situations. While the latter Article deals with imminent threats, Article 26 would be more preventative in nature.

399 See section 3.1.3 for an explanation of significant adverse effects.

26.2 Application

State A, an upstream state, has neglected to maintain a dam in the upper reaches of river X. Much of the area's population has moved elsewhere in search of jobs and improved livelihoods. The dam is therefore not used for any purposes. The region is particular vulnerable to earthquakes and one day an earthquake compromises the integrity of the dam, which leads to a major release of water from the reserve. This in turn impacts on the lives and livelihoods of populations living alongside the river in downstream state B. Pursuant to Article 26, state A is found liable for the damage caused due to the improper maintenance of the dam.

26.3 Additional reading

ILC, 'Draft Articles on the Law of the Non-Navigational Uses of International Watercourses', UN Doc A/CN.4/L.493 and Add.1 and 2, 127-128.

Tanzi A and Arcari M, The United Nations Convention on the Law of International Watercourses (Kluwer Law International 2001), 220-221.

Part V | Harmful Conditions and Emergency Situations (Articles 27-28)

Key points

- Article 27 of the UN Watercourses Convention provides that states are under an obligation to individually and, where appropriate, jointly take measures to prevent or mitigate harmful conditions that may be a result of both natural causes, such as floods and droughts, or human conduct.
- In focusing on the prevention and mitigation of harmful conditions, Article 27 provides an important bridge to strategies concerning the adaptation to climate change.
- While Article 27 focuses on the prevention and mitigation of harmful conditions, Article 28 deals with the situation where harmful conditions nevertheless occur.
- Pursuant to Article 28 states must notify potentially affected states and competent international organisations of emergency situations; and states should cooperate in order to prevent, mitigate and eliminate the effects of such emergency situations.
- Article 28 also requires states and international organisations, where necessary, to jointly develop contingency plans to respond to emergencies.

Article 27 | Prevention and Mitigation of Harmful Conditions

Convention text

Watercourse states shall, individually and, where appropriate, jointly, take all appropriate measures to prevent or mitigate conditions related to an international watercourse that may be harmful to other watercourse states, whether resulting from natural causes or human conduct, such as flood or ice conditions, water-borne diseases, siltation, erosion, salt-water intrusion, drought or desertification.

27.1 Commentary

In recent years there has been a growing recognition that climate change will continue to cause an increase in the magnitude and frequency of extreme events. Such events will have a range of impacts on social, economic and environmental uses of international watercourses (See figure 27.1). Article 27 of the UN Watercourses Convention deals with the prevention and mitigation of such events or 'harmful conditions'. Pursuant to the article, these 'harmful conditions' include 'flood or ice conditions, water-borne diseases, siltation, erosion, salt-water intrusion, drought or desertification.' While limited in content, this Article provides an important link between the law of international watercourses, and international law and policy relating to climate change adaptation.

In terms of international law relating to climate change, the 1992 Climate Change Convention obliges states to, 'cooperate in preparing for adaptation to the impacts of climate change; develop and elaborate appropriate and integrated plans for coastal zone management, water resources and agriculture, and for the protection and rehabilitation of areas, particular in Africa, affected by drought and desertification, as well as floods.'[400]

Along similar lines but in more general terms Article 27 of the UN Watercourses Convention requires states to adopt, 'all appropriate measures' to prevent or mitigate conditions related to an international watercourse that may be harmful to other watercourse states; thus couching this Article as a due diligence obligation.

While what may constitute 'appropriate measures' has been discussed generally within the context of Article 7 of the UN Watercourses Convention,[401] it is important to recognise that there has been a growing trend to develop adaptation measures to cope with the impacts of climate change. The importance of such adaptation measures cannot be underestimated. As noted by the UN ECE, 'adaptation to climate change is … indispensable and urgent since the climate is already changing in some respects, and mitigation will take too long to show effects. Further climate change throughout this century and beyond is almost certain even if global mitigation efforts prove successful. In addition it is more cost-effective to start preparing adaptation now.'[402]

Tarlock maintains that, 'adaptation to the projected adverse hydrological impacts of global climate change requires the presence of a reasonably well-developed property rights regime in the effected basin, and that the regime must be supported by public and private adaptive management institutions'.[403] Within the context of international watercourses, joint institutions are therefore considered an effective mechanism by which to cope with the hydrological impacts of climate change. Tanzi and Arcari even maintain that, 'the fact that a state has adopted all the appropriate measures that can be taken individually may not be sufficient to face certain harmful conditions or emergency situations adequately. Cooperation through joint action could be required according to the circumstances pertaining either to the nature of the actual harmful conditions, or to the affected area' [emphasis added].[404]

400 UN Framework Convention on Climate Change (adopted 9 May 1992, entered into force 24 March 1994) (1992) 31 International Legal Materials 849, art 4(1) (e).

401 See section 7.1.

402 UN ECE, Guidance on Water and Adaptation to Climate Change (UN 2009), 11.

403 D Tarlock, 'How Well Can International Water Allocation Regimes Adapt to Global Climate Change?' (2000) 15 Journal of Land Use and Environmental Law 423, 424.

404 A Tanzi and M Arcari, The United Nation Convention on the Law of International Watercourses (Kluwer Law International 2001), 222. See also S C McCaffrey, 'The Need for Flexibility in Freshwater Treaty Regimes' (2003) Natural Resources Forum 156, 160-161.

Observed effect	Observed/ possible impacts
Increase in atmospheric temperature	• Reduction in water availability in basins fed by glaciers that are shrinking, as observed in some cities along the Andes in South America
Increase in surface water temperature	• Reductions in dissolved oxygen content, mixing patterns, and self purification capacity • Increase in algal blooms
Sea-level rise	• Salinisation of coastal aquifers
Shifts in precipitation patterns	• Changes in water availability due to changes in precipitation and other related phenomena (e.g. groundwater recharge, evaportranspiration
Increase in interannual precipitation variability	• Increases the difficulty of flood control and reservoir utilisation during the flooding season
Increased evapotranspiration	• Water availability reduction • Salinisation of water resources • Lower groundwater levels
More frequent and intense extreme events	• Floods affect water quality and water infrastructure integrity, and increase fluvial erosion, which introduces different kinds of pollutants to water resources • Droughts affect water availability and water quality

Figure 5.1 | Effects of climate change and its impacts on water services

Amended from BC Bates, ZW Kundzewicz, S Wu and JP Palutikof (eds.), Climate Change and Water (IPPC 2008), 70.

Adaptation Planning and Practices - Work Area 6 of the Nairobi Work Programme

Work area 6 of the Nairobi work programme, under the UN Climate Change Convention, seeks to collect, analyse and disseminate information on past and current practical adaptation actions and measures so that governments, relevant organisations, business, communities, decision makers, and other regional and national stakeholders can learn from each other to reduce vulnerability and adapt to the impacts of climate change in the most effective manner. The range of potential adaptation actions include short- and long-term strategies and projects involving changes in lifestyle and behaviour, resource management such as farming, food and water storage, and changes in regulatory frameworks and laws such as for housing and infrastructure. The effectiveness of a practice tends to be context-specific, although there is still much value in sharing knowledge and information on practices so that they can be considered, replicated, improved and/or adapted to suit different needs, scales and geographic locations.

(For more information see: http://unfccc.int/adaptation/nairobi_work_programme/programme_activities_and_work_areas/items/3991.php)

Within the context of Article 27 of the UN Watercourses Convention, the ILC identifies a number of measures that may assist in the prevention and mitigation of harmful conditions and might be facilitated through joint institutions, namely the regular and timely exchange of data and information, holding consultations concerning planning and implementation of joint measures, and the preparation of studies of the efficacy of measures that have been taken'. [405] Cooley and others also suggest that an important role that can be played by joint institutions is 'to convene a technical committee to develop a common hydrological model of the basin and common climate change scenarios'.[406]

Within the context of flooding the ILA identifies a number of areas where states may cooperate, including

(i) the collection and exchange of relevant data:,
(ii) the preparation of surveys, investigations and studies and their mutual exchange;
(iii) planning and designing of relevant measures;
(iv) execution of flood control measures;
(v) operation and maintenance of works;
(vi) flood forecasting and communication of flood warnings; and

405 1994 Draft Articles at 129.

406 H Cooley and others, Understanding and Reducing the Risk of Climate Change for Transboundary Waters (Pacific Institute 2009), 16.

(vi) setting up of a regular information service charged to transmit the height of water levels and the discharge quantities.[407]

Along similar lines is the UN ECE's Model Provisions on Flood Management, that states should cooperate in order to:

(i) monitor/ data collection, exchange of hydrological and meteorological data, and development of a forecasting model covering the whole river basin or of a linkage between the Parties' respective forecasting models;
(ii) prepare surveys, studies (including cost-benefit or cost-effectiveness analysis), flood plain maps, flood risk assessments and flood risk maps, taking due account of local knowledge, and exchange of relevant national data and documentation;
(iii) develop a comprehensive flood action plan or a set of co-ordinated flood action plans addressing

407 ILA, 'Flood Control', in S Bogdanovic, International Law of Water Resources – Contribution of the ILA (1954 – 2000) (Kluwer Law International 2001), 151. See also A Rieu-Clarke, 'A Survey of International Law Relating to Flood Management: Existing Practices and Future Prospects', (2008) 48 Natural Resources Journal 649.

prevention, protection, preparedness and response and providing common objectives, joint action, contingency plans, information policy, flood plain management and, where appropriate, flood control works and financing mechanisms;

(iv) raise awareness and provide access to information, publication participation and access to justice[408] (see also text 27.3 EU floods directive).

408 UN ECE, 'Declaration of Bonn, Rules of procedures for Meetings of the Parties and Model Provisions on Transboundary Flood Management' (23 December 2008), ECE/MP.WAT/19/Add1. See also, UN ECE, 'Sustainable Flood Prevention' (14 January 2000), MP.WAT/2000/7.

27.2 Application

Six riparian states have established a joint commission to manage river X. Recently the states have set up a working group under the institutional structure of the commission entitled 'Climate Change Adaptation Strategies'. Firstly, the working group commissioned a study on 'Scenarios for the Discharge Regime of the Regime', which examines how the discharge patterns of the river may be effected by climate change. The effects considered included flood periods and low flow periods. Various aspects were considered including the likely impact of increased flooding, lower flows affecting navigation, and reducing groundwater recharge, as well as quality issues. Following the evaluating of likely scenarios the states are now in the process of developing adaptation measures to address the likely scenarios.

The 2007 European Union Floods Directive

The Floods Directive focuses on three areas:

(1) preliminary flood risk assessment;

(2) flood maps; and

(3) flood risk management plans.

In the context of flood risk assessment, member states are obligated to conduct a preliminary assessment, which should include maps of the river basin district, a description of past floods which have had a significant adverse impact, and the likely adverse consequences of future floods. Following the preliminary flood risk assessment, member states must identify those river basin districts where potential significant flood risks exist or might be considered likely to occur. The Floods Directive also provides that preliminary flood assessments must be made available to the public.

For areas where a potential significant flood risk exists or might be considered likely to occur, member states must prepare flood hazard maps and flood risk maps. Flood hazard maps should contain information on the potential extent of floods, water depths or water level, and flow velocity or relevant water flow, where appropriate.' Flood risk maps should show the potential adverse consequences associated with likely floods, in terms of, inter alia, inhabitants, economic activities, and installations affected. Under the Floods Directive, member states are obliged to ensure that the maps are made available to the public.

Finally, member states are required to establish flood risk management plans. Active involvement of 'interested parties' in the production, review, and updating of the flood risk management plans must be encouraged by the member states, and the plans must be made available to the public. Management plans should include conclusions made after the first preliminary flood risk assessment, flood hazard and flood risk maps, a description of the appropriate objectives of flood risk management, and a summary of measures and their aims to achieve the appropriate objectives of flood risk management'. The flood risk management plan should also include: '(1) a description of the prioritisation and the way in which progress in implementing the plan will be monitored; (2) a summary of public information and consultation measures/action taken; and (3) a list of competent authorities and, as appropriate, a description of the coordination process within any international river basin district.'

For more informations see: http://ec.europa.eu/environment/water/flood_risk/index.htm

Floods and the Mekong River Commission

Within the context of the Mekong, the Mekong River Commission has implemented a programme for Flood Management and Mitigation.
The programme was established in 2005 and consists of five components, namely

(i) the establishment of a regional flood centre in Phnom Penh, Cambodia that provides flood-related tools, data and knowledge at national and regional levels, produces regional flood forecasts, and provides tools for flood risk assessment and transboundary impact analysis;

(ii) structural measures and flood proofing, including reservoirs, embankments and waterways;

(iii) mediation of transboundary flood issues, that facilitates dialogue and resolution of issues concerning land management and land use planning, infrastructure development and cross-border emergency management of floods;

(iv) flood emergency management, which seeks to deal with the negative impacts of floods more effectively through capacity building, knowledge sharing and public awareness campaigns; and

(v) land management, which covers issues such as land use planning and damage reducing land management policies.

For more information visit: http://www.mrcmekong.org/

UN ECE – Key-steps for the development of an adaptation strategy:

1. Establish the policy, legal and institutional framework

a. Assess existing international commitments, policies, laws and regulations for water and related sectors (e.g. agriculture, health case, hydropower development, inland water transport, forestry, disaster management, nature conservation) in relation to their effectiveness in reducing climate-induced vulnerabilities and to their capacity to support the development of adaptation strategies and then revise and complement them as needed;

b. Define the institutional processes through which adaptation measures are or will be planned and implemented, including where decision-making authority lies at the transboundary, national and local levels and what the links are between these levels;

2. Understand the vulnerability of society

a. Ascertain the information needed to assess vulnerability

b. Gauge the future effects of climate change on the hydrological conditions of the specific transboundary basin in terms of water demand and water availability, including its quality, based on different socio-economic and environmental scenarios;

c. Identify the main current and climate-induced vulnerabilities that affect communities, with particular attention paid to water resources and the health-related aspects;

d. Determine, through participatory processes, the needs, priorities and adaptive capacities of different states;

3. Develop, finance and implement an adaptation strategy

a. Identify potential adaptation measures to reduce vulnerability to climate change and climate variability by preventing negative effects, by enhancing the resilience of natural, social and economic systems to climate change, or by reducing the effects of extreme events through preventive, preparatory, reactive and recovery measures. Measures should include both structural and non-structural measures as well as the financial means and the institutional changes necessary to implement successful adaptation processes;

b. Based on participatory processes, prioritise the potential measures and investments needed taking into account the financial and institutional resources and other means and knowledge available to implement them;

c. Ensure the step-by-step implementation of the adaptation strategy, in accordance with determined priorities, including coping measures from the local to the states and transboundary level.

4. Evaluate

a. Determine whether the measures are implemented and if those measures that are implemented lead to reduction of vulnerability; if not, adjust the measures accordingly;

b. Assess whether the scenarios as applied materialise in practice and adjust them accordingly.

For more information see: UNECE, Guidance on Water and Adaptation to Climate Change (UNECE 2009).

27.3 Additional reading

Bakker MHN, 'Transboundary River Floods and Institutional Capacity' (2009) 45(3) Journal of the American Water Resources Association 553.

Bates BC, Kundzewicz ZE, Wu S and Palutikof JP (eds.), Climate Change and Water (IPPC 2008).

Cooley H, Christian-Smith J, Gleick PH, Allen L and Cohen M, Understanding and Reducing the Risk of Climate Change for Transboundary Waters (Pacific Institute 2009).

Dellapenna JW, 'Adapting the Law of Water Management to Global Climate Change and Other Hydropolitical Stresses', (1999) 35 Journal of the American Water Resources Association 1301.

Drieshova A, Fischhendler I and Giordano, M, 'Governance Mechanisms to Address Flow Variability in Water Treaties' (2008) 18(2) Global Environmental Change 285.

Drieshova A, Fischhendler I and Giordano, M, 'The Role of Uncertainties in the Design of International Water Treaties: An historical perspective' (2011) 105(3) Climate Change 387.

Fischhendler I, 'Legal and Institutional Adaptation to Climate Uncertainty: a study of international rivers' (2004) 6(4) Water Policy 281.

Goldenman G, 'Adapting to Climate Change: A Study of International Rivers and Their Legal Arrangements' (1990) 17(4) Ecology Law Quarterly 741.

ILA, 'Flood Control', in Slavko Bogdanovic, International Law of Water Resources – Contribution of the ILA (1954 – 2000) (Kluwer Law International 2001).

Lucia De Stefano and others, Mapping the Resilience of International River Basins to Future Climate Change-Induced Water Variability, March 2010, Water Sector Board Discussion Paper Series, March 2010.

McCaffrey SC, 'The Need for Flexibility in Freshwater Treaty Regimes' (2003) Natural Resources Forum 156.

Schmeier S, Resilience to Climate Change – Induced Challenges in the Mekong River Basin (World Bank 2011).

Tanzi A and Arcari M, The United Nation Convention on the Law of International Watercourses (Kluwer Law International 2001), 222-224.

Tarlock D, 'How Well Can International Water Allocation Regimes Adapt to Global Climate Change?' (2010) 14 Denver Water Law Review 1.

Teclaff LA, 'Treaty Practice Relating to Transboundary Flooding', (1991) 31 Natural Resources Journal 109.
UN ECE, Guidance on Water and Adaptation to Climate Change (UN 2009).

UN ECE, 'Declaration of Bonn, Rules of procedures for Meetings of the Parties and Model Provisions on Transboundary Flood Management' (23 December 2008), ECE/MP.WAT/19/Add1.

UN ECE, 'Sustainable Flood Prevention' (14 January 2000), MP.WAT/2000/7.

Article 28 | Emergency Situations

Convention text

1. For the purpose of this article, 'emergency' means a situation that causes or poses an imminent threat of causing, serious harm to watercourse states or other states and that results suddenly from natural causes, such as floods, the breaking up of ice, landslides or earthquakes, or from human conduct, such as industrial accidents.
2. A watercourse State shall, without delay and by the most expeditious means available, notify other potentially affected States and competent international organisations of any emergency originating within its territory.
3. A watercourse State within whose territory an emergency originates shall, in cooperation with potentially affected States and, where appropriate, competent international organisations, immediately take all practicable measures necessitated by the circumstances to prevent, mitigate and eliminate harmful effects of the emergency.
4. When necessary, watercourse States shall jointly develop contingency plans for responding to emergencies, in cooperation, where appropriate, with other potentially affected States and competent international organisations.

