

7 THE UN WATERCOURSES CONVENTION, WITH SPECIAL REGARD TO THE ENVIRONMENTAL PROVISIONS

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This essay aims to trace the significance of the United Nations Watercourses Convention on the non-navigational uses of international watercourses (the Convention), which was adopted in New York in 1997 and entered into force in 2014, in particular with regards to its environmental provisions. After a short introduction dealing with water as a natural resource, the essay will focus on the Convention itself. First, the Convention will be examined in general, and then the environmental provisions will be analyzed in detail. Finally, some conclusions will be drawn.

7.1 FRESHWATER AS A NATURAL RESOURCE

Freshwater is a precondition for life for which there is no alternative.¹ Besides humans, plants and animals also depend on water as well as the whole ecosystem.² Although the Earth is called the ‘Water Planet’ as more than 70 per cent of its surface is covered with water, which practically means that water is by far the most common liquid on the Earth’s surface,³ 97 per cent of this water can be found in the ocean, so the vast majority of water on Earth is unfit for human consumption or other uses due to its high salt content. In addition, as two thirds of the remaining freshwaters are locked up in glaciers and permanent snow cover, with no more than 0.7 per cent being available as freshwater (0.66 per cent of which is groundwater and just 0.03 per cent is available as freshwater in rivers, lakes and streams).⁴ These waters constitute 276 international river basins in the world shared by

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1 A. K. De & A. K. De, *Environmental Engineering*, New Age International Ltd, New Delhi, 2009, pp. 66-67; L. Boisson de Chazournes, *Fresh Water in International Law*, Oxford University Press, Oxford, 2013, p. 12.

2 J. Verschuuren, *Recht op water*, in T. G. Drupsteen, H. J. M. Havekes & H. F. M. W. Van Rijswijk (Eds.) *Weids water. Opstellen over waterrecht*, Sdu Uitgevers, Den Haag, 2006, p. 427.

3 J. Boberg, *Liquid assets: How Demographic Changes and Water Management Policies Affect Freshwater Resources*, RAND Corporation, Santa Monica, CA, 2005, pp. 15-17; P. L. Brezonik & W. A. Arnold, *Water Chemistry: An Introduction to the Chemistry of Natural and Engineered Aquatic Systems*, Oxford University Press, Oxford, 2011, p. 10.

4 De & De, 2009, p. 66-67.

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145 countries, which cover approximately half of the Earth's land surface and 40 per cent of the world's population.⁵ Besides the limited availability, water is unevenly distributed across the globe and is often overexploited⁶ due to the rapidly growing demand⁷ as a result of population growth, urbanisation and economic development.⁸ Furthermore, it is worth noting that although freshwater is a renewable resource, its renewable capacity is not unlimited.⁹ Moreover, water quantity and quality are linked, as even if sufficient amounts of water exist, it may be unusable or suitable only for limited kinds of purposes due to the poor quality,¹⁰ not to mention that the more contaminated the water is the more challenging it is to obtain a suitable water quality.¹¹

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7.2.1 *The Preceding and Subsequent Universal Documents Relating to the Convention*

As referred to in the Preamble of the Convention, international organisations played an important role in the 'codification' and 'progressive development' of this field, of which two scholarly organisations have to be highlighted. On the one hand, there is the Institute of International Law (IIL), which is an 'exclusively learned society, without any official nature' founded in 1873 at the Ghent Town Hall in Belgium and aims to contribute to the development of international law.¹² While, on the other hand, the International Law Association (ILA), which is non-governmental organisation founded in Brussels, has as its goal 'the study, clarification and development of international law.'¹³ Starting with IIL, its first relevant document was the Madrid Declaration issued in 1911 under the title

5 A. Rieu-Clarke & F. Rocha Loures, Introduction, in F. Rocha Loures & A. Rieu-Clarke (Eds.), *The UN Watercourses in Force: Strengthening international law for transboundary water management*, Routledge, New York, 2013, p. 5.

6 G. Kardos, 'A vízhez való jog', *Acta Humana*, Vol. 15, No. 1, 2004, p. 95; Rieu-Clarke & Rocha Loures, 2013, p. 3.

7 J.C. Padowski & J.W. Jawitz, 'The Future of Global Water Scarcity: Policy and Management Challenges and Opportunities', *Whitehead Journal of Diplomacy and International Relations*, Vol. 10. No. 2, 2009, p. 100.

8 www.eea.europa.eu/articles/water-in-the-city.

9 A.Y. Hoekstra, 'The relation between international trade and freshwater scarcity', WTO Working Paper, January 2010, p. 4.

10 E. Brown Weiss, 'The Coming Water Crisis: A Common Concern of Humankind', *Transnational Environmental Law*, Vol. 1. No. 1, 2012, p. 153.

