International law and the sustainable governance of shared natural resources: A principled approach

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1 Differentiating between Sovereignty over Exclusive and Shared Resources in the Light of Future Discussions on the Law of Transboundary Aquifers

ABSTRACT

The recognition of permanent sovereignty over natural resources (PSNR) over transboundary aquifers is controversial primarily because PSNR might discourage transboundary cooperation and be insufficient to protect the environment of shared freshwater resources. The chapter argues that PSNR and 'sovereignty over shared natural resources' (SSNR) are distinct from each other. First, it presents the controversy caused by applying the principle of permanent sovereignty over natural resources to resources that are shared by two or more states. It then analyses relevant international instruments in order to identify characteristics that distinguish sovereignty over exclusive resources from sovereignty over shared resources. This compared analysis finds three main differences. First, PSNR is exercised exclusively by one state over the natural resources located entirely within its national boundaries and in areas under its exclusive economic jurisdiction (exclusive economic zone and continental shelf), while SSNR is exercised jointly by two or more states over resources distributed over their respective territories and where utilization by one state affects utilization by the other(s). Second, the original purpose of PSNR was to ensure political and economic self-determination, while that of SSNR was to regulate the benefit sharing from, and the environmental protection of, shared natural resources. Third, the essential and characteristic right under PSNR to freely dispose of natural resources does not apply to resources that are shared, while the essential and characteristic duty under SSNR to cooperate does not apply to resources under exclusive jurisdiction. Based on these findings, the chapter concludes that PSNR and SSNR are conceptually different, constituting distinct legal regimes. The chapter suggests that understanding SSNR as a set of rules different from those of PSNR could promote that shared resource governance continues to be increasingly focused on cooperation and environmental protection, and less and less oriented towards satisfying state's territorial interests. In addition, increased awareness of the differences between sovereignty over exclusive and shared resources could facilitate negotiations, particularly in the light of the ongoing discussions on the law of transboundary aquifers at the UNGA.

1 INTRODUCTION

The International Law Commission (ILC) adopted the Draft Articles on the Law of Transboundary Aquifers (Draft Articles)[1] in 2008 as a result of its work on the topic of shared natural resources.[2] This chapter follows the work of the ILC on this topic. Therefore, the term 'shared resources' refers here to natural resources contained in a single geological formation (i.e., groundwater, oil and natural gas) situated in the territory of a limited number of States.[3] 'Transboundary aquifers' are 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'.[4]

The United Nations General Assembly (UNGA) took note of the Draft Articles and encouraged States to take them into account in managing their transboundary aquifers.[5] Whether the Draft Articles will take the form of a convention or non-binding guidelines is yet to be decided. The UNGA considered the item entitled 'The law of transboundary aquifers' at its sixty-sixth (2011)[6] and sixty-eight (2013)[7] sessions and included it in the agenda of its seventy-first session (2016).[8] Under 'General Principles', the Draft Articles

1 Draft articles on the Law of Transboundary Aquifers, Report of the International Law Commission (ILC Report), Sixtieth session (2008) in Official Records of the General Assembly, Sixty-third session, Supplement No. 10 (A/63/10).

2 This topic was added to the programme of work of the ILC in 2002 and included groundwater, oil and natural gas. C. Yamada, Shared Natural Resources: First Report on Outlines UN Doc A/CN.4/533 (30 April 2003) para. 4.

3 Ibid., para. 17. See also R. Rosenstock, Shared Natural Resources of States, Report of the International Law Commission, Fifty-second session (2000) in Official Records of the General Assembly, Fifty-fifth session Supplement No. 10 (A/55/10) Annex, Section 3. The ILC only finished draft articles on transboundary aquifers; its work on oil and natural gas was discontinued in 2008. See S. Murase, Shared Natural Resources: Feasibility of Future Work on Oil and Gas, International Law Commission Sixty-second session (UN Doc. A/CN.4/621, 9 March 2010), at 3.