28.1 Commentary

Articles 27 and 28 of the UN Watercourses Convention are closely related. However, while the purpose of Article 27 is to prevent and mitigate harmful conditions in advance of such events occurring, Article 28 deals with the roles and responsibilities of watercourse states when such events actually happen. As with Article 27, Article 28 covers both natural and human induced events or a combination thereof, including floods, the breaking up of ice, landslides or earthquakes, and industrial accidents. Tanzi and Arcari therefore observe that, 'the same factual situation, being susceptible to escalation, may, in different points in time, fall within the purview of both provisions.'[409]

The inclusion of 'other States' in Article 28(1) recognises that some 'watercourse-related' emergencies may affect non-watercourse States, such as a chemical spill that is transported via an international watercourse to the sea and beyond.[410]

Article 28(2) provides an obligation upon watercourse States to notify others of any emergency originating within its territory without delay. 'Without delay' has been interpreted as meaning, 'upon learning of the emergency'; and 'by the most expeditious means available' can be defined as, 'the most rapid means of communication that is accessible.'[411] Pursuant to Article 28(2) both watercourse and non-watercourse States must be notified, if potentially affected, and the inclusion of 'competent international organisations' within the articles relates to those, 'competent to participate in responding to the emergency by virtue of its constituent instrument.'[412]

Article 28(3) requires states to take all 'practicable

409 A Tanzi and M Arcari, The United Nation Convention on the Law of International Watercourses, 223.
410 1994 Draft Articles at 130.
411 Ibid.
412 Ibid.

Industrial Accidents and the International Watercourses

In Europe, a number of industrial accidents prompted an evolution in the applicable law and policy. A release of dioxin at Seveso in Italy in 1976 led to the adoption of the first piece of legislation to prevent and control such accidents, the Seveso Directive 85/501/EEC of the European Community in 1982. In 1999, Council Directive 96/82/EC on the control of major-accident hazards updated the Seveso Directive. January 2000 witnessed another industrial accident in Romania, which had a severe transboundary impact on the Danube river basin. The mining company, Baia Mare in Northern Romania, spilled over 100,000 cubic meters of cyanide-polluted water into a tributary of the Danube river basin. These incidents also motivated the UN ECE to develop laws relating to transboundary industrial accidents, namely the Convention on the Transboundary Effects of Industrial Accidents, and Protocol on Civil Liability, to the Convention on the Protection and Use of Transboundary Watercourses and International Lakes.

For more information see: http://www.unece.org/env/teia/welcome.html

measures' to prevent, mitigate and eliminate harmful effects', which might be jointly undertaken if necessary. The qualification, 'practicable' seeks to cover those measures that are, 'feasible, workable and reasonable'.[413] Additionally, Article 28(4) calls for anticipatory measures in order to clearly set out the roles and responsibilities of states and competent international organisations in the eventuality of an emergency situation. The use of the term 'where necessary', recognises that in certain circumstances, 'some watercourse States and international watercourses may not justify the effort and expense involved in the development of contingency plans.'[414] Within the context of transboundary harm, the ILC has commented that:

'…the duty to prevent environmental disasters obligates States to enact safety measures and procedures to minimise the likelihood of major environmental accidents, such as nuclear reactor accidents, toxic chemical spills, oil spills or forest fires. Where necessary, specific safety or contingency measures are open to States to negotiate and agree in matters concerning management of risk of significant transboundary harm, such safety measures could include: (a) adoption of safety standards for the location and operation of industrial and nuclear plants and vehicles; (b) maintenance of equipment and facilities to ensure ongoing compliance with safety measures; (c) monitoring of facilities, vehicles or conditions to detect dangers; and (d) training of workers and monitoring of their performance to ensure compliance with safety standards. Such contingency plans should include the establishment of early warning systems.'[415]

413 Ibid.
414 Ibid.
415 Ibid.

28.2 Application

High flow levels occur in state A, upstream of river X. State A is aware of the likely impacts that such high flow levels might have downstream but does not have sufficient data to determine the likely impact in downstream state B. Much of the data on the likely impacts of floods in state B is not shared by state A. Serious floods occur within state B, and once state A is informed about these flood events, they notify state B with all relevant information on flow levels of river X in order to mitigate further flooding. State B claims that state A did not follow the strict requirements of Article 28, as it did not notify it of the likely impact of the high flows in time. The case is taken to international arbitration, where the tribunal agrees with state B's argument, thus stating that there was at the very least 'an imminent threat' of the high flow levels causing significant harm downstream stream through flooding.

International Law Association Flood Rules

Article 4

1. Basin States should communicate amongst themselves as soon as possible on any occasion such as heavy rainfalls, sudden melting of snow or other events likely to create floods and dangerous rises of water levels in their territory.
2. Basin States should set up an effective system of transmission in order to fulfil the provisions contained in para. 1, and should ensure priority to the communication of flood warnings in emergency cases. If necessary a special system of translation should be built up between the basin States.

28.3 Additional reading

Antypas A and Stec S, 'Towards a Liability Regime for Damages to Transboundary Waters by Industrial Accidents: A new protocol in the UN ECE region' (2003) 15(5) Environmental Law and Management 295.

Hudson C, 'The Role of International Environmental Law in the Protection of the Danube River Basin: The Baia Mare Cyanide Spill' (2001) 12 Colorado Journal of International Environmental Law and Policy 367.

ILC, 'Draft Articles on the Law of the Non-Navigational Uses of International Watercourses', UN Doc A/CN.4/L.493 and Add.1 and 2, 128-130.

Luca C, 'The Baia Mare and Baia Borsa Accidents: Cases of Severe Transboundary Water Pollution' (2001) 31(2) Environmental Policy and Law 106.

Ramcharan BG, The International Law and Practice of Early-Warning and Preventive Diplomacy: The Emerging Global Watch (Kluwer, 1991).

Tanzi A and Arcari M, The United Nations Convention on the Law of International Watercourses (Kluwer Law International 2001), 222-224.

Wang X and Yang H-G, 'Solutions to the Problem of Compensation for Transboundary Pollution Damage: A Suppositive Case Study of the Songhua River Pollution Accident' (2007) 3 Modern Law Science 15.

Part VI | Miscellaneous Provisions (Articles 29-33)

Key Points

- The effect of Article 29 of the UN Watercourses Convention is that during a period of armed conflict where an international watercourse may be potentially affected by warfare, both the laws of international watercourses (the 1997 UN Watercourses Convention) and the laws of armed conflict (see Fig. 6.2) will apply (with qualifications) to maintain the protection and prevention of significant harm to an international watercourse and protect a non-belligerent state's use of the international watercourse.
- Article 30 reiterates that even under exceptional circumstances of diplomatic breakdown or warfare, where states are unable to communicate in the direct manner envisaged under Articles 9-19 of the Convention, states are still under an obligation to cooperate by utilising 'any other indirect procedure accepted by them' for the purpose of conveying communications to each other.
- Article 31 creates a very narrow exception to the requirements of exchanging information under articles 9 to19 – with the effect that states are not required to release information concerning a watercourse which is 'vital to their national defence or security'. What is considered vital to national defence or security is interpreted very narrowly and this argument cannot be used to justify the refusal to co-operate in connection with the application of the principle of equitable utilisation and of the no harm rule unless these reasons constitute a 'state of necessity' argument.
- Article 32 sets out 'the basic principle that watercourse states are to grant access to their judicial and other procedures without discrimination on the basis of nationality, residence or the place where the damage occurred'. This means that where significant harm is or is likely to be caused by activities in one state, which may adversely affect foreign nationals who are residing in that state or such harm crosses international boundaries, potentially affecting the citizens of another watercourse state, both classes of persons have the procedural right to pursue their claims and seek remedies in the domestic courts of the country where the cause of injury originated.
- For a summary of the procedure of dispute settlement under Article 33, see the UNWC Dispute Settlement Table in Section 33.1 below.

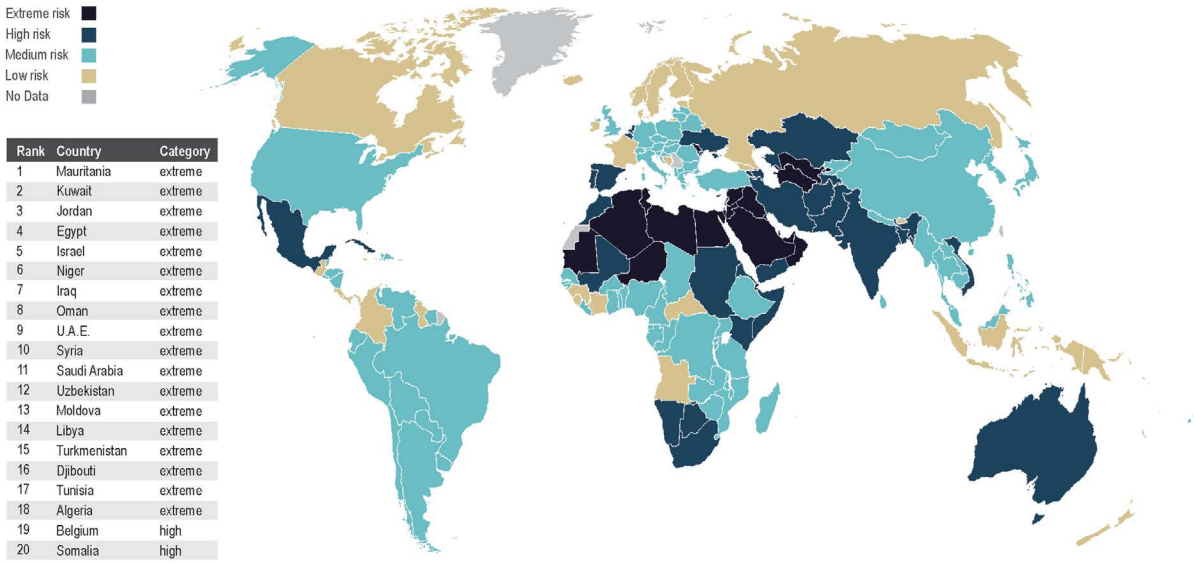
Part VI I Overview

Due to a range of converging factors – future conflicts over water are predicted to increase in both frequency and intensity.[416] The importance of understanding the contribution that Part VI of the Convention can make to resolving potential conflicts-of-use through effective dispute resolution mechanisms is pertinent to addressing the global water crisis. Clarifying the relationship between the Convention and the other bodies of international law as they apply to armed conflicts involving an international watercourse is also increasingly necessary. Moving forward – exploring how the wealth of knowledge surrounding the creation of the Convention can support the provision of water security and conflict management in an increasingly dynamic and complex global situation is an opportunity that should not be missed.

In general terms treaties give rise to numerous disputes about their interpretation or application. Most treaties prescribe how disputes will be settled and potential conflict will be managed. Dispute settlement in general covers a broad spectrum of rules, procedures and mechanisms, all consistent with the UN Charter requirement that international disputes between nation states be resolved peacefully – ranging from formal dispute management such as judicial adjudication through to more diplomatic methods of negotiation. Part VI of the Convention covers conflict management and dispute settlement – Article 33 was the subject of particularly intense debate during the negotiation and drafting of the Convention and continues to cause apprehension for states considering becoming a contracting party – though it's full force and effect is largely misunderstood and will be clarified in this section.

The Maplecroft Water Security Risk Index in Figure 6.1 below shows areas where water resources are under the most pressure and this is directly correlated to those areas which are most prone to future conflict over water resources.

416 PH Gleick, Water Conflict Chronology (2008).



Rank	Country	Category
1	Mauritania	extreme
2	Kuwait	extreme
3	Jordan	extreme
4	Egypt	extreme
5	Israel	extreme
6	Niger	extreme
7	Iraq	extreme
8	Oman	extreme
9	U.A.E.	extreme
10	Syria	extreme
11	Saudi Arabia	extreme
12	Uzbekistan	extreme
13	Moldova	extreme
14	Libya	extreme
15	Turkmenistan	extreme
16	Djibouti	extreme
17	Tunisia	extreme
18	Algeria	extreme
19	Belgium	high
20	Somalia	high

Figure 6.1 |
Water Security Risk Index (Source Maplecroft, 2011)

Article 29 | International Watercourses and Installations in time of Armed Conflict

Convention text

International watercourses and related installations, facilities and other works shall enjoy the protection accorded by the principles and rules of international law applicable in international and non-international armed conflict and shall not be used in violation of those principles and rules.

29.1 Commentary

29.1.1 The Convention and international law applicable in armed conflict

While international watercourses have never been the sole reason of an international armed confrontation, international watercourses and related facilities continue to be used in many instances as a military target, tool, or object.[417] Article 29 of the Convention does not lay down any new rule; it simply addresses the relationship between the law of international watercourses and the rules of international law applicable during international and internal armed conflict which involves an international watercourse and its installations.[418] The legal effect of Article 29 is that states will be obligated to protect and use international watercourses in accordance with the rules and principles of the Convention during times of armed conflict. However, where armed conflict affects an international watercourse including its facilities – the rules and principles of international law governing international and non-international armed conflict will also apply (see Figure 6.2 below).[419] There are numerous prominent examples of where the destruction of a regional water supply as a result of armed conflict has resulted in widespread suffering for the local population and therefore it is important to clarify the protection afforded by this body of international law.[420]

It is noteworthy that unlike other provisions of the UN Watercourses Convention, Article 29 is addressed to all states, not just watercourse states, while a state not party to the Convention would not be bound by this provision, non-watercourse states are included within Article 29 because of the importance of the subject.

417 PH Gleick, Water Conflict Chronology (2008). Also see Wouters, Vinogradov and Magsig, 'Water Security, Hydrosolidarity and International Law: A River Runs through It' at 122.

418 1994 Draft Articles at 131.

419 1994 Draft Articles at 131.

420 A selection of examples includes 1998 Somalia, 1993 Bosnia, 1999 Former Yugoslavia, 2002 Iraq, 2009 Afghanistan, 2002 Israeli/West Bank, 2011 Libya. See F Lorenz, The Protection of Water Facilities under International Law (UNESCO 2003) at 4.

A further proviso to this point is that the principles and rules of armed conflicts that are 'applicable' in a particular case are those that are binding on the states concerned. Article 29 does not extend the applicability of any international instrument to states not parties to that instrument. Of course even with these exceptions - in cases not covered by specific international agreements, civilians and combatants will still remain under the protection and authority of the principles of customary and conventional international law governing armed conflict.[421]

421 It is argued that Protocol I to the 1949 Geneva Convention is already customary law and thus binding on all states. For a discussion of customary law on warfare as it relates to water as well as more detailed examination of Treaty Law see Lorenz F, The Protection of Water Facilities under International Law (UNESCO 2003) at 9-11.

29.1.2 International humanitarian laws applicable to armed conflict involving watercourses[422]

Article 29 of the Convention does not provide an indicative list of the international laws of armed conflict that apply to the protection of water during time of war – however the core instruments of this branch of public international law (also known as International Humanitarian Law (IHL)) which apply are summarised in the following Figure 6.2 next page.

422 For more extensive discussion on how these instruments interact with Article 29 see Wouters, Vinogradov and Magsig, 'Water Security, Hydrosolidarity and International Law: 'A River Runs through It' at 121.

Type of Conflict	IHL Applicable	Relevant Provisions and Effect
International armed conflict	Hague Conventions of 1899 and 1907 Concerning the Laws and Customs of Land Warfare	Prohibits the poisoning of water supplies (Art. 23)[425]
Armed conflict between two or more States	Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I), 8 June 1977[423]	Articles 54,55 and 56 contain a number of water-related provisions aimed at the protection of the natural environment, objects indispensable to the survival of the civilian population,and works and installations. They impose, a prohibition to attack drinking water installations and supplies and irrigation works (Article 54, para. 2) as well as works or installations containing dangerous forces, such as dams and dikes, 'if such attack may cause the release of dangerous forces and consequent severe losses among the civilian population'(Article 56, para. 1). Article 55 further provides that 'care shall be taken in warfare to protect the natural environment against widespread long-term and severe damage which includes a prohibition of the use of methods or means of warfare which are intended or may be expected to cause such damage to the natural environment and thereby to rejudice the health or survival of the population'.
Non-international armed conflict	Convention on the prohibition of military or any hostile use of environmental modification techniques, 10 December 1976[424]	Article I calls on the states parties 'not to engage in military or any other hostile use of environmental modification techniques having widespread, long-lasting or severe effects as the means of destruction, damage or injury to any other State Party.'
Armed conflict between the State and one or several non-State actors, or between two or more such actors.	Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of Non-International Armed Conflicts (Protocol II), 8 June 1977.[426]	Articles 14 and 15 Protection of objects indispensable to the survival of the civilian population - prohibited from attacking objects indispensable to the survival of the civilian population such as drinking water installations and supplies and irrigation works (Article 14). Protection of works and installations containing dangerous forces, namely dams and dykes, if such attack may cause the release of dangerous forces and consequent severe losses among the civilian population (Article 15).

Figure 6.2 | International humanitarian laws applicable to armed conflict involving watercourses (Source Authors)

423 Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I), 8 June 1977. Available at International Humanitarian Law Treaties and Documents (ICRC) <http://www.icrc.org/ihl.nsf/FULL/470?OpenDocument> accessed 30 September 2011.

424 Convention on the prohibition of military or any hostile use of environmental modification techniques, 10 December 1976. Available at International Humanitarian Law Treaties and Documents (ICRC) <http://www.icrc.org/ihl.nsf/FULL/475?OpenDocument> accessed 30 September 2011.

425 Hague Convention No IV Respecting the Laws of Customs of War on Land (October 18 1907) Annex Art. 23. Available at International Hmanitarian Law Treaties and Documents (ICRC) <http://www.icrc.org/ihl.nsf/full/195> accessed 30 September 2011.

426 Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of Non-International Armed Conflicts (Protocol II), 8 June 1977. Available at International Humanitarian Law Treaties and Documents <http://www.icrc.org/ihl.nsf/FULL/475?OpenDocument> accessed 30 April 2012.

29.1.3 Other international law (soft) applicable to water during armed conflict

In 1976 the ILA adopted at its Madrid Conference a non-binding resolution entitled Water Resources and Installations in Times of Armed Conflict (Madrid Rules). This resolution contains many guidelines aimed to protect water as it affects the civilian population and the environment.[427] A subsequent ILA instrument - the Berlin Rules on Water Resources (Berlin Rules), adopted by the ILA Conference in 2004, also contains important provisions on the protection of international watercourses during armed conflict. Chapter X reiterates and slightly modifies the Madrid Rules - Article 52 is especially important and calls on combatants to not, 'for military purposes or as reprisals, destroy or divert waters, or destroy water installations, when such acts would cause widespread, long-term, and severe ecological damage prejudicial to the health or survival of the population or if such acts would fundamentally impair the ecological integrity of waters.'[428]

It is argued that the instruments of international humanitarian law (Figure 6.2) - coupled with the above instruments of water law including Article 29 of the Convention - 'point to the universal acceptance of certain legally binding rules prohibiting hostile activities against or using water resources and installations as a weapon.'[429]

427 ILA, Report of the Fifty-Seventh Conference, Madrid, at 237–9 (1976).

428 See 2004 Berlin Rules on Water Resources (Adopted by the ILA at the Seventy-First Conference, Berlin, August 2004) <http://www.ila-hq.org/en/committees/index.cfm/cid/32> accessed 30 April 2012 [Berlin Rules]. For extensive Commentary see Wouters, Vinogradov and Magsig, 'Water Security, Hydrosolidarity and International Law: A River Runs through It' at 126

429 Wouters, Vinogradov and Magsig, 'Water Security, Hydrosolidarity and International Law: A River Runs through It ...' (2009) at 126

29.2 Application

29.2.1 Hypothetical scenario - Application of the UN Convention and protection of international watercourses during armed conflict

How does the Convention and other international law apply during armed conflict where an international watercourse may be potentially affected by such warfare? The example below demonstrates that both the laws of international watercourses (the 1997 UN Watercourses Convention) and the laws of armed conflict will apply to maintain the protection and prevention of significant harm to an international watercourse and to a non-belligerent (neutral) state's use of the international watercourse during a time of armed conflict.[430]

State A is a non-riparian state sharing an international border with upstream riparian state B who is sharing international watercourse X with downstream riparian state C. State A conducts an armed attack against state B. This armed conflict may cause significant harm to the international watercourse X and to the non-belligerent downstream riparian State C's use of watercourse X.