11 M. Palaniappan et al., Water Quality in P. H. Gleick (Ed.) *The World's Water Volume 7 The Biennial Report of Freshwater Resources*, Island Press, Washington, Covelo, London, 2012, p. 60.

12 www.idi-iil.org/idiE/navig_statutes.html.

13 www.ila-hq.org/en/about_us/index.cfm.

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‘International Regulations Regarding the Use of International Watercourses for Purposes Other than Navigation.’ In 1961, it was followed by the IIL Resolution on the Utilization of Non-Maritime International Waters (Except for Navigation), also known as the Salzburg Declaration as well as the resolution on The Pollution of Rivers and Lakes and International Law (Athens Resolution) in 1979. Moving on to the ILA, first and foremost, the Helsinki Rules on the Uses of the Waters of the International Rivers (1966) has to be mentioned, which constitutes a landmark in the evolution of international water law, especially the principle of equitable and reasonable utilization (which later also became the cornerstone of the Convention). Moreover, Montreal Rules on Pollution (1982) and Supplemental Rules on Pollution (1996) as well as the Berlin Rules on Water Resources Law (Berlin Rules) have to be referred to. Berlin Rules were adopted in 2004 and these are the most recent and most comprehensive addition to ILA’s activity on water resources. These rules were adopted after the Convention and incorporate all the experiences since the adoption of Helsinki Rules as well as the developments in the international environmental law.¹⁴

In addition, the Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Helsinki Convention), which was adopted in Helsinki in 1992 and entered into force in 1996, is also worth mentioning. At the time of its adoption, it was only open to member states of the United Nations Economic Commission for Europe as well as those regional economic integration organizations formed by these states. However, in 2003 the Meeting of the Parties adopted a decision, which allowed all United Nations Member States to accede to the Convention.¹⁵ Furthermore, in 2012, another decision was adopted, which made possible the accession by non-United Nations Economic Commission for Europe countries.¹⁶ Consequently, the Water Convention has become a universal instrument and to date there are 40 parties.¹⁷

Last but not least, the International Law Commission (ILC)’s work cannot be overstressed, as the Preamble explicitly mentions its contribution to the Convention. The aim of the ILC is the promotion of the progressive development of international law and its codification. It consists of thirty-four members who are persons of recognized competence in international law. The members of the Commission serve in their individual capacities

14 International Law Association, Berlin Conference (2004), Water Resources Law. p. 4.

15 On 28 November 2003, the Meeting of the Parties to the Convention adopted Dec. III/1, amending Arts. 25 and 26 of the Convention to allow all United Nations Member States to accede to the Convention. These amendments entered into force on 6 February 2013.

16 On 30 November 2012, the Meeting of the Parties adopted Dec. VI/3 on accession by non-United Nations Economic Commission for Europe countries.

17 https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-5&chapter=27&lang=en.

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and are elected by the General Assembly (GA) from a list of candidates nominated by the Governments of States Members of the United Nations.¹⁸

7.2.2 *Overview and Scope of the Convention*

The Convention is divided into seven parts and contains 37 articles. It encompasses both substantive and procedural provisions, and the most significant of them can be identified in Part II on General Principles, Part III on Planned Measures, Part IV on Protection, Preservation and Management and Part V on Harmful Conditions and emergency situations.

It is worth pointing out that the Convention, as ascertained in the Preamble, is a so-called ‘framework convention’. Consequently, it attempts no more than to address some basic procedural and substantive rules, and leaves the details to the riparian states in order to form an agreement fitting the specific characteristics of the watercourse in question.¹⁹ Interestingly, framework convention as a regulatory technique can be deemed to be a relatively recent phenomenon in international law and mainly observed in the field of international environmental law.²⁰ However, framework conventions are also legally binding sources of international law, which do not differ from other conventions in their legal nature, so qualification as a framework convention does not bear any consequence under the law of the treaties.²¹

In determining the scope of the Convention, two key elements of the title will be examined. Firstly, based on the Draft articles on the law of the non-navigational uses of international watercourses and commentaries²² (Commentary) of the ILC, the term ‘non-navigational uses’ has to be interpreted in its broad sense, as it covers ‘all but navigational uses of international watercourses.’ Secondly, Article 2 (a) defines ‘international watercourse’ as ‘a watercourse, parts of which are situated in different states.’ In addition, in Article 2 (b) ‘watercourse’ is determined ‘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.’ The determination of the ‘international watercourse’ is interesting

18 Statute of the International Law Commission, adopted by the GA Res. 174 (II) 21 November 1947, as amended by Res. 485 (V) 12 December 1950, 984 (X) 3 December 1955, 985 (X) 3 December 1955 and 36/39 18 November 1981. Art. 1, Art. 3.

19 S.M.A. Salman, ‘The United Nations Watercourses Convention Ten Years Later: Why Has its Entry into Force Proven Difficult?’, *Water International*, Vol. 32, No 1, 2007, p. 4.