4 Draft Articles (n. 1) Art. 2(a).

5 UNGA 'The law of transboundary aquifers' UN Doc A/RES/63/124 (15 January 2009). For a comprehensive description of the work of the ILC on transboundary aquifers, see K. Mechlem, 'Moving Ahead in Protecting Freshwater Resources: The International Law Commission's Draft Articles on Transboundary Aquifers', 22:4 *Leiden Journal of International Law* (2009), 801.

6 UNGA 'The law of transboundary aquifers' UN Doc A/RES/66/104 (13 January 2012).

7 UNGA 'The law of transboundary aquifers' UN Doc A/RES/68/118 (19 December 2013).

8 Ibid., para. 3. After the publication of this journal article, the topic of the law of transboundary aquifers was discussed during the seventy-first (2016) and seventy-fourth (2019) sessions of the UNGA and will once again be considered at the seventy-seventh session (2022) showing that the discussion is not only still in progress but also relevant. See UNGA 'The law of transboundary aquifers' UN Doc A/RES/71/150 (20 December 2016) and UNGA 'The law of transboundary aquifers' UN Doc A/RES/74/193 (30 December 2019).
For a discussion on the future form of the Draft Articles, including the advantages and disadvantages of each possibility, see G. Eckstein and F. Sindico, 'The Law of Transboundary

enumerate the core principles of international water law – namely equitable and reasonable utilization, the obligation not to cause significant harm, co-operation, and exchange of data and information.[9] These principles are considered part of customary international law.[10] In addition, and for the first time in an instrument regulating shared water resources, the Draft Articles include one more principle: sovereignty. The Draft Articles apply the principle of 'permanent sovereignty over natural resources' (PSNR) to shared aquifers, referring to UNGA Resolution 1803 (XVII) in the Preamble and providing in Draft Article 3 that: 'Each aquifer State has sovereignty over the portion of a transboundary aquifer or aquifer system located within its territory. It shall exercise its sovereignty in accordance with international law and the present draft articles.'[11] This recognition of sovereignty over transboundary aquifers has proven to be controversial.

As discussed below, the scholarly debate about the effect of PSNR on the attitude of states sharing resources and about the limitations of the no-harm rule suggests that applying PSNR to shared resource governance would not contribute to advancing transboundary cooperation and effective environmental protection. If PSNR encompasses shared resources, the protection of state interests would prevail over the protection of transboundary ecosystems. In addition, discussions within UN organs show that the issue of sovereignty over shared resources is controversial and highly influenced by political concerns. In this light, the chapter explores the possibility of distinguishing between PSNR and SSNR, thus establishing a foundation for a different approach to the topic. It does so by looking into differences between PSNR and SSNR based on, first, the nature of the resources over which they are exercised; second, their original purpose; and third, their distinguishing rights and duties. Based on the differences found, the chapter argues that PSNR and 'sovereignty over shared natural resources' (SSNR) are distinct from each other. It concludes that although the overlap found in the Draft Articles -in which PSNR seemingly applies to shared resources, at least shared aquifers – reflects the current political reality, PSNR and SSNR are nevertheless conceptually different and constitute distinct legal regimes. The chapter suggests that understanding SSNR as a set of rules different from those of PSNR could promote that shared resource governance continues to be increasingly focused on cooperation and environmental protection, and less and less oriented towards satisfying state's territorial interests. In addition, increased awareness of the differences between sovereignty over exclusive and shared resources could make debates about

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Aquifers: Many Ways of Going Forward, but Only One Way of Standing Still', 23:1 *Review of European, Comparative and International Environmental Law* (2014), 32.

9 Draft Articles, n. 1 above, Articles 4-8.

10 P. Sands and J. Peel, *Principles of International Environmental Law* (Cambridge University Press, 2012), at 305–319.

11 Draft Articles, n. 1 above, Article 3.

the issue of sovereignty over transboundary aquifers more straightforward and negotiations easier, particularly in the light of the discussions about the law of transboundary aquifers scheduled at the UNGA.[12]

The chapter begins by presenting discussions about applying the principle of PSNR to shared aquifers and to shared resources in general. It then elaborates on the three fundamental differences between PSNR and SSNR. The chapter concludes that these are two different concepts constituting distinct legal regimes.