What obligations do states A and B owe to state C? The law of international watercourses will continue to apply to govern the relationship between belligerent state B and neutral state C despite the fact that state B is in conflict with state A. State B is still under an obligation under Articles 7, 20 and 28 of the Convention to take all appropriate measures to prevent harm occurring to neutral state C. It is also argued that, due to the law of neutrality and the law of state responsibility, state A could also be under an obligation not to hinder state B in its ability to prevent or mitigate harm to state C.[431] What obligations do states A and B owe to each other?

430 Scenario adapted from detailed commentary in Tanzi and Arcari, The United Nations Convention on the Law of International Watercourses: A Framework for Sharing at 70.

431 The principle of the law of neutrality relevant for this purpose is Art 1 of the 1907 Hague Convention on Respecting the Rights and Duties of Neutral Powers and Persons in Case of War on Land, which provides that '[t]he territory of neutral Powers is inviolable.' Reprinted in A Roberts and R Guelff, Documents on the Laws of War (Oxford 2003). For extensive commentary on Article 29 see Tanzi and Arcari, The United Nations Convention on the Law of International Watercourses: A Framework for Sharing at 71.

The laws of armed conflict will apply directly to govern this particular circumstance of armed conflict. The general rules on the protection and use of international watercourses under the UN Watercourses Convention will also apply in providing for the obligations between state A and B. Although the relevant HR law contains more detailed provisions to deal specifically with this particular situation, this does not imply a need to balance HR law with the UN Convention as they do not conflict. A summary of the relevant instruments and rules which would apply to states A and B are as described in Figure 6.2 above. One important effect of these rules is that state A is generally prohibited from manipulating the international watercourse as a means of warfare.[432] State A is also prohibited from attacking drinking water installations and supplies and irrigation works as well as works or installations containing dangerous forces, such as dams and dykes, but only 'if such attack may cause the release of dangerous forces and consequent severe losses among the civilian population' of State B.[433] It is also argued that the Berlin Rules Chapter X, as a reflection of customary international law, would apply to support this general outcome.[434]

432 Art 1 ENMOD.

433 Protocol II Arts 54 (2) and 56 (1).

434 Wouters, Vinogradov and Magsig, 'Water Security, Hydrosolidarity and International Law: A River Runs through It ...' (2009) at 126.

29.3 Additional reading

Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I), 8 June 1977. Available at International Humanitarian Law Treaties and Documents (ICRC) <http://www.icrc.org/ihl.nsf/FULL/470?OpenDocument> accessed 30 September 2011.

Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of Non-International Armed Conflicts (Protocol II), 8 June 1977. Available at International Humanitarian Law Treaties and Documents <http://www.icrc.org/ihl.nsf/FULL/475?OpenDocument> accessed 30 September 2011.

Convention on the prohibition of military or any hostile use of environmental modification techniques, 10 December 1976. Available at International Humanitarian Law Treaties and Documents (ICRC) <http://www.icrc.org/ihl.nsf/FULL/475?OpenDocument> accessed 30 September 2011.

1966 Helsinki Rules on the Uses of International Rivers (adopted by the International Law Commission (ILA) at the 52nd Conference, Helsinki, August 1966)

Lorenz F, The Protection of Water Facilities under International Law (UNESCO 2003) at 7-11.

Tanzi A and Arcari M, The United Nations Convention on the Law of International Watercourses: A Framework for Sharing (Kluwer Law International 2001) at 70.

Tignino M, 'Water, International Peace, and Security' (2010) 92 International Review of the Red Cross 647.

Wouters P, Vinogradov S and Magsig B-O, 'Water Security, Hydrosolidarity and International Law: A River Runs through It ...' (2009) 19 Yearbook of International Environmental Law 97 at 122-126.

Article 30 | Indirect Procedures

Convention text

In cases where there are serious obstacles to direct contacts between watercourse States, the states concerned shall fulfil their obligations of cooperation provided for in the present Convention, including exchange of data and information, notification, communication, consultations and negotiations, through any indirect procedure accepted by them.

30.1 Commentary

30.1.1 Obligations of cooperation in exceptional circumstances

Article 30 addresses the exceptional circumstance in which direct contact cannot be established between the watercourse states and therefore states are prevented from being able to comply with their existing obligations in the manner set out under Articles 9 to 19 of the Convention. Exceptional circumstances can include for example during an armed conflict or during a time where the absence of diplomatic relations poses serious obstacles to the kinds of direct contacts provided for under the Convention.[435]

However, even during such exceptional circumstances states are still under an obligation to cooperate by utilising 'any other indirect procedure accepted by them' for the purpose of conveying communications to each other – examples of indirect procedures can include employing the assistance of third countries, armistice commissions and the good offices of international organisations.[436]

There are several examples where states continued to cooperate over water using such procedures whilst they were at war. Israel and Jordan held secret 'picnic table' talks on managing the Jordan River despite being at war with each other from Israel's independence in 1948 until the 1994 treaty.[437] India and Pakistan continued to cooperate during two major wars with the initial assistance of the good offices of the World Bank (which later developed into a much more active role) and were assisted towards signing the Indus Water Treaty in 1960, during a period where conflict continued within Kashmir.[438] A final example of such cooperation is over the Mekong. In 1957 the Mekong Committee was established by the governments of Cambodia, Laos,

435 1994 Draft Articles at 132.

436 Ibid 132.

437 PR MacQuarrie, V Viriyasakultorn and AT Wolf, 'Promoting Cooperation in the Mekong Region through Water Conflict Management, Regional Collaboration, and Capacity Building' (2008) 2 GMSARN International Journal 175 at 176.

438 Ibid.

Thailand, and Viet Nam and continued to exchange data and information on water resources development throughout the Vietnam War. Additionally, during the 1970s, and despite the wars in Indochina, the committee managed to produce plans to develop water resources in the lower Mekong basin. This cooperation was assisted with significant involvement by the US and Asian Development Bank.[439]

439 Ibid at 179.

30.2 Application

30.2.1 Scenario - Exceptional cases utilise indirect procedure to cooperate

Upper riparian state A and lower riparian state B have a long history of disagreement over the transboundary river. State A has also recently emerged from a 30 year period of internal conflict and this has prevented it from fully developing its hydro-potential to irrigate its highly fertile soils. State B has experienced a less tumultuous internal period and has built up significant industry based around a reliable flow from the river. State A begins unilaterally developing barrages and canal diversions for irrigation. This threatens State B's existing industry and economy and State B sends military forces to inspect the developments. State A reacts and significantly reduces the flow of water into State B. This brings both parties to the brink of conflict.

There is no specific treaty for sharing the river but both States are contracting Parties to the UN Watercourses Convention. Relations have deteriorated so rapidly that direct contact cannot be established between the watercourse states and therefore they are prevented from being able to comply with their existing obligations in the manner set out under Articles 9 to 19 of the Convention. However, even during such exceptional circumstances, the existence of Article 30 means that the states are still under an obligation to cooperate by utilising 'any other indirect procedure accepted by them' for the purpose of conveying communications to each other. Both states agree to an offer by the UN Secretary-General to utilise the good offices of the UN Secretary-General to assist them in exchanging information.[440]

440 See United Nations Office of Legal Affairs, Handbook on the Peaceful Settlement of Disputes between States (United Nations 1992) at 37 – 39 for examples of the use of the UN Secretary General's Good Offices.

30.3 Additional reading

Draft Articles on the Law of the Non-navigational Uses of International Watercourses in UNGA 'Report of the International Law Commission on the Work of its Forty-Sixth Session' (2 May-22 July 1994) UNGA 49th Session Supp No 10 UN Doc A/49/10 (1994) at 132.

MacQuarrie PR, Viriyasakultorn V and Wolf AT, 'Promoting Cooperation in the Mekong Region through Water Conflict Management, Regional Collaboration, and Capacity Building' (2008) 2 GMSARN International Journal 175.

Salman SMA, The World Bank Policy for Projects on International Waterways: An Historical and Legal Analysis (Martinus Nijhoff Publishers 2009).

Salman SMA and Uprety K, Conflict and Cooperation on South Asia's International Rivers - a Legal Perspective (World Bank 2002) at 37-57.

United Nations Office of Legal Affairs, Handbook on the Peaceful Settlement of Disputes between States (United Nations 1992).

Wirsing RG, 'Rivers in Contention: Is There a Water War in South Asia's Future?' (2008) 41 Heidelberg Papers in South Asian and Comparative Politics.

Zawahri NA, 'Capturing the Nature of Cooperation, Unstable Cooperation and Conflict over International Rivers: The Story of the Indus, Yarmouk, Euphrates and Tigris Rivers' (2008) 8 International Journal of Global Environmental Issues 286.

Article 31 | Data and Information Vital to National Defence or Security

Convention text

Nothing in the present Convention obliges a watercourse state to provide data or information vital to its national defence or security. Nevertheless, that state shall cooperate in good faith with the other watercourse states with a view to providing as much information as possible under the circumstances.

31.1 Commentary

31.1.1 Limitations to the obligation to exchange data and information

Article 31 creates a very narrow exception to the requirements of articles 9 to 19 – with the effect that states are not required to release information concerning a watercourse which is 'vital to their national defence or security'. What is considered 'vital information to national defence or security' is not defined by the Convention but refers mainly to strategic or military types of information.[441]

This exception is limited by the corresponding obligation that a watercourse state that may experience adverse effects from the planned measures of another state should not be left entirely without information concerning those possible effects.[442] Additionally, Article 31 requires a state which is withholding information for national defence and security reasons to continue to 'cooperate in good faith' with the other watercourse states with a view to providing 'as much information as possible under the circumstances'.[443] The obligation to provide 'as much information as possible' could be fulfilled in most cases by providing a general description of the manner in which the measures would alter the condition of the water or affect other states.'[444]

It is important to emphasise that the ILC intended good-faith[445] cooperation to be the guiding principle of Article 31. The prominence of this principle can be 'explained by the discussion within the ILC that the concept of what information could potentially be

441 Vinogradov, 'Observations of the International Law Commission's Draft Rules on the Non-navigational Uses of International Watercourses: Management and Domestic Remedies' (1992) 3 Colorado Journal of International Environmental Law and Policy 235 at 249.

442 1994 Draft Articles at 132.

443 1994 Draft Articles at 132.

444 Ibid.

445 For an explanation of 'Good Faith' as a general principle of international law, refer to commentary in Part I (Article 3 and 4) and the Glossary.

withheld as a state secret was open to abuse and therefore needed to be safeguarded.'[446]

The 1992 UN ECE Helsinki Convention and the 1998 Aarhus Convention each contain similar provisions to Article 31 of the UN Convention. The obligation to exchange information under Article 13 of the UN ECE Convention may be subject to 'protection of information' limitations. Article 8 allows parties in accordance with their national legal systems and applicable supranational regulations to protect information related to industrial and commercial secrecy, including intellectual property, or national security.[447] Although commentary to the Helsinki Convention says parties should apply Article 8 restrictively with regard to requests for information from other parties, especially when these concern data relating to discharges into transboundary waters. Article 4 (4) of the Aarhus Convention sets out a framework through which members of the public can gain access to environmental information from public authorities and, in some cases, from private parties. Public authorities could refuse to give information on the basis of 'proceedings of public authorities, international relations, national defence or public security, course of justice, commercial and industrial confidentiality, intellectual property rights, personal data, voluntary information, and protecting the environment'. Of particular interest to our understanding of Article 31 of the UN Convention is the definition of the terms 'international relations', 'national defence' or 'public security' - however the Aarhus Convention does not define these terms but suggests that the definition of such terms will be determined by the parties consistent with international law, and it does provide examples of state practice in this area.[448] Essentially the grounds of refusing access to information in both these Conventions are to be interpreted in a restrictive way, particularly when the data requested relates to emissions into the environment.[449]

An important comparative observation - the exception in Article 31 of the UN Convention only applies to information vital to national defence or security and does not include the right to withhold commercial or industrial information that is deemed confidential and so this provision is much narrower than the exceptions within both the Aarhus and UN ECE Conventions.

446 Yearbook... 1988, vol. I., p. 53 (Mr. Beesley). Also see Vinogradov 'Observations of the International Law Commission's Draft Rules on the Non-navigational Uses of International Watercourses: Management and Domestic Remedies' at 249

447 Paragraph 292, 1992 Helsinki Guide.

448 Aarhus Convention, at 59.

449 Ibid at 60. Also Paragraph 293 of the UNECE Helsinki Guide.

31.1.2 Limitation from Articles 5 & 7 and exception of state of necessity

A significant limitation on the exception under Article 31 is that this provision is without prejudice to the obligations of the state under Articles 5 and 7. This means that national defence or security arguments cannot be used to justify the refusal to co-operate in connection with the application of the principle of equitable utilisation and of the no harm rule unless these reasons constitute a 'state of necessity' argument.[450]

The defence of 'state of necessity' is a ground recognised by customary international law and codified by Article 25 of the ILC's 2001 Draft articles on Responsibility of States for Internationally Wrongful Acts. This defence has the effect of making what would otherwise have been a wrongful act become legitimate. Article 25 sets out the four principles which a state must satisfy in order to invoke 'necessity' as a defence – these are:[451]

The act has to be the only way for the state to safeguard an essential interest against a grave and imminent peril.

The act must not seriously impair an essential interest, of such state or states, towards which the obligation exists, or of the international community as a whole.

The international obligation in question should not exclude the possibility of invoking necessity.

The state should not have contributed to the situation of necessity.

The ICJ in Gabcíkovo-Nagymaros considered the 'state of necessity' in relation to international watercourses.[452]

In this case downstream riparian Hungary halted construction of the Gabcíkovo-Nagymaros barrage system provided for in the 1977 Treaty with Slovakia, alleging that continuation would pose grave risks to the Hungarian environment and water supply. Hungary relied on the 'state of ecological necessity' and 'ecological risk' to justify this act although it acknowledged that 'necessity' would not preclude it from compensating upstream riparian Slovakia. The ICJ found that Hungary's concerns were 'an essential interest of the state' but the potential environmental problems did not constitute a 'grave and imminent peril' which threatened the state's interests.[453]
The court held that the acts of Hungary were not justified by the exception of necessity[454] stating that 'such grounds for precluding wrongfulness can only be accepted on an exceptional basis' and 'strictly defined conditions which must be cumulatively satisfied.'[455] This means that all the four principles in Article 25 of the 2001 Draft Articles must be satisfied.

450 For examination of State Necessity in International Law T Yamada 'State of Necessity in International Law: A Study of International Judicial Cases' (2004) <http://www.law.kobegakuin.ac.jp/~jura/hogaku/34-4/34-4-04.pdf> accessed 2 October 2011. Also see Tanzi and Arcari, The United Nations Convention on the Law of International Watercourses: A Framework for Sharing at 200.

451 ILC 2001 Draft Articles on Responsibility of States for internationally wrongful acts, Report of the International Law Commission on the work of its 53rd session (2001) UN Doc A/56/10, at 43-365.

452 The ICJ in the Case Concerning the Gabcíkovo-Nagymaros Project (Hungary v Slovakia) Judgement of 25 September 1997 (Gabcíkovo-Nagymaros Case) [1997] ICJ Reports 1997 7 at 36 - 45 considered the 'state of necessity' in relation to international watercourses – however it is important to note that the court was not asked to apply the state of necessity rule as a justification for an inequitable or significantly harmful use of a river..

453 Ibid para 53.

454 The court referred to a previous version of Article 25 of the 2001 Draft Articles which was then Article 33 of the ILC Draft Articles on State Responsibility.

455 Gabcíkovo-Nagymaros Case at 37.

31.2 Application

State A and state B share an international watercourse – state A is a wealthy upstream country with significant technological advancement in hydropower. State A wants to test a new method for generating hydropower, with the hope of securing intellectual property rights in this new technology. The testing may cause harm and affect downstream state B which is a developing country with low levels of technological advancement. State B has received news that it may be affected by a new unknown water use from state A. A dispute has arisen between the two states over the extent of the obligation to exchange data and information under Articles 9-19 of the UN Convention. State A considers that the exception under Article 31 of the Convention also applies to commercial and industrial information and therefore exempts it from the obligation to give out the information to state B about how the testing of the technology will affect the watercourse.

The exception in Article 31 only provides an exception for withholding information vital to national defence or security and does not include the right to withhold commercial or industrial information that is deemed confidential. That is to say in this case 'the common interest in the management and protection of the international watercourse as a shared natural resource has an overriding relevance in the Convention over unilateral interests of economic value.'[456]

Even if the new technology was also arguably vital to national defence, state A would still be under an obligation to cooperate in good faith with state B with a view to providing 'as much information as possible under the circumstances' which would include providing a general description of the manner in which the shared watercourse would be affected by any proposed use.

456 Gabcíkovo-Nagymaros Case at 37.

31.3 Additional reading

Draft Articles on the Law of the Non-navigational Uses of International Watercourses in UNGA 'Report of the International Law Commission on the Work of its Forty-Sixth Session' (2 May-22 July 1994) UNGA 49th Session Supp No 10 UN Doc A/49/10 (1994) at 132.

ILC 2001 Draft Articles on Responsibility of States for Internationally Wrongful Acts, Report of the International Law Commission on the work of its 53rd session (2001) UN Doc A/56/10, at 43-365.

Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus) (adopted 1998, entered into force 29 October 2001) 38 ILM (1999) 517, Article 4. Also see Aarhus Convention: An implementation guide (UN 2000), <http://www.unece.org/env/pp/acig.html> accessed 1 October 2011.

Case Concerning the Gabcíkovo-Nagymaros Project (Hungary v Slovakia) Judgement of 25 September 1997 (Gabcíkovo-Nagymaros Case) [1997] ICJ Reports 1997 7 at 36-39.