20 N. Matz-Lück, ‘Framework Conventions as a Regulatory Tool’, *Göttingen Journal of International Law*, Vol. 1, No. 3, 2009, p. 440.

21 Matz-Lück, 2009, p. 451.

22 Draft articles on the law of the non-navigational uses of international watercourses and commentaries thereto and resolution on transboundary confined groundwater, adopted by the International Law Commission at its forty-sixth session in 1994.

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from two perspectives. Firstly, contrary to the general presumption, it is not synonymous with 'international river'. As based on the definition of 'watercourse' in the Convention, it covers a broader category than river by encompassing both surface water and groundwater. Integrating groundwaters into this definition may be based on the recognition that the vast majority of freshwater on Earth is groundwater and that most of them are related to or interact with surface water. This interrelationship between surface water and groundwater is crucial from both a water quantity and quality point of view. Just as water withdrawals mutually affect both surface and groundwater, the pollution in either of them also contaminates the other one.²³ Secondly, in harmony with the definition of 'watercourse' and the Commentary, scholars agree that confined groundwaters, which are not related to any surface water, are excluded under the scope of this Convention.²⁴ Instead, the ILC adopted the Draft articles on the Law of Transboundary Aquifers.²⁵

7.2.3 The Adoption of the Convention

The United Nations Convention on the Law of the Non-Navigational Use of the International Watercourses was adopted by the GA on 21 May 1997 and entered into force on 17 August 2014.²⁶ The ILC started its work after the GA adopted its Resolution on 'Progressive development and codification of the rules of international law relating to international watercourses' in 1970, in which the ILC was asked 'to take up the study of the law of the non-navigational uses of international watercourses with a view to its progressive development and codification.'²⁷ The Convention was negotiated in the Sixth (Legal) Committee of the GA, based on the draft articles of the ILC and the negotiations were open to all member states of the UN. It can be said about the ILC's work that it was highly influenced by the different approaches of its five special rapporteurs and was not 'linear'. On the one hand, it developed based on the annual interaction between the ILC and the GA.²⁸ On the other hand, at various stages of the ILC's work, states also had the opportunity to reflect

23 S.C. McCaffrey, *The UN Convention on the Law of the Non-Navigational Uses of International Watercourses: Prospects and Pitfalls*, in S.M.A. Salman & L. Boisson de Chazournes (Eds.), *International Watercourses, Enhancing Cooperation and Managing Conflict*, World Bank Technical Paper No. 414, 1997, p. 18.

24 S.C. McCaffrey, 'The contribution of the UN Convention on the law of the non-navigational uses of international watercourses', *International Journal of Global Environmental Issues*, Vol. 1. No. 3-4, 2001, pp. 251-252; Salman, 2007, p. 5.

25 Draft articles on the Law of Transboundary Aquifers, adopted by the International Law Commission at its sixtieth session, in 2008.

26 https://treaties.un.org/Pages/ViewDetails.aspx?src=UNTSOnline&tabid=2&mtdsg_no=XXVII-12&chapter=27&lang=en#Participants.

27 GA Res. 2669 (XXV), 8 December 1970.

28 S.C. McCaffrey, 'The 1997 U.N. Watercourses Convention: Retrospects and Prospects', *Global Business & Development Law Journal*, Vol. 21, 2008, p. 165.

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on the drafts and share their viewpoint.²⁹ Finally, on 21 May 1997, the Convention was adopted by an overwhelming majority of the states, as 103 states voted in favour, 26 abstained, and only three states (Burundi, China and Turkey) voted against it.³⁰ Contrary to this remarkable support, the number of ratifications slowly increased, although the Convention needed 35 instruments of ratification or accession to its entry into force,³¹ which is slightly less than one third of the number of the states which voted in favour of the final draft. Several reasons have been identified behind the slow ratification process. On the one hand, the controversies relating to the adopted Convention were blamed, especially the relationship between two key principles, namely the principles of equitable and reasonable utilisation and the prevention of significant harm. However, some other provisions, such as the dispute settlement mechanism, and the relationship between the Convention and other existing agreements may have also contributed to the reluctance of the states.³² Besides, on the other hand, other reasons may have been related to the ratification process of the multilateral agreements. In these processes most of the time one or more ‘key individual governments’ as well as UN bodies or regional organisations play a key role in order to push them forward. However, in this case, the adoption of the Convention was shortly succeeded by the adoption of the Kyoto Protocol, of which the ratification process proved to be more challenging. Furthermore, climate change was evaluated to be more significant. Consequently, the attention of the international community started focusing on the Kyoto Protocol shortly after the adoption of the Convention.³³

7.2.4 *Current Status of the Convention*

To date there are 36 contracting states to the Convention.³⁴ Despite the long ratification process and the low number of the parties, the significance of the Convention is indisputable. This ascertainment can be supported, first and foremost, by the judgement of the

29 A. Rieu-Clarke & K. Hayward, ‘Entry into force of the 1997 UN Watercourses Convention: barriers, benefits and prospects’, *Water 21*, Vol. 9, No. 6, 2007, p. 12.