2 SOVEREIGNTY OVER SHARED RESOURCES: A CONTROVERSIAL ISSUE

2.1 Academic discussion

Draft Article 3 limits the exercise of sovereignty by international law and the Draft Articles, and in the words of the ILC it 'represents an appropriately balanced text'.[13] In addition, it is argued that the Draft Articles impose considerable restrictions and obligations through the provisions on equitable use, no harm, information exchange and cooperation, which would mitigate the reference to sovereignty.[14] However, academic discussions have focused on whether recognizing sovereignty over the portion of a shared aquifer located within a national jurisdiction entails a regression to theories of absolute sovereignty over shared water resources, such as the discredited Harmon Doctrine.[15] Such regression would clash with the principle of limited territorial sovereignty[16] that is currently the norm in international water law and according to which the exercise of sovereignty over shared waters is limited by the obligation not to cause significant harm to other states.[17] To dissipate this concern, some alternatives have been suggested. For instance, establishing two

12 The topic of the law of transboundary aquifers will be considered at the seventy-seventh session (2022) of the UNGA, n. 8 above.

13 Draft Articles on the Law of Transboundary Aquifers with Commentaries, in: Yearbook of the International Law Commission, Volume II, Part Two (UN Doc. A/CN.4/SER.A/2008/Add.1, 2008), Draft Article 3, Commentary (3).

14 See, e.g., G. Eckstein, 'Commentary on the UN International Law Commission's Draft Articles on the Law of Transboundary Aquifers', 18:3 *Colorado Journal of International Environmental Law and Policy* (2007), 537, at 560–562. See also A. Tanzi, 'Furthering International Water Law or Making a New Body of Law on Transboundary Aquifers? An Introduction', 13:3 *International Community Law Review* (2011), 193, at 204–205.

15 S. McCaffrey, 'The International Law Commission Adopts Draft Articles on Transboundary Aquifers', 103:2 *American Journal of International Law* (2009), 272, at 289; K Mechlem, 'Past, Present and Future of the International Law of Transboundary Aquifers', 13:3 *International Community Law Review* (2011), 209, at 219–220.

16 Also referred to as 'restricted sovereignty'. See, e.g., E. Brown Weiss, 'The Evolution of International Water Law', 331 *Recueil de Cours* (2007), at 94.

17 S.C. McCaffrey, *The Law of International Watercourses* (Oxford University Press, 2007), at 135–147.

different regimes – one for the geological formation that contains the groundwater, based on sovereignty; and another for the water itself, based on equitable use and a community of interest[18] – or, more drastically, eliminating the concept of sovereignty from the Draft Articles altogether.[19] The latter is suggested because recognizing sovereignty 'risks encouraging [the] state to drill first and ask questions later – or, more likely, to wait to see if its neighbour asks questions later'.[20] Indeed, a significant apprehension among scholars regarding the recognition of sovereignty over shared aquifers is that it might discourage transboundary cooperation. For instance, McCaffrey and Neville argue that assertions of sovereignty 'tend to engender disputes over international waters and hinder their resolution'.[21] Eckstein argues that States would be less inclined to cooperate in determining their rights over shared waters because they perceive any interference with their rights over their natural resources as 'an infringement of [their] sovereignty'.[22] Vick states that sovereignty is 'unhelpful' for promoting cooperation over shared water resources[23] and that Article 3 of the Draft Articles 'should be deleted or transformed' so as not to give the idea that sovereignty over shared aquifers is exercised by one state to the exclusion of the other/s.[24]

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18 O. McIntyre, 'International Water Resources Law and the International Law Commission Draft Articles on Transboundary Aquifers: A Missed Opportunity for Cross-fertilisation?', 13:3 *International Community Law Review* (2011), 237, at 248, 254.

19 S.C. McCaffrey, 'The International Law Commission's Flawed Draft Articles on the Law of Transboundary Aquifers: The Way Forward', 36:5 *Water International* (2011), 566, at 571.