Tanzi A and Arcari M, The United Nations Convention on the Law of International Watercourses: A Framework for Sharing (Kluwer Law International 2001) at 199-201.

Yamada T 'State of Necessity in International Law: A Study of International Judicial Cases' (2004), <http://www.law.kobegakuin.ac.jp/~jura/hogaku/34-4/34-4-04.pdf> accessed 2 October 2011.

Article 32 | Non-discrimination

Convention text

Unless the watercourse states concerned have agreed otherwise for the protection of the interests of persons, natural or juridical, who have suffered or are under a serious threat of suffering significant transboundary harm as a result of activities related to an international watercourse, a watercourse state shall not discriminate on the basis of nationality or residence or place where the injury occurred, in granting to such persons, in accordance with its legal system, access to judicial or other procedures, or a right to claim compensation or other relief in respect of significant harm caused by such activities carried on in its territory.

32.1 Commentary

32.1.1 Non-discrimination and Equality of Access to National Remedies

Equality of access to transboundary remedies is based on the principle of non-discrimination which means that where domestic remedies are already available to deal with environmental problems, international law may be used to ensure that the benefit of these remedies is extended to transboundary claimants.[457] Article 32 sets out 'the basic principle that watercourse states are to grant access to their judicial and other procedures without discrimination on the basis of nationality, residence or the place where the damage occurred'.[458] Article 32 provides that where significant harm[459] is or is likely to be caused by activities in one state, which may adversely affect foreign nationals (non-citizens or non-residents) who are residing in that state or such harm crosses international boundaries, potentially affecting the citizens of another watercourse state, both classes of persons have the procedural right to pursue their claims and seek remedies in the domestic courts of the country where the cause of injury originated.[460] According to the ILC commentary 'persons who… have suffered or are under a serious threat of suffering' significant harm, means that Article 32 is applicable 'both to cases involving actual harm and to those in which the harm is prospective in nature'.[461]

The guarantee of equality of access and non-discrimination for such persons gives these persons access to the foreign national courts or 'any other procedures' in this foreign jurisdiction – these 'other procedures' could include the provision of access to information concerning the environmental risk, participation in hearings, preliminary enquiries,

457 Birnie, Boyle and Redgwell, International Law and the Environment at 304. See also O McIntyre Environmental protection of international watercourses under international law at 350.

458 1994 Draft Articles at 132.

459 Ibid at 133.

460 McCaffrey, The Law of International Watercourses at 510.

4611994 Draft Articles at 133 and see Trail Smelter Arbitration, 33 AJIL (1939) 182 & 35 AJIL (1942).

participation in the domestic land-use planning development control or pollution licensing procedures that relate to the offending use, and obtaining compensation.[462] However, states can require that non-residents or non-citizens provide a bond in order to utilise a national Court system to cover court costs and fees.[463]

An important note - the Article 32 non-discrimination rule is residual in that if 'the states concerned have agreed otherwise', they do not have to follow the procedure of Article 32. However, they must still provide an alternative inter-state procedure for resolution of such disputes for example through diplomatic channels.[464]

462 See 1988 General Code of Procedure and for Commentary Birnie, Boyle and Redgwell, International Law and the Environment at 308.

463 1994 Draft Articles at 132.

464 Ibid at 133.

32.1.2 Availability of private domestic remedies

Private remedies (Article 32) will not always be available immediately or in some cases will not be available at all. The granting of these rights may require the domestic legislation of some countries to be amended because in some countries administrative authorities are only empowered to consider the effects of proposed projects which may occur within the state that established the authorities.[465] As noted by the ILC, a prominent watercourse dispute, the Trail Smelter arbitration, was set in motion because the national legislation of the country where the harm originated (Canada) did not grant the right of domestic recourse to those foreign nationals who had suffered damage abroad.[466] Conversely in the Pulp Mills Case, it was found the Argentinian citizens enjoyed equal access to remedies and procedures under the national laws of Uruguay as Uruguayan citizens possess in respect of possible transboundary harm.[467] Once the UN Convention has entered into force, its incorporation into the national legal system of a state party should imply an automatic adjustment of the national legal system (or states will as per their domestic legislation create additional implementing legislation) to implement the international legal obligations under Article 32 and the procedural right to access could be directly invoked by private foreign nationals without delay.[468]

For states who are not a contracting party to the Convention and where administrative law is viewed as strictly territorial, foreign citizens may not be protected by domestic law and may not be able to access private recourse in non-contracting states.

465 McCaffrey, The Law of International Watercourses at 510.

466 1994 Draft Articles at 133 and see Trail Smelter Arbitration, 33 AJIL (1939) 182 & 35 AJIL (1942)

467 See 1988 General Code of Procedure and for Commentary Birnie, Boyle and Redgwell, International Law and the Environment at 308.

468 Tanzi and Arcari, The United Nations Convention on the Law of International Watercourses: A Framework for Sharing at 171.

Additionally not all disputes will be able to be solved at the private level and the following section on Article 33 of the Convention will discuss mechanisms which avoid or resolve disputes between states where private remedies are not available or do not adequately resolve the issues.

32.1.3 Advantages and disadvantages of private domestic remedies

During the drafting of the Convention the Finnish representative in the Sixth Committee aptly observed the advantages of utilising domestic procedures at a private level including that such procedures were 'usually less costly; they involved individuals and companies actually engaged in the relevant activities; they provided a more effective incentive to comply with the rules; in certain cases they were faster than diplomatic channels; they led to legally binding and enforceable determinations of the relevant parties obligations; and they encouraged regional cooperation in the management of the particular watercourse system.'[469] The disadvantages of equal access are that it does not guarantee a substantive standard of environmental protection and may give rise to problems in terms of language and unfamiliarity. Furthermore it does not solve the problems of the choice of law which arise in transboundary litigation.[470] However, equal access to domestic remedies does not preclude access to other forums.[471]

469 UNGA Sixth Committee (45th Session) 'Summary Record of the 24th (30 October 1990) UN Doc A/C.6/45/SR.24 (1990) at 13.

470 Birnie, Boyle and Redgwell, International Law and the Environment at 310.

471 Ibid.

Legal right of non-discrimination and equal access to national remedies	
Prior to the Convention, the following instruments existed:	The 1909 Boundary Waters Treaty between Canada and the US provides that injuries in one country caused by the diversion in the other of waters flowing across the boundary would 'give rise to the same rights and entitle the injured parties to the same legal remedies as if such injury took place in the country where such diversion or interference occurs'. 1974 OECD Recommendation of the Council on Principles concerning Transfrontier Pollution, 14 November 1974 - C (74)224 (Annex C (4) (d), D (5) (a), D (5) (b). Article 8 of the International Law Association's 1982 Montreal Rules on Water Pollution in an International Drainage Basin Part II.B.8 of the 1990 ECE Guidelines on Responsibility and Liability regarding Transboundary Water Pollution 1982 UNCLOS Art 235 (2) Article 2 (6) 1991 UNECE Convention on Environmental Impact Assessment in a Transboundary Context (Espoo Convention).
Selection of Instruments Post-Convention (though not based on Convention but helpful for understanding the evolution of the concept as it exists in international law):	Art 3(9) 1998 Aarhus Convention Article 3(10)(c) of the 2000 SADC Revised Protocol on Shared Watercourses 2003 UNECE Protocol on Civil Liability and Compensation for Damage caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters, which supplements both the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes and 1992 Convention on the Transboundary Effects of Industrial Accidents and acts to channel liability to the 'operator' responsible for causing transboundary damage. Expressly incorporates the principle of non-discrimination. Also ILA's 2004 Berlin Rules on Water Resources Law, Articles 69 &71.

Figure 6.3 |
Legal right of non-discrimination and equal access to national remedies (Source Authors)

32.1.4 State practice

The principle of non-discrimination is considered to be a broader principle of inter-state relations which includes but is not limited to equal access - Article 32 of the UN Convention does not replicate this broader meaning of the principle and is instead limited to equal access.[472]

This legal right of non-discrimination and equal access [473] to national remedies is not new - there is substantial existing state practice concerning equal access to national legal systems for compensation and relief in respect of damage caused to watercourses. This state practice was in existence before the Convention was adopted and has continued to develop since (a summary of the significant instruments is provided in Figure 6.3). However, state practice is heavily concentrated in Europe and North America and the legitimacy and practicality of non-discrimination and equal access in many other regions has been questioned. This argument is supported by the observation that there is no universal legal instrument in effect that would establish the rule of equal access as a generally recognised principle of international law. [474] Conversely, despite there being no universal instrument, given the ILC's consistent endorsement of the non-discrimination principle and the other precedents listed in Figure 6.3 it might be argued that the principle exists as a general principle of international law.[475]

472 Vinogradov, 'Observations of the International Law Commission's Draft Rules on the Non-navigational Uses of International Watercourses: Management and Domestic Remedies' at 240.

473 The principle of non-discrimination is considered to be a broader principle of inter-state relations which includes but is not limited to equal access. Article 32 of the UN Convention does not replicate this broader meaning of the principle and is instead limited to equal access. See Vinogradov 'Observations of the International Law Commission's Draft Rules on the Non-navigational Uses of International Watercourses: Management and Domestic Remedies' at 235.

474 Vinogradov 'Observations of the International Law Commission's Draft Rules on the Non-navigational Uses of International Watercourses: Management and Domestic Remedies' at 235.

475 Birnie, Boyle and Redgwell, International Law and the Environment at 306.

32.2 Application

Company X in State A pollutes the international watercourse in State A and adversely affects individuals in downstream State B. What basic obligations and remedies exist under Article 32 in this situation?
State A has an international responsibility to State B of exercising due diligence in preventing or abating the transboundary harm (Article 7 UN Convention) therefore the dispute may need to be settled at this state level. However the dispute may also be settled satisfactorily through the principle of non-discrimination and equal access national remedies. Individuals of State B are entitled procedurally to bring a claim by virtue of Article 32 of the Convention in the domestic courts of state A where it could be considered satisfactory recourse that Company X pay the affected individuals of state B compensation under the domestic civil liability regime of state A and depending on the facts of the case it could be that no further international liability will exist. It is also important to note that the court in state A will apply any relevant binding national and international law to the case. Finally, if the private recourse does not produce a satisfactory resolution, Article 33 (discussed below), which sets out the basic rules for the settlement of watercourse disputes on the inter-state level, could be used to resolve the case through state level mechanisms.

32.3 Additional reading

Sixth report on the law of the Non-navigational Uses of International Watercourses, by SC McCaffrey, Special Rapporteur UN Doc A/CN.4/427 (23 February and 7 June 1990) reproduced in Yearbook of the International Law Commission (1990) vol. II Part 1 at 42-82.

Birnie PW, Boyle AE and Redgwell C, International Law and the Environment (3rd edn, Oxford University Press 2009) at 304-311.

McCaffrey SC, The Law of International Watercourses (2nd edn, Oxford University Press 2007) at 508-510.

McIntyre O, Environmental Protection of International Watercourses under International Law (Ashgate 2007) at 349-354.

Vinogradov S, 'Observations of the International Law Commission's Draft Rules on the Non-navigational Uses of International Watercourses: Management and Domestic Remedies' (1992) 3 Colorado Journal of International Environmental Law and Policy at 235.

Article 33 | Settlement of Disputes

Convention text

1. In the event of a dispute between two or more parties concerning the interpretation or application of the present Convention, the parties concerned shall, in the absence of an applicable agreement between them, seek a settlement of the dispute by peaceful means in accordance with the following provisions.
2. If the parties concerned cannot reach agreement by negotiation requested by one of them, they may jointly seek the good offices of, or request mediation or conciliation by, a third party, or make use, as appropriate, of any joint watercourse institutions that may have been established by them, or agree to submit the dispute to arbitration or to the International Court of Justice.
3. Subject to the operation of paragraph 10, if after six months from the time of the request for negotiations referred to in paragraph 2, the parties concerned have not been able to settle their dispute through negotiation or any other means referred to in paragraph 2, the dispute shall be submitted, at the request of any of the parties to the dispute, to impartial fact-finding in accordance with paragraphs 4 to 9, unless the parties otherwise agree.
4. A fact-finding Commission shall be established, composed of one member nominated by each party concerned and in addition a member not having the nationality of any of the parties concerned chosen by the nominated members who shall serve as Chairman.
5. If the members nominated by the parties are unable to agree on a Chairman within three months of the request for the establishment of the Commission, any party concerned may request the Secretary-General of the united Nations to appoint the Chairman who shall not have the nationality of any of the parties to the dispute or of any riparian state of the watercourse concerned. If one of the parties fails to nominate a member within three months of the initial request pursuant to paragraph 3, any other party concerned may request the Secretary-General of the United Nations to appoint a person who shall not have the nationality of any of the parties to the dispute or of any riparian state of the watercourse concerned. The person so appointed shall constitute a single member Commission.
6. The Commission shall determine its own procedure.
7. The parties concerned have the obligation to provide the Commission with such information as it may require and, on request, to permit the Commission to have access to their respective territory and to inspect any facilities, plant, equipment, construction or natural feature relevant for the purpose of its inquiry.
8. The Commission shall adopt its report by a majority vote, unless it is a single-member Commission, and shall submit that report to the parties concerned setting forth its findings and the reasons therefore and such recommendation as it deems appropriate for an equitable solution of the dispute, which the parties concerned shall consider in good faith.

9. The expenses of the Commission shall be borne equally by the parties concerned.

10. When ratifying, accepting, approving or acceding to the present Convention, or at any time thereafter, a party which is not a regional economic integration organisation may declare in a written instrument submitted to the depositary that, in respect of any dispute not resolved in accordance with paragraph 2, it recognises as compulsory ipso facto and without special agreement in relation to any party accepting the same obligation:

(a) Submission of the dispute to the International Court of Justice; and/or

(b) Arbitration by an arbitral tribunal established and operating, unless the parties to the dispute otherwise agreed, in accordance with the procedure laid down in the annex to the present Convention;

A party which is a regional economic integration organisation may make a declaration with like effect in relation to arbitration in accordance with, subparagraph (b).

33.1 Commentary

33.1.1 The nature of water disputes and justiciability

This section focuses on the diplomatic and legal processes for the settlement of disputes and the roles and functions of courts and tribunals and other institutions or individuals, in relation to dispute settlement under Article 33 of the Convention. Before examining the meaning of dispute settlement under Article 33 it is important to briefly discuss several points crucial to understanding the place of Article 33 of the Convention within the broader context of international law. The first point essentially revolves around the question: What is an international dispute? And a second related question: What is the distinction between and international justiciable dispute and non-justiciable dispute and why does the distinction matter?

The term 'dispute' has been defined as a 'conflict or controversy; a conflict of claims or rights'.[476] The Permanent Court of International Justice in the Mavrommatis case defines a dispute as a, 'disagreement on a point of law or fact, a conflict of legal views or of interests between two persons'.[477] The distinction is often drawn between legal disputes (primarily involving legal issues) and any other kind of dispute. Whether a disagreement over an international watercourse is considered to be a 'dispute' or not has legal implications for the type of dispute settlement response.

Only disputes which are 'justiciable' are suitable for resolution by legal dispute settlement methods. A dispute is justiciable if, 'first, a specific disagreement exists, and secondly, that disagreement is of a kind which can be resolved by the application of rules of law by judicial (including arbitral) processes', otherwise a dispute is non-justiciable.[478] Where disputes are

476 Black's Law Dictionary (4th edn West 1951).

477 (1924) PCIJ Ser. A, No. 2, 11.

478 J Collier and V Lowe, Settlement of Disputes in International Law: Institutions and Procedures (Oxford University Press 1999) at 10.

non-justiciable this means they must be resolved through other methods of peaceful settlement, which are described below. Finally, a 'water dispute' has been defined as 'any conflict of views or of interests, which takes the form of opposing claims between the states, concerning the use of a transboundary water resource.'[479]

479 Vinogradov, Wouters and Jones, Transforming Potential Conflict into Cooperation Potential: The Role of International Water Law at 26.

What is an International Dispute?

Definition | 'Conflict or controversy; a conflict of claims or rights' [Black's Law Dictionary]

'Justiciable' / legal disputes | Ability to be resolved by 'legal' means

'Non-justiciable' disputes | Resolved by non-judicial methods

33.1.2 Background to Article 33

The drafting of Article 33 gave rise to significant controversy over whether or not it was appropriate for a framework convention to contain dispute settlement provisions and whether, and to what extent, the dispute settlement mechanisms should be compulsory.[480] Article 33 in its final form reflected a compromise, including a range of diplomatic and legal dispute settlement provisions based on the rationale of Articles 1 (1), 2 (3) and 33 of the UN Charter, that states are under a general obligation to settle disputes peacefully and in good faith but are free to choose the methods for dispute settlement.

Since the UN Watercourses Convention was first negotiated, the subject matter of international water disputes and the kinds of disputants have changed and increasingly reflect conflicts between several competing water users in two or more states - and now involve numerous actors besides national governments.[481] However, Article 33 of the UN Convention (not to be confused with Article 33 of the UN Charter) contains a broad range of mechanisms which should provide the flexibility required to meet these changing characteristics of water disputes.

Article 33 of the UN Convention is also residual in nature which means it applies where the watercourse states concerned do not have an applicable agreement for the settlement of such disputes (Article 33 (1)).[482]

480 While one group of states supported compulsory and binding means of dispute settlement as part of the Convention (Finland, Hungary, Pakistan, Sudan and Syria See U.N. Doc. A/51/275 at 67; UN Doc A/C.6/51/SR.20 at 11; and UN Doc. A/51/275/Add.3, at 12) others considered this approach to be too rigid and unsuitable for a framework document (Ethiopia: (U.N. Doc. A/C.6/51/SR.20) China, India, Israel and Rwanda objected) and argued that such matters should be left to the discretion of the states concerned (Turkey: UN Doc. A/51/275, at 68) and finally the U.S. and Venezuela thought the provision should be left as proposed. See Wouters 'Universal and Regional Approaches to Resolving International Water Disputes: What Lessons Learned from State Practice?' at 121.

481 Brown Weiss, 'The Evolution of International Water Law' at 270.

482 1994 Draft Articles at 134.

Purposes and Principles of the UN Charter related to dispute settlement

One of the purposes of the United Nations, set out in Article 1(1) of the Charter, is 'to bring about by peaceful means, and in conformity with the principles of justice and international law, adjustment or settlement of international disputes or situations which might lead to a breach of the peace'.

Article 2(3) provides that in pursuit of such purposes states 'shall settle their international disputes by peaceful means in such a manner that international peace and security, and justice, are not endangered'.