30 GA Fifty-first Session 99th plenary meeting Wednesday, 21 May 1997, 10 a.m., New York.

31 Convention on the Law of the Non-navigational Uses of International Watercourses, adopted by the General Assembly of the United Nations on 21 May 1997, Art. 36.

32 Rieu-Clarke & K. Hayward, 2007, p. 13; Salman, 2007, pp. 8-11.

33 J.W. Dellapenna & A. Rieu-Clarke & F. Rocha Loures, Possible reasons slowing down the ratification process, in F. Rocha Loures and A. Rieu-Clarke (Eds.), *The UN Watercourses in Force: Strengthening international law for transboundary water management*, Routledge, New York, 2013, p. 14.

34 Such as, Benin, Burkina Faso, Chad, Côte d’Ivoire, Denmark, Finland, France, Germany, Greece, Guinea-Bissau, Hungary, Iraq, Ireland, Italy, Jordan, Lebanon, Libya, Luxembourg, Montenegro, Morocco, Namibia, Netherlands, Niger, Nigeria, Norway, Portugal, Qatar, South Africa, Spain, State of Palestine, Sweden, Syrian Arab Republic, Tunisia, United Kingdom of Great Britain and Northern Ireland, Uzbekistan, Vietnam. https://treaties.un.org/Pages/ViewDetails.aspx?src=UNTSOnline&tabid=2&mtdsg_no=XXVII-12&chapter=27&lang=en#EndDec.

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International Court of Justice (ICJ) in the case *Gabčíkovo-Nagymaros*,³⁵ in which ICJ referred to the Convention several times shortly after its adoption.³⁶ Moreover, it seems to be influential in regional, basin specific and bilateral agreements, especially in Africa, such as Revised Protocol on Shared Watercourses in the Southern African Development Community in 2000.³⁷ However, Biswas warns that the impact of the Convention on the resolution of conflicts may be limited, as several states belonging to the same international watercourses and having ongoing disputes did not support the adoption of the Convention.³⁸ This observation begs the question to what extent the Convention reflects customary international law. As mentioned above, when the ILC was asked in 1970 to study the non-navigational use of international watercourses, the GA referred in its Resolution to both 'progressive development and codification' international law.³⁹ However, as McCaffrey correctly observed, the ILC does not indicate in the Commentary whether certain provisions were the codification or the progressive development of international law. Nonetheless, in his opinion, at least three principles constitute part of the customary international law, such as equitable and reasonable utilization, not to cause significant harm and notification.⁴⁰ In addition, Salman extended this list with the exchange of data and information, and the provisions relating to the protection of the environment.⁴¹ Differentiating between customary international law and the other provisions of the Convention is crucial, as customary international law norms bind all states regardless of joining the Convention, while other rules binds only the party to the Convention.⁴² Bruhács argues that the whole Convention reflects the customary law on governing the non-navigational uses of international watercourses, as it transforms customary rules into treaty provisions as a codification treaty. Furthermore, it was referred to by the ICJ in the *Gabčíkovo-Nagymaros* case before its entry into force.⁴³ However, several reasons may be recalled which contradict this approach. First, the controversies, which have surrounded certain provisions, first and foremost, the relationship between the principle of equitable and reasonable utilization and the principle not to cause significant harm, as upper riparians tend to favour the former

35 Case Concerning the *Gabčíkovo-Nagymaros Project (Hungary v. Slovakia)*, Judgment of 25 September 1997, Judgment, 1997 ICJ Rep., p. 7.

36 McCaffrey, 2001, p. 259.

37 Rieu-Clarke & K. Hayward, 2007, p. 14.

38 J.C. Kahn, '1997 United Nations Convention on the Law of the Non-navigational Uses of International Watercourses', *Colorado Journal of International Environmental Law and Policy*, 1997 Yearbook, p. 183.

39 McCaffrey, 2001, p. 259.

40 McCaffrey, 1997, p. 27.

41 Salman, 2007, p. 13.

42 Statute of the International Court of Justice, Art. 38.

43 J. Bruhács, 'A nemzetközi folyók jogáról szóló 1997. évi New York-i egyezmény', *Jura*, Vol. 6. No. 1-2, 2000, p. 46.

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one, while lower riparians the latter one.⁴⁴ Secondly, despite its entry into force, the slow ratification process as well as the low intention to join may indicate that the Convention does not unconditionally mirror the standpoint of the states. This concern was also manifested in Rieu-Clarke's ascertainment, as he argued that among others the benefit of the Convention's entry into force would be, on the one hand, the strong manifestation of the states towards 'water crisis'; on the other hand, the accession to the Convention by a large number of states could contribute to the clarification and the strengthening of customary international law in this field.⁴⁵

7.3 THE ENVIRONMENTAL PROVISIONS OF THE CONVENTION

This part shall concentrate on the environmental provisions of the Convention. As has been shown, while introducing water as a natural resource; freshwater is a precious natural resource with no alternative. However, there is a growing concern due to water quantity and quality, so it is worth taking a look at the Convention's provisions in order to find out how it aims to contribute to the protection of the environment.