20 Ibid., at 570.

21 See, e.g., S.C. McCaffrey and K.J. Neville, 'The Politics of Sharing Water: International Law, Sovereignty and Transboundary Rivers and Aquifers', in: K. Wegerich and J. Warner (eds.), *The Politics of Water: A Survey* (Routledge, 2010), 18, at 19. See also A. López and R. Sancho, 'Central America', in: F. Rocha Loures and A. Rieu-Clarke (eds.), *The UN Watercourses Convention in Force: Strengthening International Law for Transboundary Water Management* (Routledge, 2013), 123, at 130–131 stating that notions of traditional sovereignty, territoriality and national interests remain a serious challenge for inter-State cooperation in the Central American region.

22 G.E. Eckstein, 'Buried Treasure or Buried Hope? The Status of Mexico-US Transboundary Aquifers under International Law', 13:3 *International Community Law Review* (2011), 273, at 286 (citing the Israeli/Palestinian negotiations over the Jordan River and the Mountain Aquifer as an example in which negotiations over water rights hindered the development of cooperative water arrangements).

23 M.J. Vick, 'International Water Law and Sovereignty: A Discussion of the ILC Draft Articles on the Law of Transboundary Aquifers', 21:2 *Pacific McGeorge Global Business and Development Law Journal* (2008), 191, at 213.

24 Ibid., at 221, suggesting that Article 3 should be transformed according to the principle of equitable apportionment as defined in 1907 by the United States Supreme Court in the *Kansas v. Colorado* case (also known as the 'Arkansas River Disputes'). Here, the Court recognized the sovereign equality of each of the riparian states and the sovereign right of each state to assert jurisdiction over and regulate the use of their equitable share of the water contained in transboundary aquifers. However, it determined that neither state had sovereignty over the water to the exclusion of the other. Ibid., at 215.

In addition, scholars also point out apprehensions related to environmental protection and water security. Indeed, although subject to the *sic utere tuo ut alienum non laedas* ('use your own as not to harm that of another') principle or no-harm rule, the theory of limited territorial sovereignty has been criticized as being insufficient to protect the environment of shared water resources.[25] According to this view, limited territorial sovereignty would allow states to use (and abuse) the resource until the required threshold of *significant* harm to any of the other states concerned is reached and a resulting complaint is made by the affected state/s. McCaffrey points out that the no-harm rule is not 'an *absolute* obligation, but rather one of due diligence, or best efforts under the circumstances'.[26] In addition, Brunnée and Toope argued that the no-harm rule seeks to balance conflicting sovereign rights and therefore focuses on the protection of state's territorial interests rather than on the protection of the environment as such.[27] This state-centred approach to environmental protection would be contrary to the ecosystem-centred approach necessary for the effective protection of the flora and fauna of international rivers *per se* – that is, irrespective of whether harm is caused to other states.[28] On the issue of water security, Grey and Garrick argue that the principle of sovereignty is no longer capable of providing 'the primary basis for achieving and sustaining water security' because its local character does not correlate with the global nature and interdependencies of the water cycle.[29]

2.2 Discussions within UN organs

Discussions on the Draft Articles on the Law of Transboundary Aquifers within the ILC and the Sixth Committee of the UNGA (Sixth Committee) proved the issue of exercising PSNR over shared aquifers to be controversial and highly influenced by political concerns. Similar discussions took place earlier in the *travaux préparatoires* of other international instruments – namely the Charter

25 A. Tanzi and M. Arcari, *The United Nations Convention on the Law of International Watercourses: A Framework for Sharing* (Kluwer Law International, 2001), at 19–20.

26 S.C. McCaffrey, 'The Contribution of the UN Convention on the Law of the Non-navigational Uses of International Watercourses', 1:3-4 *International Journal of Global Environmental Issues* (2001), 250, at 254 (emphasis in the original).

27 J. Brunnée and S.J. Toope, 'Environmental Security and Freshwater Resources: A Case for International Ecosystem Law', 5 *Yearbook of International Environmental Law* (1994), 41, at 53–54.