33.1.3 Process of Article 33 – Start with negotiation and consultation

Negotiation between the parties is the first stage of the process set out in Article 33 (2) and can take different forms, including (but not limited to) bilateral talks and diplomatic correspondence to international conferences.[483] Diplomatic negotiations are sometimes preceded by the meetings of experts (such as occurred between Israeli and Jordanian water experts prior to formal negotiations over the 1994 Peace Treaty).[484] Parties are under the obligation to conduct negotiations in good faith and in a manner that 'the negotiations are meaningful, which will not be the case when either of them insists upon its own position without contemplating modification of it' as stipulated by the ICJ in Gabcíkovo-Nagymaros and the North Sea Continental Shelf case.[485] Most disputes are able to be settled by negotiation and, if this is the case, parties should record the terms of settlement – this often takes the form of a non-legally binding Memorandum of Understanding (MOU).[486] Of course parties can also mutually agree to formalise the agreed outcome and render the MOU as legally binding.

For several interesting examples of a demonstrative negotiation process see the 2002 agreement between the United States and Mexico regarding the Rio Grande River, which resulted from negotiations between the two countries under the auspices of the International Boundary Water Commission (IBWC).[487] Also see the negotiations leading to the 1995 Mekong Agreement[488] and the negotiations over the Nile Basin.[489] Extensive study shows that there is a state preference to negotiate at the bilateral level,[490] although it is multi-lateral treaties involving participation by all riparians to a transboundary river which will normally be the most equitable and sustainable for the countries sharing transboundary resources.

Formal negotiations are often preceded by consultations, which usually involve the exchange of views and information. Consultation is normally an ad hoc procedure, but it can also be provided for in any watercourse agreement either within an institutional mechanism (the Convention specifies that parties

483 Vinogradov, Wouters and Jones, Transforming Potential Conflict into Cooperation Potential: The Role of International Water Law at 27. Also A Aust, Modern Treaty Law and Practice (2nd edn, Cambridge University Press 2001) at 353

484. 1994 Treaty of Peace between the state of Israel and the Hashemite Kingdom of Jordan (signed =October 26 1994) UN Treaty Database, available at <http://treaties.un.org/pages/UNTSOnline.aspx?id=1> accessed 30 April 2012. For discussion see Vinogradov, Wouters and Jones, Transforming Potential Conflict into Cooperation Potential: The Role of International Water Law at 27.

485 Gabcíkovo-Nagymaros para 14, quoting from North Sea Continental Shelf case at para 85.

486 Aust, Modern Treaty Law and Practice at 353.

487 S McCaffrey, 'Water Disputes Defined: Characteristics and Trends for Resolving Them' in International Bureau of the Permanent Court of Arbitration (ed), Resolution of International Water Disputes : Papers Emanating from the Sixth Pca International Law Seminar, November 8, 2002 (Kluwer Law International 2003) at 76.

488 G Browder, 'An Analysis of the Negotiations for the 1995 Mekong Agreement' (2000) 5 International Negotiation 237.

489 A Dinar and S Alemu, 'The Process of Negotiation over International Water Disputes: The Case of the Nile Basin' (2000) 5 International Negotiation 331; J Brunnée and SJ Toope, 'The Changing Nile Basin Regime: Does Law Matter?' (2002) 43 Harvard International Law Journal 105.

490 N Zawahri, S Dinar and S Mitchell, 'Fragmented Governance of International Rivers: Negotiating Bilateral versus Multilateral Treaties' (2011) 55(1) International Studies Quarterly 835.

should make use of any existing joint institutions) or as a dispute prevention and resolution tool.[491] Article 33 does mention consultation but it is provided for elsewhere in the Convention (including in Articles 4, 6, 7, 8, 17, 18, 19, 24, 26 and 30) and these provisions attempt to avoid having to utilise dispute settlement provisions under Article 33. The Nile River Basin Initiative can be considered as an on-going multilateral consultation.[492]

If states cannot resolve their issues through negotiation then Article 33 (2) provides that they 'may' seek to settle issues in a non-binding way through good offices, mediation or conciliation by a third party, any joint watercourse institutions that may have been established by them, or states can opt for a binding method of dispute settlement by agreeing to submit the dispute to the binding arbitration or to the International Court of Justice. The characteristics of each dispute including subject matter and disputants will affect the choice of settlement method. It is suggested that when disputes involve more than one type of competing water use and important actors in addition to states, the diplomatic methods used for dispute resolution are more favourable.[493] Finally if parties are unable to agree on a solution using these mechanisms they must submit the dispute, at the request of any party, to fact-finding as per Article 33 (3).

This statement is of course qualified at the beginning of Article 33 (3) by the words 'subject to the operation under paragraph 10' which means that if parties choose to use either of the two legally binding dispute resolution methods (Arbitration or Adjudication) then the decision in both these methods is binding and not appealable. The dispute will be considered closed after either of these processes has finished and it is only in circumstances where the decision making body, such as the International Court of Justice, makes an order to the parties that negotiation or fact-finding might resume. Each of the dispute resolution mechanisms is discussed in turn and summarised in Figure 6.8 below.

491 Vinogradov, Wouters and Jones, Transforming Potential Conflict into Cooperation Potential: The Role of International Water Law at 28.

492 Dinar and Alemu 'The Process of Negotiation over International Water Disputes: The Case of the Nile Basin', at 331.

493 Brown Weiss, 'The Evolution of International Water Law' at 207.

33.1.4 Joint institutions

Part IV of this Guide (especially commentary on Article 24) provides an explanation of the use of joint institutions to manage transboundary waters including their role in facilitating on-going consultation, communication and procedural obligations assisting states with strengthening bi-lateral relations and the prevention of disputes. As discussed, what constitutes a 'joint management mechanism' is quite open and the ILC suggested that the term 'joint management mechanism' might encompass not only formal organisational arrangements, but less formal means such as, 'the holding of regular meetings between the appropriate agencies or other representatives of the states concerned.'[494] Joint institutions can also provide a more formalised framework for dispute resolution (when preventative measures are unsuccessful). Article 33 of the Convention encourages states to utilise joint institutions to resolve disputes where possible and this can apply during the process of initial consultations, through to formal negotiations and even as part of Court orders post Adjudication. As McCaffrey has pointed out 'where disputes have arisen…expert bodies in particular joint commissions…are generally best equipped to conduct fact-finding…and resolve questions concerning the obligations of the states'.[495]

The 1960 Indus Treaty between Pakistan and India is one of the most extensively examined bilateral transboundary water agreements, and provides for a joint institution the Permanent Indus Commission (PIC) (consisting of one member from each country) and corresponding procedures for dispute resolution. The PIC serves as the initial venue where a possible conflict must first be addressed and is empowered to examine any 'question' which arises between the parties concerning the interpretation or application of the Treaty or the existence of any fact which, if established, might constitute a breach of the Treaty . . . [and] resolve the question by agreement' (Article IX (1)). Issues that cannot be resolved by the PIC will be deemed 'differences' which may, depending on their classification, be heard by a 'neutral expert'. The difference will be considered as a 'dispute' if the matter falls outside those listed in Annex F. Disputes are to be resolved through negotiation and if they are unsuccessful become subject to arbitration.[496] The use of these two mechanisms will be discussed further below in relation to two recent conflicts over the Indus, the Baglihar difference and the Kishenganga dispute.

Article 35 of the 1995 Mekong Agreement also provides for the use of joint institutions to be the first point for dispute resolution to be followed by other dispute settlement methods if unsuccessful. It reads:

'In the event the Commission is unable to resolve the difference or dispute within a timely manner, the issue shall be referred to the Governments to take cognisance of the matter for resolution by negotiation through diplomatic channels within a timely manner. . . Should the Governments find it necessary or beneficial to facilitate the resolution of the matter, they may, by mutual agreement, request the assistance of mediation through an entity or party mutually agreed upon, and thereafter to proceed according to the principles of international law.'

494 1994 Draft Articles at 125.

495 McCaffrey, The Law of International Watercourses at 511.

496 See Vinogradov, Wouters and Jones Transforming Potential Conflict into Cooperation Potential: The Role of International Water Law at 65.

33.1.5 Good offices and mediation

Mediation and good offices are diplomatic methods of dispute settlement involving third parties.The third party can be a single state or a group of states, an individual, an organ of a universal or regional international organisation, or a joint body. The good offices method is where the third party offers 'good offices' to the conflicting states to facilitate dialogue and assist states towards peaceful settlement of the dispute. The third party offering good offices must be acceptable to all the parties.[497] Once the negotiations have started, the functions of good offices are usually considered to be completed.[498]

Mediation involves more active third party participation in the negotiations. The Mediator conducts the negotiations between contending parties on the basis of proposals made by the mediator aimed at a mutually acceptable compromise solution.[499] Mediation may be set in motion either upon the initiative of a third party whose offer to mediate is accepted by the parties to the dispute, or initiated by the parties to the dispute themselves agreeing to mediation.[500] The mediator's role can involve communication, clarification of issues, drafting of proposals, identifying areas of agreement between parties, and elaboration of provisional arrangements to minimise contentious and propose alternate solutions.[501]

The World Bank provided good offices and mediated the solution to the Indus River dispute, which resulted in the negotiation of the 1960s Indus Water Treaty. Another example of a mediated dispute is the Israeli–Jordanian bilateral negotiations which were combined with informal discussions where American and Russian diplomats acted as mediators which resulted in the 1994 Treaty of Peace between Israel and Jordan.

497 For extensive commentary on good offices see United Nations Office of Legal Affairs, Handbook on the Peaceful Settlement of Disputes between States (United Nations 1992) at 33.

498 Vinogradov, Wouters and Jones, Transforming Potential Conflict into Cooperation Potential: The Role of International Water Law at 28. United Nations Office of Legal Affairs, Handbook on the Peaceful Settlement of Disputes between States at 42.

499 Brownlie 'The Wang Tieya Lecture in Public International Law: The Peaceful Settlement of International Disputes' (2009) 8 Chinese Journal of International Law 267 at 271.

500 United Nations Office of Legal Affairs, Handbook on the Peaceful Settlement of Disputes between States at 42.

501 Ibid 43. See UN Rules for the Conciliation of Disputes, UN Doc A/50/33 (1993).

Conciliation

'The process of settling a dispute by referring it to a commission of persons whose task it is to elucidate the facts and usually after hearing the parties and endeavouring to bring them to an agreement to make a report containing proposals for a settlement, which is not binding'

33.1.6 Conciliation

Conciliation involves an impartial third party who can be a sole conciliator but normally involves a formal, institutionalised and impartial commission which investigates the dispute and proposes ways to resolve it by combining elements of inquiry and mediation.[502] The conciliator or commission will seeks to objectively establish the facts and applicable law but may also investigate the problem broadly.[503] It may also submit proposals for resolving the dispute which the parties can choose whether or not to accept. Parties respond to the conciliation commission's proposals within a prescribed time limit.

If they agree to the proposals, the commission drafts a procés-verbal, which sets forth the terms of the agreement which are non-binding.[504] It is argued that the fact-finding procedure under Article 33 of the UN Convention closely resembles a conciliation procedure since the fact-finding commission's task includes providing a 'recommendation as it deems appropriate for an equitable solution of the dispute.'[505]

In 2002 the Permanent Court of Arbitration adopted the Optional Rules for Conciliation of Disputes Relating to the Environment and/or Natural Resources which provide a comprehensive set of environmentally tailored dispute resolution procedural rules which can be used to complement conciliation under Article 33.[506]

502 United Nations Office of Legal Affairs, Handbook on the Peaceful Settlement of Disputes between States at 45.

503 Vinogradov, Wouters and Jones, Transforming Potential Conflict into Cooperation Potential: The Role of International Water Law at 30.

504 Brown Weiss, 'The Evolution of International Water Law' at 286.

505 Wouters, 'The International Law of Watercourses: New Dimensions' at 377.

506 PCA 2002 Optional Rules for Conciliation of Disputes Relating to the Environment and/or Natural Resources, available at <http://www.pca-cpa.org/upload/files/ENVIRONMENTAL%281%29.pdf > accessed 30 April 2012 at 215.

33.1.7 Fact-finding and inquiry

Inquiry and fact-finding are procedures specifically designed to produce an impartial finding of disputed facts by engaging a third-party.[507] The terms 'inquiry' and 'fact finding' have often been used (sometimes interchangeably) for this type of procedure under which states refer questions to a panel of experts (commission of inquiry or a fact-finding commission) for investigation of factual or technical matters after diplomatic negotiations.[508] Fact-finding and inquiry can also be undertaken by one expert alone.[509]

Fact-finding under Article 33 (3) is the only element of the Convention's dispute settlement procedures which does not require every disputing party's prior agreement, and may be invoked unilaterally by any of the parties to the Convention at any time after six months from the commencement of the consultations and negotiations between parties (provided the parties have not already initiated one of the legal dispute resolution processes (Arbitration and Adjudication). The rationale of the inclusion of these provisions was to avoid stalemate in the dispute settlement and to assist parties in moving forward with data and information exchange which are essential for the operation of the principle of equitable utilisation, and to enable the resolution of a dispute in good faith.[510]

Article 33 (4)-(9) provides for the establishment of the fact-finding commission which will have three members, one from each disputing country and one from a third country who will act as chair. The chair must be agreed upon by both parties. If the parties are unable to agree on a chairman within three months of the request for the establishment of the Commission, any party concerned may request the Secretary-General of the United Nations to appoint the chair. These provisions are intended to avoid the dispute settlement mechanism being frustrated by the lack of cooperation of one of the parties.[511]

Once the Commission is established it shall determine its own procedure (Article 33 (6) and the parties are to provide the Commission with the information it requires and to permit it to have access to their territories (Article 33 (7)). The Commission will then prepare and adopt a report by majority vote which contains findings and 'such recommendation as it deems appropriate for an equitable solution of the dispute' (Article 33 (8). These recommendations are not binding but the parties must consider them in good faith. Good faith in this instance means that parties must consider the recommendations with a view to reaching a negotiated settlement.[512] One of the most significant recent uses of fact-finding in water disputes is by Pakistan and India, pursuant to the Indus Waters Treaty, to resolve a 'difference' regarding the construction by India of the Baglihar hydropower plant summarised opposite.

507 Vinogradov, Wouters and Jones, Transforming Potential Conflict into Cooperation Potential: The Role of International Water Law at 29.

508 Ibid.

509 United Nations Office of Legal Affairs, Handbook on the Peaceful Settlement of Disputes between States at 26.

510 McCaffrey, The Law of International Watercourses at 516.

511 1994 Draft Articles at 134.

512 Tanzi and Arcari, The UN Convention on the Law of International Watercourses at 284.

Indus Waters Baglihar Dam

In 2000 India proposed building the Baglihar Dam on the Chenab River, which is one of the major rivers within the Indus River system governed by the 1960 Indus Water Treaty between India and Pakistan. Pakistan opposed the dam on the basis that it did not comply with the requirements of the Treaty. The two parties were unsuccessful in bilateral negotiations. Part IX of the Treaty deals with differences and disputes, and provides for 'differences' to be referred to a neutral expert. The neutral expert has extensive quasi-judicial powers, including determination of available waters, withdrawals, releases, uses, and procedures for providing each party an adequate hearing. The decision of the expert is binding. In 2005 Pakistan requested that the World Bank appoint a neutral expert to investigate the facts and settle the difference. The expert in the Baglihar difference issued a decision in 2007, which both parties accepted. Although Pakistan was not satisfied with the decision and has recently argued (in front of the Permanent Court of Arbitration during the Kishenganga Arbitration) that the Baglihar case has left Pakistan without physical protection against the manipulation of flow on the Indus system.

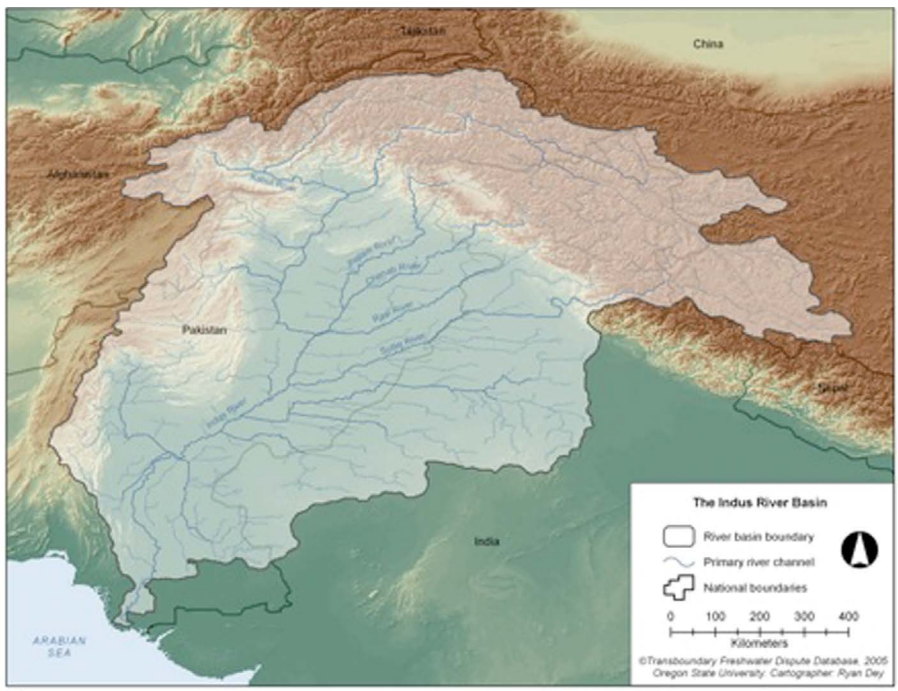


Figure 6.4 | Indus River Basin (Source TFDD, 2005)[513]

513 This map is a product of the Transboundary Freshwater Dispute Database, Department of Geosciences, Oregon State University. Additional information about the TFDD can be found at: <http://www.transboundarywaters.orst.edu>, accessed 30 April 2012.

33.1.8 Legal methods of dispute settlement – Arbitration (Annex 1 UNWC)

Permanent Court of Arbitration

Established in 1899 located in The Hague 2001 Optional Rules for Environmental Disputes are non-mandatory

Arbitration is a legal method of dispute settlement which requires the prior consent of each party to the dispute. This is usually done through a special agreement between the parties called a compromise.[514] Arbitration is provided for in Article 33 and complemented by the Annex to the Convention which sets out the rules for the establishment and operation of an Arbitral Tribunal (Article 33 (10) (b) and (Annex Articles 1-14) as included in the following text box.