7.3.1 *The Environmental Provisions in General*

In evaluating the environmental provisions of the Convention, its framework convention character has to be referred to. Consequently, it cannot be expected that there will be the same degree of protection as in the case of regional or bilateral agreements in the developed states. Although numerous proposals were made during the negotiations in order to strengthen the environmental standpoint, very few were ultimately accepted.⁴⁶ This was regrettable; however, an environmentally stronger text would ultimately have received less support for the Convention.⁴⁷ The environmental references can be discovered, on the one hand, in the Preamble of the Convention, such as reference to the protection and sustainable utilization of international watercourses as well as to the principles and recommendations of the Rio Declaration and Agenda 21 adopted by the United Nations Confer-

44 A. Schwabach, 'The United Nations Convention on the Law of the Non-navigational Uses of International Watercourses, Customary International Law, and the Interests of Developing Upper Riparians', *Texas International Law Journal*, Vol. 33. No. 2, 1998, pp. 276-278; C.B. Bourne, 'The Primacy of the Principle of Equitable Utilization in the 1997 Watercourses Convention', *Canadian Yearbook of International Law*, Vol. 35, 1997, pp. 215-232; M.S. Helal, 'Convention on the Law of the Non-Navigational Uses of International Watercourses Ten Years On', *Colorado Journal of International Environmental Law and Policy*, Vol. 18. No. 2, 2007, pp. 337-378.

45 Rieu-Clarke & Hayward, 2007, p. 14.

46 UN Doc. A/C.6/51/SR.15.

47 McCaffrey, 2001, p. 257.

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ence on Environment and Development in 1992. However, there is also reference to the ‘special situation’ of developing countries, which, as mentioned above, must have had an influence on the level of the environmental protection. On the other hand, environmental provisions can be also found in Part IV on Protection, Preservation and Management, namely Article 20 on Protection and preservation of ecosystems, Article 21 on Protection, reduction and control of pollution, Article 22 on Introduction of alien or new species and finally, Article 23 on Protection and preservation of the marine environment. In the following section, these provisions will be shortly discussed, especially in comparison with the relevant articles of the Berlin Rules. Although non-binding, these rules constitute the most recent and comprehensive universal regulations on water resources. Moreover, ILA has been active on freshwater issues for decades and their work can be seen in several rules.⁴⁸ Furthermore, the provisions of the Helsinki Convention will also be mentioned if and when they are accurate. However, it has to be taken into account that at the time of the adoption it was a regional instrument (connected to developed states) and was adopted years before the Convention.

7.3.2 Protection and Preservation of Ecosystems

Article 20 on Protection and preservation of ecosystems states that ‘Watercourse States shall, individually and, where appropriate, jointly, protect and preserve the ecosystems of international watercourses.’ Following Article 192 of the United Nations Convention on the Law of the Sea (UNCLOS),⁴⁹ Article 20 imposes the obligation to protect and preserve the environment. As mentioned in the Commentary, the ILC was of the opinion that this article, which lays down a general obligation, should precede the more specific articles of this part of the Convention. The Commentary also defines some terms of this article. Firstly, ‘ecosystems’ are determined as ‘an ecological unit consisting of living and non-living components that are interdependent and function as a community’ of which an important feature is that ‘everything depends on everything else and nothing is really wasted.’ Secondly, it explains that the obligation to ‘protect’ requires the watercourse States to ‘shield the ecosystems of international watercourses from harm and damage’, while the obligation to ‘preserve’ is applicable especially to those freshwater ecosystems that are in a ‘pristine or unspoiled condition.’ It aims to protect those ecosystems in such a way to maintain their natural state. This article of the Convention is evaluated by McCaffrey as ‘a simple but potentially quite powerful provision.’ Similarly to Article 192 of the UNCLOS,

48 S. Bogdanović, *International law of water resources: contribution of the International Law Association (1954-2000)*, Kluwer Law International, London, 2001, 436 p.

49 Art. 192 of UNCLOS on General obligation stipulates that states have the obligation to protect and preserve the marine environment.