28 See also J. Brunnée and S.J. Toope, 'Environmental Security and Freshwater Resources: Ecosystem Regime Building', 91:1 *American Journal of International Law* (1997), 26, at 37.

29 D. Grey and D. Garrick, 'Water Security, Perceptions and Politics: The Context for International Watercourse Negotiations', in: L. Boisson de Chazournes, C. Leb and M. Tignino (eds.), *International Law and Freshwater: The Multiple Challenges* (Edward Elgar, 2013), 37, at 44–45.

of Economic Rights and Duties of States (CERDS),[30] the Draft Principles of Conduct in the Field of the Environment for the Guidance of States in the Conservation and Harmonious Utilization of Natural Resources Shared by Two or More States (UNEP Draft Principles),[31] and the 1997 UN Convention on the Non-navigational Uses of International Watercourses (UNWC).[32] These discussions show the insistence of states on ensuring the protection of their interests over shared resources through the principle of PSNR.

During discussions on the Draft Articles, the issue of sovereignty over transboundary aquifers was considered at length both at the ILC and at the Sixth Committee. It was also addressed in the comments of governments submitted to the ILC, in which states advocated including an explicit reference to the principle of PSNR in the Draft Articles. This was requested 'particularly by those delegations [at the UNGA] that are of the opinion that water resources belong to the States in which they are located and are subject to the exclusive sovereignty of those States'.[33] Eventually, the preamble to the Draft Articles included express reference to UNGA Resolution 1803 (XVII) on PSNR. Part of the discussions focused on the terminology used by the ILC, where the term 'shared' in the title of the ILC topic 'Shared natural resources' was a matter of concern in connection with the principle of PSNR.[34] The concerns were primarily based on the fact that 'the term "shared resources" might refer to a shared heritage of mankind or to notions of shared ownership'.[35] Comments during ILC sessions throw light on the nature of the discussions. The Costa Rican member stated that: 'Above all, he supported the idea of deleting the word "shared" so as not to give the impression that what was meant was "shared property". That was a key point that must be extremely clear.'[36] The member from New Zealand affirmed that: 'The decision to refer to "transboundary" rather than "shared" natural resources seemed sensible. The former term had the obvious advantage of describing the physical characteristics of the resources rather than the attitude or action taken by the contiguous States

30 Charter on the Economic Rights and Duties of States (UNGA Resolution 3281 (XXIX), 12 December 1974) ('CERDS').

31 UNEP Draft Principles of Conduct in the Field of the Environment for the Guidance of States in the Conservation and Harmonious Utilization of Natural Resources Shared by Two or More States, 17 I.L.M. 1091 (1978).

32 Convention on the Law of the Non-navigational Uses of International Watercourses (New York, 21 May 1997; in force 17 August 2014).

33 C. Yamada, Third Report on Shared Natural Resources: Transboundary Groundwaters (UN Doc. A/CN.4/551, 11 February and 9 March 2005), at paragraph 4.

34 International Law Commission (ILC), Summary Record of the 2778th Meeting (UN Doc. A/CN4/SR.2778, 2003), at paragraph 3.

35 C. Yamada, Second Report on Shared Natural Resources: Transboundary Groundwaters (UN Doc. A/CN.4/539, 9 March and 12 April 2004), at paragraph 3.

36 ILC, Summary Record of the 2798th Meeting (UN Doc. A/CN.4/SR.2798, 2004), at paragraph 7.

towards them.'[37] The Malian member stated that 'the phrase "shared transboundary groundwaters" was problematic from the technical, political and legal points of view. It would thus be sensible to dispense with the word "shared" in the title and retain only the subtitle "transboundary groundwaters" '.[38] And the Italian member expressed that 'it might be useful to state, if only in the preamble, that territorial sovereignty over groundwaters was not under discussion'.[39]