It is important to note that parties are not bound to use the particular arbitral formula of Article 33 and are instead able to utilise other procedures if 'the parties to the dispute otherwise agree' (Article 33 (10)(b)). These other options could include use of the procedures of the Permanent Court of Arbitration (PCA), which is not a 'court' but rather a special mechanism, the primary purpose of which is to assist states in settling their international controversies.[515] The PCA was established in 1899 under the Hague Convention for the Pacific Settlement of International Disputes and is able to provide its services to all arbitration cases submitted to it by agreement of the parties to a dispute. It has recently updated its procedures to respond to current international practice and a particularly relevant outcome is the 2001 Optional Rules for Arbitrating Environmental Disputes which provides more detailed provisions than the arbitration procedure in the Convention.[516] One significant distinguishing factor between the ICJ and the PCA is that both international organisations and companies can be parties to PCA proceedings under the 2001 Optional whereas only states can be parties to proceedings before the ICJ.[517]

There have been numerous international arbitrations of water disputes since the late 19th Century, a select list of more recent cases include: the 1941 Trail Smelter Arbitration[518] ; the 1947 Lake Lanoux Arbitration between Spain and France [519]; the 1968 Gut Dam case between the United States and Canada[520] ; the 1994 Landmark 62-Mount Fitz Roy case between Argentina and Chile[521]; the 2004 arbitration between Netherlands and France pursuant to a nearly 70 year dispute; and the 1976 Convention on the Protection of the Rhine Against Pollution by Chlorides and the Additional Protocol of 199[522]. Most recently, in 2011, the PCA delivered an Order on Interim Measures regarding the Indus Waters Kishenganga Arbitration (Pakistan v. India), which is examined below with a specific focus on the process of dispute resolution.[523]

514 Ibid at 31.

515 See website of the Permanent Court of Arbitration, <http://www.pca-cpa.org/showpage.asp?pag_id=363> accessed 10 November 2011.

516 The 2001 Optional Rules for Environmental Disputes are non-mandatory and designed to facilitate arbitration pertaining to disputes that involve public international law and the utilisation of natural resources and environmental protection. See PCA, 2001 Optional Rules for Arbitration of Disputes Relating to the Environment and/or Natural Resources, <http://www.pca-cpa.org/upload/files/ENVIRONMENTAL%281%29.pdf> accessed 10 November 2011.

517 See Articles 35 and 40 of the Statute of the International Court of Justice, and for ICJ procedure see the 1978 Rules of Court, both available on the ICJ website <http://www.icj-cij.org/documents/index.php?p1=4&p2=2&p3=0> accessed 22 October 2011.

518 Trail Smelter Arbitration, 33 AJIL (1939) 182 & 35 AJIL (1941).

519 Lake Lanoux Arbitration, 24 ILR (1957).

520 Gut Dam Arbitration, 8 ILM (1968).

521 Case Concerning Boundary Dispute between Argentina and Chile Concerning Delimitation of the frontier line between boundary post 62 and mount Fitzroy (1994). Available <http://untreaty.un.org/cod/riaa/cases/vol_XXII/3-149.pdf> 1 November 2011.

522 Rhine Chlorides Convention Arbitral Award (France/Netherlands) (2004), Available online at the Permanent Court of Arbitration <http://www.pca-cpa.org/upload/files/Neth_Fr_award_English.pdf> accessed 1 November 2011.

523 For the Pakistan v. India Order of Interim Measures see website of Permanent Court of Arbitration <http://www.pca-cpa.org/showpage.asp?pag_id=1392>

UNWC Annex Articles 1-14 on Arbitration

Article 1

Unless the parties to the dispute otherwise agree, the arbitration pursuant to article 33 of the Convention shall take place in accordance with articles 2 to 14 of the present annex.

Article 2

The claimant party shall notify the respondent party that it is referring a dispute to arbitration pursuant to article 33 of the Convention. The notification shall state the subject matter of arbitration and include, in particular, the articles of the Convention, the interpretation or application of which are at issue. If the parties do not agree on the subject matter of the dispute, the arbitral tribunal shall determine the subject matter.

Article 3

1. In disputes between two parties, the arbitral tribunal shall consist of three members. Each of the parties to the dispute shall appoint an arbitrator and the two arbitrators so appointed shall designate by common agreement the third arbitrator, who shall be the chairman of the tribunal. The latter shall not be a national of one of the parties to the dispute or of any riparian state of the watercourse concerned, nor have his or her usual place of residence in the territory of one of these parties or such riparian state, nor have dealt with the case in any other capacity.
2. In disputes between more than two parties, parties in the same interest shall appoint one arbitrator jointly by agreement,
3. Any vacancy shall be filled in the manner prescribed for the initial appointment.

Article 4

1. If the Chairman of the arbitral tribunal has not been designated within two months of the appointment of the second arbitrator, the President of the International Court of Justice shall, at the request of a party, designate the Chairman within a further two-month period.
2. If one of the parties to the dispute does not appoint an arbitrator within two months of receipt of the request, the other party may inform the President of the International Court of Justice, who shall make the designation within a further two-month period.

Article 5

The arbitral tribunal shall render its decisions in accordance with the provisions of this Convention and international law.

Article 6

Unless the parties to the dispute otherwise agree, the arbitral tribunal shall determine its own rules of procedure.

Article 7

The arbitral tribunal may, at the request of one of the parties, recommend essential interim measures of protection.

Article 8

1. The parties to the dispute shall facilitate the work of the arbitral tribunal and, in particular, using all means at their disposal, shall:

   (a) Provide it with all relevant documents, information and facilities;

   (b) Enable it, when necessary, to call witnesses or experts and receive their evidence.

2. The parties and the arbitrators are under an obligation to protect the confidentiality of any information they receive in confidence during the proceedings of the arbitral tribunal.

Article 9

Unless the arbitral tribunal determines otherwise because of the particular circumstances of the case, the costs of the tribunal shall be borne by the parties to the dispute in equal shares. The tribunal shall keep a record of all its costs, and shall furnish a final statement thereof to the parties.

Article 10

Any party that has an interest of a legal nature in the subject matter of the dispute which may be affected by the decision in the case may intervene in the proceedings with the consent of the tribunal.

Article 11

The tribunal may hear and determine counterclaims arising directly out of the subject matter of the dispute.

Article 12

Decisions both on procedure and substance of the arbitral tribunal shall be taken by a majority vote of its members.

Article 13

If one of the parties to the dispute does not appear before the arbitral tribunal or fails to defend its case, the other party may request the tribunal to continue the proceedings and to make its award. Absence of a party or a failure of a party to defend its case shall not constitute a bar to the proceedings. Before rendering its final decision, the arbitral tribunal must satisfy itself that the claim is well founded in fact and law.

Article 14

1. The tribunal shall render its final decision within five months of the date on which it is fully constituted unless it finds it necessary to extend the time limit for a period which should not exceed five more months.

2. The final decision of the arbitral tribunal shall be confined to the subject matter of the dispute and shall state the reasons on which it is based. It shall contain the names of the members who have participated and the date of the final decision. Any member of the tribunal may attach a separate or dissenting opinion to the final decision.

3. The award shall be binding on the parties to the dispute. It shall be without appeal unless the parties to the dispute have agreed in advance to an appellate procedure.

4. Any controversy which may arise between the parties to the dispute as regards the interpretation or manner of implementation of the final decision may be submitted by either party for decision to the arbitral tribunal which rendered it.

Indus Waters Kishenganga Arbitration (Pakistan v. India)

Background | This overview focuses on some key features of the arbitration process rather than the legal merits of the dispute or the parties' arguments. In 2008 a dispute arose over India's construction of the Kishenganga Hydroelectric Project (KHEP). The KHEP aims to divert water from the Kishenganga River (also known as the Neelum River) to a tributary of the Jhelum River in Kashmir through a by-pass tunnel. Pakistan is also building a dam (known as the Neelum-Jhelum Hydroelectric Project (NHJEP). Pakistan raised technical and legal objections to Kishenganga and claimed that it is a violation of the 1960 Indus Waters Treaty. It claimed that the diverted water would reduce downstream flows and hydropower generation capacity in NHJEP as well as other issues. India counter-argued that the flows into Pakistan will not be reduced and the KHEP will have no impact because NJHEP is not an existing project. Some observers suggest the parties are building their respective projects with the hope of claiming 'prior appropriation' and 'existing use' to the water of the tributary (Uprety and Salman at 647).

Contentious points | The Treaty allocates the waters of the eastern rivers of the Indus basin – Sutlej, Beas and Ravi – to India, while Pakistan has unrestricted use of the western rivers, Indus, Jhelum and Chenab (Article III). The questions at the centre of the dispute from Pakistan's view point are:

a) Whether India's proposed diversion of the river Kishenganga (Neelum) into another tributary breaches India's legal obligations owed to Pakistan under Article III (2) of the Treaty to let all the waters of the Western rivers flow (and not permit any interference with those waters) and Article IV(6) - maintenance of natural channels.

b) Whether under the Treaty India may deplete or bring the reservoir level of a run-of-river storage plant below Dead Storage Level?

Arbitration Process and Provisional Measures | In May 2010 Pakistan instituted arbitral proceedings against India under Article IX and Paragraph 2(b) of Annexure G to the Indus Waters Treaty 1960. Article IX of the Treaty provides for a system for the settlement of differences and disputes that may arise in relation to the Treaty. Article IX states:

(4) Either Government may, following receipt of the report referred to in Paragraph (3), or if it comes to the conclusion that this report is being unduly delayed in the Commission, invite the other Government to resolve the dispute by agreement

(5) A Court of Arbitration shall be established to resolve the dispute in the manner provided by Annexure G

(a) upon agreement between the parties to do so; or

(b) at the request of either party, if, after negotiations have begun pursuant to Paragraph (4), in its opinion the dispute is not likely to be resolved by negotiation or mediation; or

(c) at the request of either party, if, after the expiry of one month following receipt by the other Government of the invitation referred to in Paragraph (4), that Party comes to the conclusion that the other Government is unduly delaying the negotiations.

Paragraph 2 of Annexure G of the Treaty provides as follows:

2. The arbitration proceeding may be instituted [...]

(b) at the request of either party to the other in accordance with the provisions of Article IX (5) (b) or (c). Such request shall contain a statement setting forth the nature of the dispute or claim to be submitted to arbitration, the nature of the relief sought and the names of the arbitrators appointed under Paragraph 6 by the Party instituting the proceeding.

In its Request for Arbitration, Pakistan stated parties had failed to resolve the dispute concerning the KHEP by agreement pursuant to the terms under Article IX (4) of the Treaty. This is the first time a dispute under the Indus Treaty has been referred to arbitration. A Court of Arbitration composed of seven members was constituted pursuant to Article IX (5) and Annexure G. The Permanent Court of Arbitration acts as Secretariat to the Court of Arbitration pursuant to Paragraph 15(a) of Annexure G. The first meeting of the Court of Arbitration was held in January 2011 where the Court made personnel appointments with the consent of the parties. In June 2011 the Tribunal conducted a site visit to both the Neelum-Jhelum Dam in Pakistan and KHEP in India.

In June 2011 Pakistan requested the Court to lay down interim measures for a specified time period necessary to safeguard interests and avoid prejudice to the final solution and aggravation or extension of the dispute (Annexure G, para 28). Essentially Pakistan sought an interim order which would restrain India from proceeding with the diversion of the Kishenganga River until the legality of the diversion had been determined by the Court of Arbitration (paras 52 and 53). India requested the court to reject this application. For an overview of the process of communication exchange between the parties including the Procedural Orders of the Court – see paras 28-51 of the Interim Order.

On 23 September 2011, the arbitral tribunal ordered interim measures pending its final decision on the merits of the case – in order to avoid prejudice to the final solution. The Tribunal ordered India to halt any 'permanent constructions or works within the river bed that would cause irreparable reduction in water flow' until the final decision was reached on the merits of the case – this includes the construction of a portion of the KHEP which presents a real risk of 'prejudice to the final solution'. However, the Court also ordered that India would be allowed to continue construction on the diversion tunnel and hydro-electric facilities, as well as any temporary coffer dams within the Kishenganga River, at its own risk, pending a final decision. Finally the Court requested the two countries to submit a joint report setting forth the areas of agreement and any points of disagreement that may arise regarding the implementation of its order (para 152). It is expected the Court will deliver its final Award in December 2012/January 2013.

33.1.9 Legal methods of dispute settlement – Adjudication

The International Court of Justice was established in 1945 by the Charter of the United Nations and is the principal judicial organ of the UN – although this status does not give it priority as a forum of dispute[524] settlement and the Court's jurisdiction is based on the consent of all parties to each dispute. The Court's general mandate is to settle, in accordance with international law, legal disputes submitted to it by states (contentious disputes) and to give advisory opinions on legal questions referred to it by authorised United Nations organs and specialised agencies (advisory proceedings).[525] Proceedings may be instituted either through the notification of a special agreement or by means of application.[526]

The ICJ or its predecessor the Permanent Court of International Justice (PCIJ) have heard numerous freshwater related disputes including: River Oder case (1929)[527]; River Meuse case (1937)[528]; Gabcíkovo-Nagymaros Project (Hungary v. Slovakia)(1997)[529] ; Kasilili/Sedudu Island (boundary river) case, Botswana/ Namibia (1999); River Niger boundary dispute Benin/ Niger (2005); Case concerning Navigation and Related Rights Costa Rica v. Nicaragua (2009; Pulp Mills on the River Uruguay Argentina v. Uruguay (2010); and Certain Activities carried out by Nicaragua in the Border Area, Costa Rica v. Nicaragua (case pending). All of these cases going back to 1947 can be accessed from the ICJ Website.[530] The salient cases which involve several of the legal and diplomatic dispute resolution techniques are summarised in the text boxes below – the Gabcíkovo-Nagymaros Project (Hungary v. Slovakia) is a particularly interesting case for its long and varied negotiation and dispute resolution experience, both prior and immediately after the 1977 Treaty, and before and after the ICJ judgment. However, although interesting for our purposes of examination, this case remains unresolved. The Pulp Mills case is also briefly examined with a focus on process – for further analysis of the legal merits of the case see Parts III and IV of the Guide.

Most importantly for the procedural purposes of this Guide, Article 33 (10) (b) of the UN Convention provides for the submission of a dispute to the ICJ with the agreement of all states concerned. At the time of becoming a contracting party to the Convention or at any time after, a state party may declare in a written instrument submitted to the depositary that, in respect of any dispute not resolved in accordance with Article 33 (2) and where both parties to a dispute have declared their willingness – either party can unilaterally submit their dispute to the ICJ. The judgment is final, binding on the parties to a case, and without appeal.[531] A selection of the reasons why a party may choose to submit an instrument declaring willingness to have any dispute resolved by compulsory third party adjudication are: the certainty of a neutral, orderly and principled dispute settlement procedure; and the increased certainty that the dispute will be resolved. Since the

accessed 28 October 2011.

524 Birnie, Boyle and Redgwell C, International Law and the Environment at 250.

525 For a general explanation of the Court's jurisdiction, mandate and functions and to find cases and advisory opinions see the website of the International Court of Justice, <http://www.icj-cij.org/homepage/index.php> accessed 20 October 2011.

526 See Article 40 of the Statute of the International Court of Justice, and for ICJ procedure see the 1978 Rules of Court, both available on the ICJ website <http://www.icj-cij.org/documents/index.php?p1=4&p2=2&p3=0> accessed 22 October 2011.

527 Territorial Jurisdiction of the International Commission of the River Oder Case, PCIJ Ser. A, No.23 (1929).

528 River Meuse Case (Netherlands v Belgium) PCIJ Reports Series A/B No 70. Available online at <http://www.worldcourts.com/pcij/eng/decisions/1937.06.28_meuse.htm> accessed 1 November 2011.

529 1997 Case Concerning the Gabcíkovo-Nagymaros Project (Hungary v. Slovakia). Available online at the International Court of Justice website <http://www.icj-cij.org/docket/index.php?p1=3&p2=3&code=hs&case=92&k=8d> accessed 2 November 2011.

530 International Court of Justice <http://www.icj-cij.org/docket/index.php?p1=3&p2=2> accessed 3 November 2011.

531 See Article 40 of the Statute of the International Court of Justice, and for ICJ procedure see the 1978 Rules of Court, both available on the ICJ website <http://www.icj-cij.org/documents/index.php?p1=4&p2=2&p3=0> accessed 22 October 2011.

decision to submit to adjudication is consensual; the rate of compliance with decisions is high.[532] The disadvantages of utilising the ICJ include the significant cost, time constraints, less privacy, and a lack of control over the process.[533]

532 R Bilder, 'Adjudication: International Arbitral Tribunals and Courts' Peacemaking in International Conflict: Methods and Techniques, eds. I Zartman and JL Rasmussen (Washington DC, United States Institute of Peace Press 1997) at 155-190.

533 Ibid.

1997 Case Concerning the Gabcíkovo-Nagymaros Project (Hungary v. Slovakia)

Facts and focus on dispute resolution process| After 25 years of negotiation, in 1977 Hungary and Czechoslovakia (now Slovakia) concluded a Treaty on the joint utilisation of the Danube River including the construction of a joint barrage system – one dam in Czechoslovakia and one dam in Hungary. In 1989 Hungary suspended work on the dam at Nagymaros due to alleged environmental concerns in order to investigate and in response Czechoslovakia proposed a solution which would enable them to continue unilaterally with the first dam 'Variant C'. New negotiations began between the countries but subsequently failed. In 1992, in response, Hungary unilaterally terminated the Treaty. Czechoslovakia then diverted 90% of the water from the Danube into an artificial canal in order to pursue Variant C. In 1992 Hungary initiated a case before the ICJ - this failed because Czechoslovakia had not given express consent so the Court had no jurisdiction. The Commission of the European Communities offered to mediate and establish a fact-finding commission to investigate Variant C and create a Group of Experts including an expert designated by each party and three by the Commission of European Communities. The Group was to report on emergency measures, establish a temporary water management regime for the Danube and agree on terms of submission to the ICJ. The working group produced recommended measures and on this basis the parties in 1993, concluded an agreement 'Concerning Certain Temporary Technical Measures and Discharges in the Danube and Monsoni Branch of the Danube' which addressed the issues above and also included agreed process for joint submission to the ICJ by Special Agreement. In 1993 Czechoslovakia split into the Czech Republic and Slovakia.

The parties submitted the dispute to the ICJ by Special Agreement asking three questions related to interpretation and implementation of the 1977 Treaty and general principles of international law.

Q1. Was Hungary entitled to abandon works on the project?

Q2. Was Slovakia entitled to proceed with Variant C?

Q3. What were the legal effects of Hungary's notification and termination of the 1977 Treaty?

The ICJ responded to the three questions:

A1 | Hungary acted unlawfully when it suspended works on Nagymaros. Hungary relied on the 'state of ecological necessity' and 'ecological risk' to justify this act and the ICJ found that Hungary's concerns were 'an essential interest of the State' but the potential environmental problems did not constitute a 'grave and imminent peril' which threatened the State's interests. The Court held that the acts of Hungary were not justified by the exception of necessity relying on Article 25 of the 2001 Draft Articles on International Responsibility of States.

A2 | Slovakia was entitled to proceed with building Variant C but acted unlawfully when it began operating the system and diverting the flow of the Danube. The ICJ based it reasoning on the law of state responsibility which requires a countermeasure to be proportional to the unlawful act and the Court found that Hungary was deprived of its right to an equitable and reasonable share of the watercourse. The Court also referred to the 'Community of Interest' from the River Oder case which also applied to non-navigational uses and cited the 1997 UN Watercourses Convention – especially Article 5 in support.