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on which it is modelled, this obligation is not qualified, and without any doubt it is not an absolute obligation, but it is an obligation to exercise due diligence to protect and preserve watercourses' ecosystems.⁵⁰ Contrary to the Convention, the Helsinki Convention contains only short references to the ecosystem.⁵¹ However, Article 22 of the Berlin Rules on Ecological Integrity prescribes for states to 'protect the ecological integrity necessary to sustain ecosystems dependant on particular waters.' This obligation is described in the Commentary of the Berlin Rules as a recently recognized, but rapidly generally accepted obligation. Similarly to the Convention, it is not an absolute obligation. Moreover, as indicated in the Commentary, its real content is discharged through the fulfilment of other obligations.

7.3.3 *Prevention, Reduction and Control of Pollution*

Before embarking on the definition of 'water pollution' in the Convention, it is worth mentioning Lammers' observations on defining water pollution. He concluded that many sources had not even attempted to define water pollution, which might be traced back to two reasons. On the one hand, people generally have a 'fairly accurate idea' about water pollution; on the other hand, there are difficulties with defining it precisely, as different approaches may result in a significantly different definition 'not only in details but sometimes in also fundamental respects.'⁵² Indeed, it proves to be challenging to define what clean water is for several reasons, such as that nature itself does not provide 'pure' water and it is the human's concern to decide whether or not the water is clean enough to satisfy their needs, not to mention that water serves multiple purposes claiming different water quality, so the term 'clean water' may imply different water quality depending on the uses in question.⁵³

Similarly to Article 194 of UNLOS,⁵⁴ Article 21 of the Convention establishes the fundamental obligations to 'prevent, reduce and control the pollution of international watercourses.' These provisions encompass three paragraphs. The first stipulates the 'pollution of an international watercourse' as 'any detrimental alteration in the composition or quality of the waters of an international watercourse which results directly or indirectly from human conduct.' As indicated in the Commentary, this definition is far too general. On the one hand, it does not name any particular type of pollution or polluting agent, such

50 McCaffrey, 1997, p. 24.

51 Convention on the Protection and Use of Transboundary Watercourses and International Lakes, adopted in Helsinki on 17 March 1992, Art. 2-3.

52 J.G. Lammers, *Pollution of International Watercourses: search for substantive rules and principles of law*, Martinus Nijhoff, The Hague, 1984, p. 7.

53 C.B. Bourne, 'International Law and Pollution of International Rivers and Lakes', *University of Toronto Law Journal*, Vol. 21, 1971, p. 194.

54 Art. 194 of UNCLOS on Measures to prevent, reduce and control pollution of the marine environment.

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as introduction of substances or energy. On the other hand, the term ‘any detrimental alteration’ does not specify a threshold, which would help differentiate between legal and illegal pollution. Consequently, paragraph 1 declares the general prohibition of water pollution *per se*, as it encompasses all kinds of negative alterations regardless of their effects, not to mention that it leaves open the question of what ‘detrimental effect’ means.

Turning to paragraph 2, it obliges watercourse States to ‘prevent, reduce and control the pollution of an international watercourse.’ As explained in the Commentary, these obligations, just like in the case of marine pollution, refer to the varying water quality of the international watercourses. While the obligation to ‘prevent’ refers to the new pollution of international watercourses, the other obligations, such as the obligation to ‘reduce and control’ refers to the existing pollution. However, this obligation is not unconditional, as it is applicable only to that pollution which ‘may cause significant harm to other watercourse States or to their environment.’ In addition, this paragraph provides a non-exhaustive list of ‘significant harm’, namely ‘harm to human health or safety, to the use of the waters for any beneficial purpose or to the living resources of the watercourse.’ Finally, in paragraph 2, states are required to ‘take steps to harmonize their policies in this connection.’ Not surprisingly, the Commentary identifies this paragraph as a ‘specific application’ of the two general principles, namely the equitable and reasonable utilization and the obligation not to cause significant harm, which definitely implies that all the controversies and uncertainties surrounding these principles also affect the interpretation of this paragraph.

Moving onto paragraph 3, it establishes the obligation to ‘consult with a view to arriving at mutually agreeable measures and methods’ in order to, just like in paragraph 2, ‘prevent, reduce and control the pollution of an international watercourse.’ Three groups of ‘measures and methods’ are specified, such as joint water quality objectives, the establishment of techniques and practices against pollution from point and non-point sources and finally, the establishment of lists on substances, of which the introduction into the international watercourse is ‘prohibited, limited, investigated or monitored.’ Furthermore, it is worth noting, that this paragraph does not establish an absolute obligation to consult, as it is applicable ‘at the request of any of the watercourse states.’ On the one hand, this can be interpreted as a right of every single watercourse state to initiate consultation. On the other hand, however, it may mean that in the absence of such kind a request this paragraph is not applicable to a watercourse State. Finally, a closing remark on this paragraph is that there is no reference to the required water quality level, which should be reached by these obligations and ‘measures and methods’, which can result in maintaining the present varying water quality from river basin to river basin.

Turning our attention to the relevant provisions of the Berlin Rules, the starting point should be Article 3, which defines ‘pollution’ as ‘any detrimental change in the composition or quality of waters that results directly or indirectly from human conduct.’ As can be seen, similarly to the Convention, the term ‘human conduct’ is used. On the one hand, it serves

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to differentiate between natural and anthropogenic pollution, as only the latter one can be the subject of the legal regulation.⁵⁵ On the other hand, similarly to the Convention, it is understood to cover both acts and omissions, which is preferred to other terms, such as 'human activities'. The obligations relating to 'pollution' are prescribed in Article 27 on Pollution. First, paragraph 1 obliges states to 'prevent, eliminate, reduce, or control pollution in order to minimize environmental harm.' Some remarks can be made to this provision. On the one hand, in comparison with the Convention, an additional obligation, namely the obligation to eliminate can be detected. On the other hand, contrary to the Convention, these obligations are not limited to transboundary issues. Moreover, the aim of Article 27 is to 'minimize environmental harm', which covers 'injury to the environment and any other loss or damage caused by such harm' and 'the costs of reasonable measures to restore the environment actually undertaken or to be undertaken' compared to 'significant harm' in the Convention. Secondly, paragraph 2 requires states to conform with Article 28 on Establishing Water Quality Standards, to 'assure compliance with that standard.' The Berlin Rules go further than the Convention by specifying the achievable goals by the establishment of the standards, such as the protection of public health and the aquatic environment as well as provision of water for the satisfaction of certain needs, particularly drinking, ecosystem, agriculture and recreation. Finally, paragraph 3 formulates prescriptions relating to 'wastes, pollutants and hazardous substances' in order to 'protect the aquatic environment.' Besides, the Berlin Rules devote a separate article on hazardous substances, namely Article 26, which obliges states to 'prevent the introduction of hazardous substances into the waters.' Interestingly, there is no explicit reference to hazardous substances in the Convention, although, their harmful effect on the waters had been widely recognized at time of the adoption of the Convention, such as in ILA Montreal Rules on Pollution (1982) and Supplemental Rules on Pollution (1996) as well as in the Helsinki Convention. As most of the developed states are able to control most of the discharges from the point source (which is primarily responsible for the introduction of hazardous substances into water) well,⁵⁶ it may be suspected that the resistance of the developing countries may be behind the exclusion of this problem.⁵⁷ Furthermore, contrary to the Helsinki Convention and the Berlin Rules, there is no reference to the application of best available techniques (for point sources of pollution) and best environmental practices (for non-point sources of pollution) to tackle water pollution. This is despite the fact that Annex I and II of the Helsinki Convention had dealt with it in detail in 1992. As a closing remark,

55 X. Hanqin, *Transboundary Damage in International Law*, Cambridge University Press, Cambridge, 2003, p. 6.

56 M.K. Hill, *Understanding Environmental Pollution: A Primer*, 2nd ed., Cambridge University Press, Cambridge, 2004, p. 201.

57 A. Elhassadi, 'Pollution of water resources from industrial effluents: a case study – Benghazi, Libya', *Desalination*, Vol. 222. No. 1-3, 2008, pp. 286-293.

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it is worth noting that the Helsinki Convention does not determine the definition of water pollution. It applies a broader category, namely transboundary impact. It specifies in connection with water pollution that states are obliged to ‘prevent, control and reduce pollution of waters causing or likely to cause transboundary impact’, without any definition on water pollution.⁵⁸

7.3.4 Introduction of Alien or New Species

Similarly to Article 196 paragraph 1 of UNCLOS,⁵⁹ Article 22 on Introduction of alien or new species obliges watercourse States to

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 State.

As reasoned in the Commentary, ILC excluded the present article under the scope of Article 21 of the Convention and devoted a separate article for ‘biological’ alterations, as even though the introduction of alien or new species may have harmful effects upon water quality, it is not generally regarded as pollution *per se*, as its detrimental effects on the environment are not generally regarded as pollution. Nonetheless, it does not affect the significance of this paragraph, as the introduction of alien or new species into a watercourse poses a threat to the native species, as it can upset the ecological balance of the watercourse and trigger serious problems, such as the disruption of the food web and the elimination of other species. Based on the Commentary, the term ‘species’ encompass both flora and fauna, while ‘alien’ refers to non-native species and ‘new’ covers those species that ‘have been genetically altered or produced through biological engineering.’ Interestingly, while no reference to this issue can be found in the Helsinki Convention, the Commentary of the Berlin Rules describes it as ‘nothing is more disruptive of the biological integrity of an ecosystem.’ However, in comparison with the Convention, the scope of Berlin Rules is limited to alien species. Although contrary to the Convention, the Berlin Rules go further in the sense that they do not require a threat of ‘significant harm to other watercourses states.’

⁵⁸ Convention on the Protection and Use of Transboundary Watercourses and International Lakes, adopted in Helsinki on 17 March 1992, Art. 2.