A3 | Hungary was not legally entitled to terminate the 1977 Treaty. Both parties were found to have acted unlawfully, and the parties were legally obligated to enter into negotiations to implement the purpose and obligations of the 1977 treaty given the existing circumstances, which include the operation of Variant C. The ICJ also provided the option to bring the dispute back to Court if necessary.

Summary of dispute settlement procedure post 1997 ICJ Judgement | More than 13 years after the ICJ decision the parties have been unable to reach a settlement. The parties started their negotiations regarding implementation of ICJ Judgment in 1997, several milestones have been achieved including: a 2001 Draft Agreement on implementation of the Judgment', several joint Working Groups on legal matters, economic matters and water management and a Strategic Environmental Assessment of the Bratislava-Budapest section of the Danube, but the parties are still unable to agree and proceedings are still pending in the ICJ. It is suggested that parties are very close to realising that they may need to ask for third party assistance which could include returning to the ICJ to request an additional judgment as provided for in the Special Agreement. However this will be complicated because Slovakia has already requested an additional judgement in 1998 although that procedure was suspended.

Figure 6.5 | Danube River Basin (Source WWF, 2005)

Figure 6.6 | Original Gabcíkovo-Nagymaros Project
(Source Authors (2012), adapted from ICJ (1997))

Figure 6.7 | Provisional Solution: Variant "C" Gabcíkovo-Nagymaros Project (Source Authors (2012), adapted from ICJ (1997))

Case Concerning Pulp Mills on the River Uruguay (Argentina v. Uruguay)

Facts and Process | Uruguay wanted to build two cellulose pulp mills located on the banks of the River Uruguay (the boundary river between Argentina and Uruguay). The River Uruguay is governed by the 1975 River Uruguay Statute between Argentina and Uruguay which sets down rules for the protection of the river, procedural requirements for notification of projects and the establishment of a joint commission (CARU). In 2002 the Spanish company ENCE informed CARU of its intention to build a pulp mill - this project was abandoned in 2006 because of large public opposition within Argentina, and investor uncertainty. In 2004 the Finnish company Botnia informed CARU of its intention to build a cellulose pulp mill on the river bank, on Uruguayan territory – this became operational in 2007.

In 2006 Argentina initiated proceedings before the ICJ pursuant to Article 60(1) of the 1975 Statute of the River Uruguay which provides: 'Any dispute concerning interpretation or application of the 1961 (Montevideo) Treaty and the 1975 Statute which cannot be settled by direct negotiations may be submitted by either party to the ICJ' (For details of the proceedings and jurisdiction see paras 1-24 and 48-66 of the Judgment).

The dispute centred on whether Uruguay complied with its procedural obligations under the 1975 Statute in authorising construction of the ENCE mill and the construction and commission of the Botnia mill and whether Uruguay had complied with its substantive environmental obligations under the Statute since the Botnia mill began operation in 2007. Argentina claimed Uruguay had breached the procedural provisions relating to notification, conduct of an environmental impact assessment, and information disclosure under Articles 7-12 of the 1975 River Uruguay Statute and substantive obligations related to optimum and rational utilisation, State's right to use, management of soil and woodlands so as not to impair, coordinating measures to avoid ecological changes, protecting and preserving the environment and preventing pollution (Articles 1, 27, 35, 36, 40 and 41).

In 2006 Argentina also requested injunctive relief from the ICJ by making an application for provisional measures to suspend construction of the Pulp Mills – which was rejected by the ICJ because Argentina failed to demonstrate that the construction would cause imminent harm to the river sufficient to meet the test of urgency under Article 41 of the ICJ Statute justifying provisional measures.

Essentially the ICJ had to address whether the River Uruguay would be adversely affected by the discharges from the Botnia plant taking into account the variability in seasonal flow. There was an unprecedented quantity of scientific and technical evidence put before the Court which had an impact upon the process of the hearing and discussion around the possibility of the Court retaining its own scientific expertise (Phillipe Sands Co-Agent for Argentina).

The ICJ delivered the verdict in April 2010, finding that Uruguay had breached its procedural obligations (paras 67- 158), however Uruguay did not breach the substantive obligations and Uruguay was thus not barred from proceeding operating the Botnia mill and Argentina was not entitled to any compensation (paras 169-266). The Court finally stressed the State's obligation to cooperate (ongoing monitoring) (para 281).

Significant observations are the court's linking of notification of new projects to the customary due diligence obligation to prevent significant transboundary harm. Also an Environmental Impact Assessment (EIA) was found to be an essential requirement of customary international law in respect to activities having potential transboundary effects. Finally the principle of equitable and reasonable utilisation was found to be synonymous with sustainable development and should be considered as a process.

For analysis of the judgement and the broader contribution of the case to international law see P Sands 'Water and International Law: Science and Evidence in International Litigation' (2010) 22 Environmental Law & Management 151. O McIntyre 'The Proceduralisation and Growing Maturity of International Water Law' (2010) 22 Journal of Environmental Law 475.

Dispute Resolution Process of Art 33 UNWC

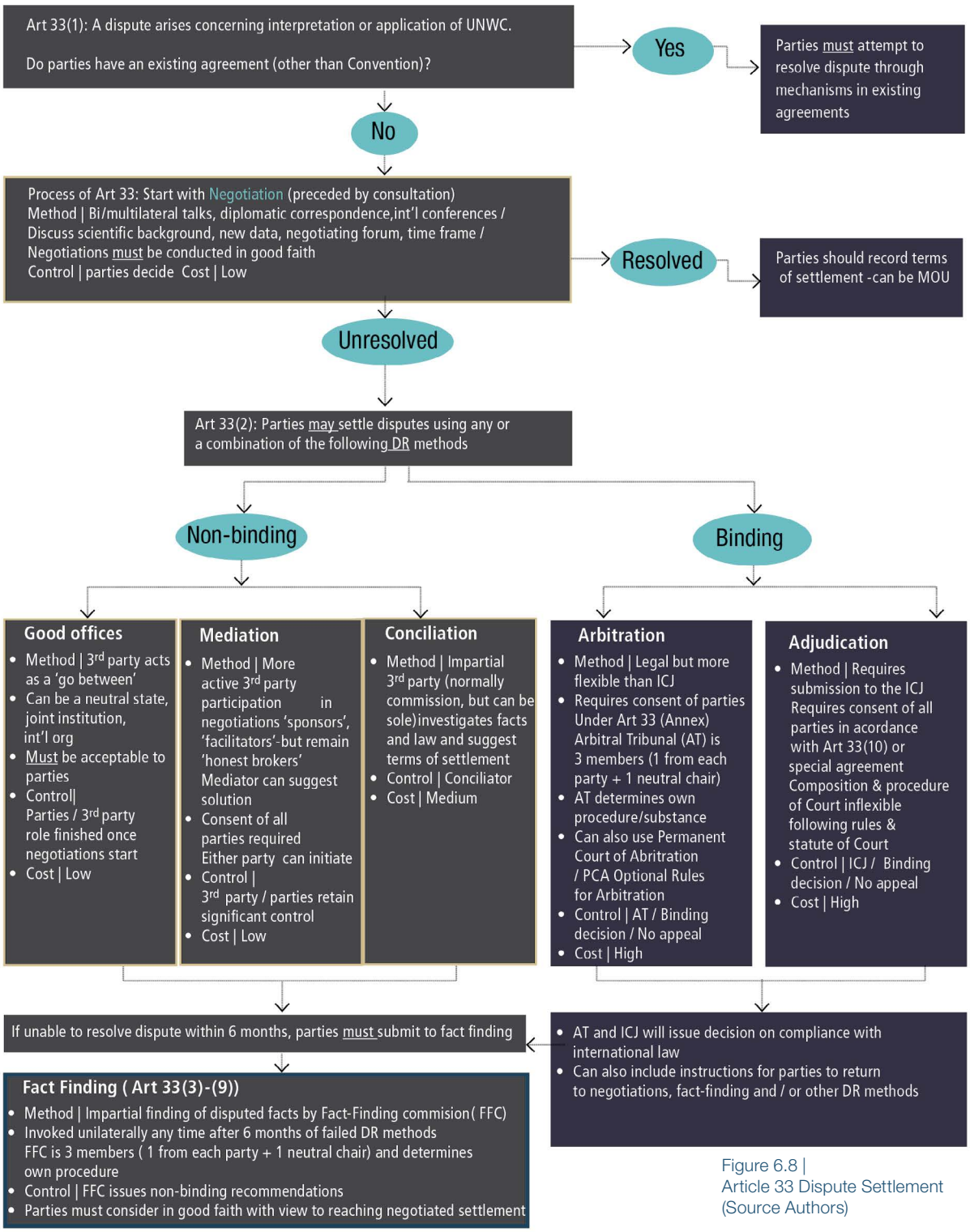


Figure 6.8 | Article 33 Dispute Settlement (Source Authors)

33.2 Application

33.2.1 Dispute resolution scenario

Upstream state A is currently operating an opencast coal mine on mountain plateau situated beside an international watercourse. Downstream state B has recently experienced increased downstream sediment and acid mine drainage issues that arise from mining activities during periods of flooding. State A has significant potential to generate hydropower from the rainfall in the surrounding catchment of the coal mine and in the process utilise and clean the slightly contaminated water.

Downstream state B is eager to avoid future contam-ination and also to develop its agricultural potential which requires irrigation and a reliable flow regime. State B has also recently had an election and is opting to move away from Nuclear power as its domestic energy supply. States A and B conclude Treaty X on the joint utilisation of their border River Y. Treaty X provides for the Parties to construct a joint barrage system which will involve two dams, one in upstream state A (Dam I) and one further downstream in the territory of state B (Dam II).

The Treaty provides that Dam I is located on a tributary of River X in state A and will collect water from the majority of the catchment then divert and transfer the water via a canal to Dam II which is located on River X just inside the border of state A. This will alter the flow regime of River X into state B. Under the Treaty, state A will produce power to sell at a very reduced rate to state B. State B will finance the construction of Dam II and will also receive flood control, navigation benefits and be able to irrigate with a more reliable flow regime.

Both states are contracting parties to the 1997 UN Watercourses Convention which has recently come into force and it is agreed that the dispute resolution clause under Treaty X is drafted as follows:

> Paragraph XX: 'In the event of a dispute between parties concerning the interpretation or application of the present Treaty X, the parties concerned shall, in the absence of an applicable agreement between them, seek a settlement of the dispute by peaceful means in accordance with the provisions of Article 33 of the 1997 UN Watercourses Convention'.

Dispute 1

During the construction of Dam I, state B has concerns that the filtration and cleaning systems will be insufficient to protect its citizens against contamination. It enters into a dispute with state A over the dam design. What dispute settlement process is to be followed by the parties to resolve the dispute?

In accordance with Article 33 (2) of the UN Convention (the adopted dispute settlement procedures of Treaty X), the states must first attempt to resolve the dispute by negotiation which can take different forms, including (but not limited to) bilateral talks or diplomatic correspondence. Diplomatic negotiations are sometimes preceded by the meetings of experts and thus a Water Management Working Group of Experts is informally established between states A and B to discuss the issues and put forward suggestions for improved pollution management – the results of which are submitted to a diplomatic conference where parties who are under an international legal obligation to conduct negotiations in good faith and in a manner that the negotiations are meaningful, which will not be the case when either of them insists upon its own position without contemplating modification of it. The results of this negotiation are successful and the parties record the terms of settlement – in a Memorandum of Understanding on future pollution management procedures.

Dispute 2

State B reviews the designs and schedules of flow release for Dam II and concludes that the times at which maximum flows will be released and the rate of flow does match the demand times for water in state B, and also the dramatic increase in flow rate during peak generation periods will cause environmental consequences for aquatic life which have only recently been discovered. State B refuses to pay for the construction of Dam II and State A decides to proceed unilaterally with Dam I and abandon Dam II. State B enters into a dispute with State A.
What dispute settlement process is to be followed by the parties to resolve the dispute?

As before, the parties attempt to resolve their dispute this time by negotiation which fails. Mediation involves more active third party participation in the negotiations. State A suggests engaging a mediator in accordance with Article 33 (2) of the Convention. State B agrees and the mediator conducts the negotiations between contending parties on the basis of proposals made by the mediator aimed at a mutually acceptable compromise solution. The mediator attempts to clarify issues and drafts a solution of provisional arrangements to minimise contentious issues. Neither party is satisfied with this solution and both reject it. Both parties then agree to submit the dispute to Arbitration in accordance with the procedure under Article 33 (10)(b) and Annex Articles 1-14 of the Convention. The outcome of this decision will binding in accordance with Annex Article 14(3).

33.3 Additional reading

Permanent Court of Arbitration, 2001 Optional Rules for Arbitration of Disputes Relating to the Environment and/or Natural Resources, <http://www.pca-cpa.org/upload/files/ENVIRONMENTAL%281%29.pdf> accessed 10 November 2011.

Statute of the International Court of Justice, <http://www.icj-cij.org/documents/index.php> accessed 22 October 2011.

Aust A, Modern Treaty Law and Practice (2nd edn, Cambridge University Press 2007) at 352-366.

Brochmann M and Hensel PR, 'The Effectiveness of Negotiations over International River Claims' (Annual Meeting of the International Studies Association 2009).

Brown Weiss E, 'The Evolution of International Water Law' in Hague Academy of International Law (ed), Recueil Des Cours, Collected Courses, Tome 331, vol 331 (Martinus Nijhoff Publishers 2009) at 268.

Romano C, 'International Dispute' in Bodansky D, Brunnée J and Hey E (eds.), The Oxford Handbook of International Environmental Law (Oxford University Press 2007) at 1036.

Collier J and Lowe V, Settlement of Disputes in International Law: Institutions and Procedures (Oxford University Press 1999).

Dellapenna JW and Gupta J, 'The Evolution of Global Water Law' in Dellapenna JW and Gupta J (eds.), The Evolution of the Law and Politics of Water (Springer 2009).

Dinar S and Dinar A, 'Negotiating in International Watercourses: Diplomacy, Conflict and Cooperation' (2000) 5 International Negotiation 193.

Grzybowski A, McCaffrey S and Paisley RK, 'Beyond International Water Law: Successfully Negotiating Mutual Gains Agreements for International Watercourses' (2010) 22 Pacific McGeorge Global Business & Development Law Journal 139.

Koh T, 'International Law and the Peaceful Resolution of Disputes: Asian Perspectives, Contributions, and Challenges' (forthcoming) 1 Asian Journal of International Law.

McCaffrey SC, The Law of International Watercourses (2nd edn, Oxford University Press 2007) at 514-516.

McCaffrey S, 'Water Disputes Defined: Characteristics and Trends for Resolving Them' in International Bureau of the Permanent Court of Arbitration (ed), Resolution of International Water Disputes : Papers Emanating from the Sixth PCA International Law Seminar, November 8, 2002 (Kluwer Law International 2003).

Salman SMA, 'International Water Disputes: A New Breed of Claims, Claimants, and Settlement Institutions' (2006) 31 Water International 2.

Sands P, 'Water and International Law: Science and Evidence in International Litigation' (2010) 22 Environmental Law & Management 151.

Shaw MN, International Law (6th edn, Cambridge University Press 2008) at 179.

Szabó M, 'Gabcíkovo-Nagymaros Dispute: Implementation of the ICJ Judgment' (2009) 39 Environmental Policy and Law 97.

United Nations Office of Legal Affairs, Handbook on the

Peaceful Settlement of Disputes between States (United Nations 1992).

Uprety K and Salman SMA, 'Legal Aspects of Sharing and Management of Transboundary Waters in South Asia: Preventing Conflicts and Promoting Cooperation' (2011) 56 Hydrological Sciences Journal 641.

Wouters P, 'Universal and Regional Approaches to Resolving International Water Disputes: What Lessons Learned from State Practice?' in International Bureau of the Permanent Court of Arbitration (ed), Resolution of International Water Disputes : Papers Emanating from the Sixth Pca International Law Seminar, November 8, 2002 (Kluwer Law International 2003) at 120-123.

Wouters P, 'The International Law of Watercourses: New Dimensions' 3 Collected Courses of the Xiamen Academy of International Law (Martinus Nijhoff 2011) at 377.

Vinogradov S, Wouters P and Jones P, Transforming Potential Conflict into Cooperation Potential: The Role of International Water Law (UNESCO 2003) at 20, 27-35.

Part VII – Final Clauses (Articles 34-37)

Article 34 | Signature

Key points

- Article 34 related to the process for signing the Convention which has now closed.
- Pursuant to Article 35, states may however still become a party to the Convention by lodging an instrument of ratification, acceptance, approval or accession.
- States and regional economic integration organisations can become party to the Convention, but there are differences in terms of the rights and responsibilities that both have under the instrument.
- Article 36 stipulates which texts of the Convention are deemed authentic.

Convention text

The present Convention shall be open for signature by all states and by regional economic integration organisations from 21st May 1997 until 20 May 2000 at United Nations Headquarters in New York.

34.1 Commentary

34.1.1 Opening for signature

On 21 May 1997, the UN General Assembly adopted the UN Watercourses Convention. It proclaimed that, in accordance with Article 34, the Convention shall be open for signature to all states and regional economic integration organisations from the same day until 20 May 2000.[534] Many multilateral agreements, especially UN conventions, provide that they will be 'open for signature' until a specified date, after which signature will no longer be permitted. By 20 May 2000, however, only 16 states had signed the Convention. Since it is now closed for signature, the question may arise: Can states which did not sign the Convention still become a contracting party? In these cases, international law allows states to do so by 'acceding' to a treaty (see Article 35); meaning that, in practice, the 'closing for signature' has no impact on the process of entering into force. As a matter of fact, half of the states party to the Convention became so by accession.

534 UNGA Res 51/229 (21 May 1997) UN Doc A/RES/51/229, <http://www.un.org/documents/ga/res/51/ares51-229.htm> accessed 30 April 2012

34.1.2 All states formula

Since the UNWC seeks universal participation,[535] it seems obvious to open it for signature to 'all states.' However, the 'all states formula' also has its draw backs, since it has given rise to the question whether certain territories or entities whose status under international law as sovereign states was unclear would be permitted to become a signatory to the respective treaty.[536]

The Secretary-General, as the depositary for the Convention (see Section 35.1.1), follows the advice of the UN General Assembly when he receives instruments relating to a treaty from an entity whose claim to being a state seems questionable, since determining whether such a territory or entity would fall within the 'any state formula' would be outside his sphere of competence. The General Assembly issued a general understanding in this matter, stating that: 'The Secretary-General, in discharging his functions as a depositary of a convention with an 'all States' clause, will follow the practice of the Assembly in implementing such a clause and, whenever advisable, will request the opinion of the Assembly before receiving a signature or an instrument of ratification or accession.'[537]

535 See, e.g., treaties concerning human rights, disarmament, or environment.
536 Treaty Section of the United Nations Office of Legal Affairs, Final Clauses of Multilateral Treaties : Handbook (United Nations Publications 2003) at 14.
537 See United Nations Juridical Yearbook, 1973, Sales No. E.75.V.1, at 79, footnote 9.