⁵⁹ Art. 196 of UNCLOS on Use of technologies or introduction of alien or new species.

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7.3.5 *Protection and Preservation of the Marine Environment*

Following Article 207 of UNLOS,⁶⁰ Article 23 on Protection and preservation of the marine environment obliges watercourse States to ‘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.’ Similarly to Article 20 of the Convention, the significance of this field has been recognised relatively recently. The inclusion of this article into the environmental provisions of the Convention is based on the recognition that waters on Earth are linked due to the hydrological cycle.⁶¹ Therefore, pollutants introduced or reaching rivers by the flowing water will sooner or later reach the sea.⁶² Consequently, the quality of rivers directly affects the marine environment, which similarly to freshwaters, also has important roles, such as fishing, shipping or recreation.⁶³ Furthermore, it is worth mentioning that land-based marine pollution constitutes more than 70 per cent of all marine pollution.⁶⁴ However, it is not all via watercourses, as land-based marine pollution arises from two general sources. The first of them, which accounts for 44 per cent of all pollution, can reach the marine environment by introducing substances or energy into waters,⁶⁵ and it enters into the sea either from rivers (which are often transboundary) or from direct discharges into coastal waters.⁶⁶ The other source of land-based marine pollution can arise from or through the atmosphere as an effect of land-based activities and it accounts for 33 per cent of marine pollution.⁶⁷ As reasoned in the Commentary, the Convention does not require the watercourse States to protect the marine environment, but to take the necessary measures which are ‘capable financially and technologically,’ in order to protect the marine environment from pollution via international watercourse. The Helsinki Convention does not address this question in

60 Art. 207 of UNLOS on Pollution from land-based sources. In addition, the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA) and the associated 1995 Washington Declaration on Protection of the Marine Environment from Land-based Activities, which has been renewed through the Montreal Declaration on the Protection of the Marine Environment from Land-based Activities (2001), the Beijing Declaration on furthering the implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (2006) and the Manila Declaration on Furthering the Implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (2012).

61 A.C. Kiss & D. Shelton, *International Environmental Law*, 3rd ed., Ardsley: Transnational Publishers, New York, 2004, p. 455.

62 Boisson de Chazournes, 2013, p. 5.

63 *Protecting coastal and marine environments from land-based activities: A guide for national action* UNEP, 2006, p. 2; D. Shelton & A. Kiss, *Judicial handbook on Environmental Law*, UNEP, Stevenage, 2005, p. 65.

64 Boisson de Chazournes, 2013, p. 116.

65 P. Sands & J. Peel, *Principles of International Law*, 3rd ed., Cambridge University Press, Cambridge, 2012, pp. 372-373; D. Hassan, *Protecting the Marine Environment from Land-based Sources of Pollution: Towards Effective International Cooperation*, Ashgate, Aldershot, 2006, pp. 15-16.

66 Boisson de Chazournes, 2013, p. 116.

67 Sands & Peel, 2012, pp. 372-373; Hassan, 2006, pp. 15-16.

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detail, but short references can be found to it.⁶⁸ Even though the Berlin Rules are not applicable to marine waters,⁶⁹ so they do not tackle this issue; their environmentally progressive provisions can definitely contribute to the reduction of pollution via watercourses. However, ILA had dealt with this question in 1972,⁷⁰ two years before the Paris Convention, the first regional agreement on land-based marine pollution, was adopted.⁷¹

7.4 CONCLUSIONS

The codification of the rules governing the non-navigational uses of the international watercourses is an indisputable achievement of the Convention, even if certain provisions are not without controversies. When it comes to the environmental provisions, some remarks may be made. Firstly, the incorporation of these provisions may be evaluated as (at least emerging) customary international law. Secondly, Article 21 on the Prevention, reduction and control of pollution, which is the only environmental provision directly referring to freshwater protection and from which the most direct obligations to states could be derived, is surrounded by uncertainties and does not reflect the growing concerns of the states on freshwaters. Thirdly, the other environmental provisions correctly aim to contribute not only to the protection of the freshwater, but also to the protection of the wider environment dependant on freshwater, however, the obligations of the states relating to them are vague. Last but not least, although the Convention entered into force in 2014, the low number of ratifications represents the lack of support behind the Convention as a whole, so the benefits of the entry into force are not clear yet.

68 Convention on the Protection and Use of Transboundary Watercourses and International Lakes, adopted in Helsinki on 17 March 1992, Preamble, Arts. 2.6, 9.4.

69 International Law Association, Berlin Conference (2004) Water Resources Law, p. 4.

70 Supplementary Rules applicable to Marine Pollution of Continental Origin, adopted by the ILA on its 55th Conference held in New York in 1972.

71 Convention for the Prevention of Marine Pollution from Land-Based Sources, signed in Paris in 1974.