34.1.3 Regional economic integration organisations

For 'regional economic integration organisations,' see Section 2.1.6. As of today, no regional economic integration organisation has initiated steps towards becoming a party to the Convention.

34.3 Additional reading

Treaty Section of the United Nations Office of Legal Affairs, Final Clauses of Multilateral Treaties: Handbook (United Nations Publications 2003).

Article 35 | Ratification, Acceptance, Approval or Accession

Convention text

1. The present Convention is subject to ratification, acceptance, approval or accession by states and by regional economic integration organisations. The instruments of ratification, acceptance, approval or accession shall be deposited with the Secretary-General of the United Nations.
2. Any regional economic integration organisation which becomes a Party to this Convention without any of its member states being a party shall be bound by all the obligations under the Convention. In the case of such organisations, one or more of whose member states is a party to this Convention, the organisation and its member states shall decide on their respective responsibilities for the performance of their obligations under the Convention. In such cases, the organisation and the member states shall not be entitled to exercise rights under the Convention concurrently.
3. In their instruments of ratification, acceptance, approval or accession, the regional economic integration organisations shall declare the extent of their competence with respect to the matters governed by the Convention. These organisations shall also inform the Secretary-General of the United Nations of any substantial modification in the extent of their competence.

35.1 Commentary

35.1.1 Depository of instruments

Due to the increasing number of multilateral agreements and their growing complexity, the practice to designate a 'depositary' of multilateral treaties came into being. Usually, treaties were prepared and signed in one copy only, which then was entrusted to one of the parties to the agreement. The depositary's job was to prepare certified copies for all the parties, verify the acceptability of signatures, instruments and of corresponding reservations or declarations, and inform the respective parties through depositary notifications of any developments regarding the treaty – especially its entry into force.[538]

While in the past only states were depositaries, the establishment of the United Nations deemed it suitable for depositary functions. The treaties database of the UN contains information on the status of more than 500 important multilateral agreements deposited with the Secretary-General of the United Nations – including the instruments of states as they sign, ratify, accede or provide declarations, reservations or objections.[539] As with other multilateral treaties of global interest (usually adopted by the UN General Assembly or concluded by conferences convened by the United Nations) the Secretary-General did accept the role of depositary for the UN Watercourses Convention.

538 See also Articles 76 and 77 of the 1969 Vienna Convention on the Law of Treaties (adopted 23 May 1969, entered into force 27 January 1980) 1155 UNTS 331 (Vienna Convention).

539 United Nations Treaty Collection (2011) <http://treaties.un.org/> accessed 30 April 2012.

35.1.2 Consent to be bound

The consent of the states party to the Convention is a vital factor, since states may (in the absence of a rule being also one of customary law) be bound only by their consent. A state can express this consent in several ways which are detailed below. The UN Watercourses Convention was opened for signature by all states and by regional economic integration organisations from 21 May 1997 until 20 May 2000 and is now closed for signature. Hence, only those states which signed the Convention can now ratify it. States which did not sign the Convention can now becoming contracting parties by accession to the Convention. The differences between these methods are described below; however the resulting legal effect and obligations for those states which become contracting parties by ratification or accession are the same.

35.1.3 Ratification

Ratification defines the international act by which a state indicates its consent to be bound to a treaty, and usually follows signature. It allows states the necessary time frame to seek the approval for the treaty required by national law (constitutional control) and to enact relevant legislation to give domestic effect to the treaty.[540]

540 Arts 2(1) (b), 14(1) and 16 of the 1969 Vienna Convention.

35.1.4 Acceptance and approval

The instruments of acceptance or approval have the same legal effect as ratification and consequently express the consent of a state to be bound by a treaty. It is used instead of ratification when constitutional law (national level) does not require the treaty to be ratified by the head of state.[541]

35.1.5 Accession

Accession is the method whereby a state which has not signed the treaty subsequently expresses its consent to become a party to that treaty. Generally, accessions occur once a treaty is closed for signature or after its entry into force.[542]

541 Arts 2(1) (b), 14(2) and 16 of the 1969 Vienna Convention.
542 Arts 2(1) (b), 15 and 16 of the 1969 Vienna Convention.

35.1.6 Regional economic integration organisations

In case a regional economic integration organisation (see Section 2.1.6) intends to become a party to the Convention, Paragraphs 2 and 3 of Article 35 cover the particularities in such an event.

If none of its member states is a party to the Convention, the organisation is bound by all the obligations under the Convention. In all other cases, the regional body and its member states which are party to the Convention have to decide on their respective responsibilities, since they are not entitled to exercise rights under the Convention simultaneously.

This is why any regional economic integration organisation has to declare the extent of its competences regarding the Convention in its instrument of ratification, acceptance, approval or accession, and keep the Secretary-General of the UN informed about any substantial changes to such competences.

35.2 Application

Given the fact that the Convention is now closed for signature, only the five states which have already signed the UNWC but not (yet) ratified, accepted or approved it can still do so – depending on their respective national legal requirements.

All other states only have the option of acceding to the Convention. As stated before, however, the legal implications following an accession do not differ from the ones following ratification.

STATE	SIGNATURE
Côte d'Ivoire	25 Sep 1998
Luxembourg	14 Oct 1997
Paraguay	25 Aug 1998
Venezuela	22 Sep 1997
Yemen	17 May 2000

Figure 7.1 | States with the option of ratifying, accepting or approving the Convention (Source Authors)

35.3 Additional reading

1969 Vienna Convention on the Law of Treaties, 1155 UNTS 331.

Aust A, Modern Treaty Law and Practice (2nd edn, Cambridge University Press 2007) at 103-113.

Shaw MN, International Law (6th edn, Cambridge University Press 2008) at 910-913.

Treaty Section of the United Nations Office of Legal Affairs, Summary of Practice of the Secretary General as Depositary of Multilateral Treaties (United Nations 1994).

Article 36 | Entry into Force

Convention text

1. The present Convention shall enter into force on the ninetieth day following the date of deposit of the thirty-fifth instrument of ratification, acceptance, approval or accession with the Secretary-General of the United Nations.
2. For each state or regional economic integration organisation that ratifies, accepts or approves the Convention, or accedes thereto after the deposit of the thirty-fifth instrument of ratification, acceptance, approval or accession, the Convention shall enter into force on the ninetieth day after the deposit by such state or regional economic integration organization of its instrument of ratification, acceptance, approval or accession.
3. For the purposes of paragraphs 1 and 2, any instrument deposited by a regional economic integration organisation shall not be counted as additional to those deposited by states.

36.1 Commentary

A treaty is intrinsically different to national legislation which, once in force, applies to all whom it has been directed at. An international agreement, like the UN Watercourses Convention, is much closer to a contract, which can only be in force for those states that have consented to be bound by it. A state can express this consent in several ways – by ratification, acceptance, approval or accession (see Section 35.1).

Each of the states which has expressed consent is then a 'contracting state' to the Convention,[543] and should, from that point on, never be referred to as 'signatory,' to avoid confusion. Signature is only one of the ways of consenting to be bound, and is in most cases subject to ratification; making it a rather loose term.[544] However, when states express their consent to be bound, the entry into force of the Convention does not automatically follow for them. This depends on whether the Convention is already in force or whether more contracting states are needed to reach the number of states required for its entry into force. Only once this has happened will all 'contracting states' also become 'parties' to the Convention.[545]

The UN Watercourses Convention follows the tradition of other multilateral treaties:[546] It enters into force after a specified period ('on the ninetieth day') following the deposit of the last instrument of ratification needed for the entry into force (thirty-fifth instrument). In case a state or regional economic integration organisation accedes to the Convention after its entry into force, it will enter into force for that particular state or organisation on the ninetieth day after the deposit of the instrument.

543 Article 2 (1) (f) 1969 Vienna Convention.
544 A Aust, Handbook of International Law (2nd edn, Cambridge University Press 2010) at 62.
545 Article 2 (1) (g) 1969 Vienna Convention.
546 A Aust, Handbook of International Law at 74.

Paragraph 3 of Article 36 clarifies that in case a regional economic integration organisation deposits an instrument, it cannot be counted as an additional instrument of ratification, acceptance, approval or accession to those of states regarding Paragraphs 1 and 2.

36.2 Application

The UN Watercourses Convention secures 35 instruments of accession, approval, acceptance and ratification. However, the 35th instrument of accession came from the European Union. Given that the European Union is classified as a 'Regional Economic Integration Organisation', it is determined that the Convention will not enter into force until an additional contracting state, accedes, approves or accepts this instrument.

36.3 Additional reading

Aust A, Handbook of International Law (2nd edn, Cambridge University Press 2010) at 73.

Treaty Section of the United Nations Office of Legal Affairs, Final Clauses of Multilateral Treaties: Handbook (United Nations Publications 2003).

Article 37 | Authentic Texts

Convention text

The original of the present Convention, of which the Arabic, Chinese, English, French, Russian and Spanish texts are equally authentic, shall be deposited with the Secretary-General of the United Nations.

37.1 Commentary

Since treaties represent negotiated compromises – often reconciling strong differences between a large number of states – imaginative and subtle drafting is vital in order to bridge the gap between the opposing views. This is equally true for the UN Watercourses Convention, which serves as a global framework for law related to the non-navigational uses of international watercourses. Hence, it is inevitable that some terms are unclear or ambiguous. In applying these sometimes vague provisions, the question may arise which text of the Convention has priority in interpreting it?

An authentic, or 'authoritative,' version of the text of the Convention has to be distinguished from an 'official' one. The former is the text being used for the authentication, i.e. the verification, of the Convention. The latter may have been used by a party for signing, but never reached the status of being 'authentic,' since it may merely be an official translation by a particular state.[547]

547 BS Murty, The International Law of Diplomacy : The Diplomatic Instrument and World Public Order (Martinus Nijhoff Publishers 1989) at 648.

37.2 Application

One could think of two cases where Article 37 may become relevant. First, discrepancies in interpretation of two or more authentic texts existing between watercourse states. Since none of the mentioned languages (Arabic, Chinese, English, French, Russian and Spanish) possesses superior authority, the various language versions have to be compared by the interpreter who then has to arrive at a common meaning.[548] In practice, however, during the process of comparing and reconciling texts, tribunals and courts often give priority to one particular text on the ground that it is less ambiguous and clearer; or to the one in the language in which the interpreter is more proficient.[549]

Article 33 (4) of the Vienna Convention on the Law of the Treaties [550] states that conflicts between authentic texts of equal authority should be resolved by: (1) applying the principles specified in Articles 31 (General rule of interpretation) and 32 (Supplementary means of interpretation) of the Vienna Convention; and (2), if necessary, by taking into account the object and purpose of the agreement, i.e. the Preamble.

The second scenario involves differences in interpretation of authentic and official texts. While, certainly, a distinction has to be drawn between the two – the former being authoritative – official versions of the Convention cannot be regarded as

548 Ibid at 649.

549 See J Hardy, The Interpretation of Plurilingual Treaties by International Courts and Tribunals (Oxford University Press 1961) at 82.

550 969 Vienna Convention on the Law of Treaties (adopted 23 May 1969, entered into force 27 January 1980) 1155 UNTS 331 (Vienna Convention), <http://www.unhcr.org/refworld/docid/3ae6b3a10.html> accessed 30 April 2012.

irrelevant. The interpreter might focus, and rightly so, on the authentic versions of the Convention as the expression of agreement between the parties, but reference to the official versions can be crucial as well in determining the states' expectations. This is due to the fact that some parties to the Convention agreed to the authentic versions only because they were recognised to correspond with the respective official text. Hence, the merit of official versions of agreements is generally being regarded as more valuable for the interpretation of the treaty than extrinsic materials.[551]

Given the fact that during the whole process of drafting the convention English has been the working language, it seems highly likely that, in any case, the English version of the Convention will receive greater attention from any interpreter.

551 Hardy, The Interpretation of Plurilingual Treaties by International Courts and Tribunals at 651.

37.3 Additional reading

Articles 31, 32 and 33 of the 1969 Vienna Convention on the Law of Treaties, 1155 UNTS 331.

Glossary of Legal Terms

Acceptance/Approval | Same legal effect as ratification and consequently expresses the consent of a state to be bound by a treaty. It is used instead of ratification when constitutional law (national level) does not require the treaty to be ratified by certain branches of government (Arts. 2(1)(b), 14(2) and 16 of the 1969 Vienna Convention on the Law of Treaties).[552]

Accession | The method whereby a state, which has not signed the treaty, subsequently expresses its consent to become a party. Generally, accessions occur once a treaty is closed for signature or after its entry into force (Arts. 2(1)(b), 15 and 16 of the 1969 Vienna Convention on the Law of Treaties).[553]

Appropriate measures | See 'due diligence' below.

Contracting state | A state that has consented to be bound by a treaty that has not entered into force.

Convention | The creation of a written agreement whereby the states participating bind themselves legally to act in a particular way or to set up particular relations between themselves. The term is used interchangeably with Treaty. Treaties are also known by a variety of differing names, ranging from International Agreements, Pacts, General Acts, and Charters, through to Statutes, Declarations and Covenants.

Customary International Law | Rules derived from the general practice among states and accompanied by a belief that such practice is legal binding (opinio juris).

552 A Aust, Modern Treaty Law and Practice (2nd edn, Cambridge University Press 2007) at 109-110.

553 Ibid at 110-111.

Due Diligence | A standard of care that a state of similar standing in, for example, financial, legal, technical and administrative terms would adopt in similar circumstances.

Ecosystem | An ecological unit consisting of living and non-living components that are interdependent and function as a community.[554]

Equitable and reasonable utilisation | Equitable and reasonable is often considered as synonymous with fair and sustainable respectively. All relevant factors and circumstances must therefore be considered to determine a solution that maximises benefits while minimising detriment. Equity has a long tradition in legal systems where prescriptive and rigid rules applied to complex situations would lead to unfair results.

General International Law | Applicable to relations between all states and subjects of international law, it usually derives its authority from customary international law and multilateral agreements.

Good Faith | Conduct with honest intent, fairness and sincerity, and with no intention of deceit.[555]

Jurisdiction | The right in international law for a state to exercise authority over its national and persons and things in its territory.

Justiciable | Legal disputes are able to be resolved by 'legal' means as opposed to 'Non-justiciable' disputes which are resolved by non-judicial methods.

554 Draft Articles on the Law of the Non-navigational Uses of International Watercourses, in (1994) Yearbook of the International Law Commission (Vol. II, part II), <http://untreaty.un.org/ilc/documentation/english/a_cn4_l493.pdf> accessed 21 September 2011, at 118.

555 See 'good faith' in J Law, E A Martin (eds.) A Dictionary of Law (Oxford University Press Oxford 2009), <http://www.oxfordreference.com> accessed 21 November 2011.

Lex lata | An existing rule of international law.

Opinio juris | General belief by states that a state practice is legally binding.

Optimal utilisation | The best possible or desirable use under certain restrictions, for example, satisfying the interests of two or more states.

Party | A state or regional economic integration organisation that has consented to be bound by the Convention once in force.

Precautionary approach | Where scientific understanding of a particular harm to the public or environment is not fully known, the burden of proof falls upon those seeking to take the action to prove that the harm will not be significant.

Ratification | Following signature, the expression of a state's consent to be bound by a treaty. Often the term ratification is used interchangeably with 'accession', 'approval' and 'acceptance' but there are procedural differences between the terms; as noted above.

Significant harm | Something that is more than detectable but not necessarily to a level of serious or substantial. To be significant the harm must lead to a 'real detriment' to, for example, human health, industry, property, environment or agriculture.[556]

Significant adverse effect | A lower threshold than significant harm. There may therefore be both a detectible and causal link between activities and impact, but such impacts may not necessarily amount to significant harm.

State responsibility | Responsibility of a state in international law for its wrongful acts.

Sustainable utilisation | Comprises two key elements in the context of natural resources, rational use and the protection of the ecosystem; which in the context of renewable resources means protecting the long-term viability of the resources for present and future generations.

Third state | A state which is not party to a treaty. A treaty does not create either obligations or rights for a third state without its consent (Article 34 Vienna Convention (see Part I)).

Vital human needs | Sufficient water to sustain human life.

556 Draft Articles on Prevention of Transboundary Harm from Hazardous Activities, in Report of the International Law Commission on the Work of its Fifty-third Session, UN GAOR, Supp (No. 10), UN Doc. A/56/10.

Adopted in 1997 by the UN General Assembly, the Convention on the Law of the Non-navigational Uses of International Watercourses (UN Watercourses Convention), seeks to, 'ensure the utilisation, development, conservation, management and protection of international watercourses and the promotion of the optimal and sustainable utilisation thereof for present and future generations' (Preamble). The User's Guide to the UN Watercourses Convention provides an Article by Article explanation of the text of this global framework instrument. In so doing, the Guide explains the meaning and purpose of each Article, and offers guidance on how the rights and obligations contained therein might be implemented. The User's Guide is written for a wide range of readers, including policy makers and decision makers, implementation agencies and other bodies responsible for transboundary water issues. It is hoped that the document will also be useful for managers and stakeholders from other sectors with a direct relevance to water, such as health, environment, education, agriculture, food, energy, fisheries and industrial water users.

"I have absolutely no doubt that this User's Guide will quickly become an indispensable tool for all those engaged in making sense of the provisions of the UN Watercourses Convention, or of any legal regime applying to the management of transboundary water resources. I have already found myself routinely reaching for it to look up the authors' incisive commentary on a range of specific issues – the role of transboundary EIA, the meaning of 'equity' in the specific context of transboundary waters, the significance of procedural and informational obligations, the nature of the obligation to protect watercourse ecosystems, etc. – and can honestly say that I've learned something new on each occasion. The commentary on each provision of the Convention is also pleasantly readable, concise and readily accessible to the non-expert reader – a hugely important achievement! Indeed, I feel certain that this Guide will play a key role in addressing lingering uncertainties and misconceptions about this important instrument, which can only encourage ratification by States and thus promote the Convention's ultimate entry into force!"
Dr. Owen McIntyre, Senior Lecturer in Environmental Law, Faculty of Law, University College Cork.

"The Guide is very user friendly, is a model work and will, undoubtedly, become the standard training manual in the field for the UN Watercourses Convention."
Dr. Bennett L. Bearden, Special Counsel on Water Law and Policy at Geological Survey of Alabama.

"The User's Guide is a very rich document and will be a great source book for water law students or water law professionals."
Dr. Sokhem Pech, Manager, International Group, Environmental Governance, Hatfield Consultants and Chair of M-Power Mekong Research Network.

ISBN 978-0-9572603-1-3