Because of the sensitivity of the issue, Special Rapporteur Chusei Yamada decided in his report of 2004 to focus on the sub-topic of transboundary groundwaters in the times when the ILC dealt exclusively with groundwaters.[40] One year later, and considering that '[s]ome aquifer States continued to object to the application of the concept of "shared" natural resources to groundwaters',[41] the Special Rapporteur said that '[h]e continued to avoid using the word "shared", but it should be noted that accepting the principle of "equitable utilization" implied recognizing the shared character of a transboundary aquifer and the absence of absolute sovereign rights over it'.[42] The original terminology was nevertheless considered appropriate by some delegations, since in their view it referred to only common management, and not sovereignty or common heritage.[43]

A similar controversy took place in the *travaux préparatoires* of the CERDS,[44] the UNEP Draft Principles and the UNWC. The discussions about the CERDS show that states had trouble finding a harmonious interpretation of PSNR, addressed in Article 2, and the exploitation of shared natural resources, addressed in Article 3. Article 2 states: 'Every State has and shall freely exercise full permanent sovereignty, including possession, use and disposal, over all its wealth, natural resources and economic activities.'[45] Article 3 states: 'In the exploitation of natural resources shared by two or more countries, each State must co-operate on the basis of a system of information and prior consultations to

37 ILC, Summary Record of the 2797th Meeting (UN Doc. A/CN.4/SR.2797, 2004), at paragraph 36.

38 See ILC, n. 36 above, at paragraph 45.

39 Ibid., at paragraph 3.

40 See C. Yamada, n. 35 above, at paragraph 4. In the end, the ILC discontinued its work on oil and gas (S. Murase, n. 3 above). It therefore made no final statement on the terminology and its implications for sovereignty.

41 ILC, Summary Record of the 2831st Meeting (UN Doc. A/CN4/SR2831, 2005), at 6.

42 Ibid., at 7.

43 Sixth Committee, Summaries of Work 59th Session (2004), Report of the International Law Commission on the Work of its Fifty-sixth Session, Shared Natural Resources, found at: <http://www.un.org/law/cod/sixth/59/sixth59.htm>.

44 The fact that the legal effects of the CERDS are contested is irrelevant to this analysis because this chapter aims at illustrating the controversy regarding the exercise of permanent sovereignty over shared resources and at pointing out the distinction between exclusive and shared resources made in Articles 2 and 3 (see below). The aim of this chapter is not to discuss the legal nature of the obligations contained in the CERDS.

45 CERDS, n. 30 above, Art. 2.

achieve optimum use of such resources without causing damage to the legitimate interest of others.'[46] Comments of states claiming the protection of their interests through the principle of PSNR include, for instance, that Article 3 imposes an undue limitation to the exercise of PSNR (Afghanistan), that it openly disregards PSNR (Bolivia), that optimum use and prior consultations constitute a 'grave and unacceptable limitation' of PSNR (Brazil), that prior consultations could be interpreted as prior consent, which would be a clear contravention of PSNR (Ethiopia); and that the principle of PSNR is 'negated and diminished' by Article 3 (Paraguay).[47]

The effort to reconcile PSNR and shared resource governance is also observed in the UNEP Draft Principles, which recognize the basic principles of the exercise of sovereignty over shared natural resources – namely equitable and reasonable utilization, the obligation not to cause significant harm, exchange of information, prior notification of planned measures and consultation and the duty to cooperate. Draft Principle 1 tries to harmonize said basic principles with PSNR, providing that the duty to cooperate is to be fulfilled 'on an equal footing and taking into account the sovereignty, rights and interests of the States concerned'.[48] In this way, Principle 1 ensures that territorial rights and interests of states are expressly considered. During discussions at the UNGA on adopting the UNEP Draft Principles, several states reiterated their objection to any breach of sovereignty.[49] Finally, similar debates took place during the discussions on the Draft Articles on the Non-navigational Uses of International Watercourses.[50] This was the first time that the ILC dealt with shared resources, and these Draft Articles formed the basis of the UNWC.[51] Here, all references to 'shared' were changed to 'transboundary' because of the continued opposition to the phrase 'shared natural resources'.[52]

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46 Ibid., Art. 3.

47 UN, *Yearbook of the United Nations* (UN, 1977), at 397. Article 3 was adopted by 100 votes to eight with 28 abstentions; the high number of abstentions illustrates the controversy of the issue. See N Schrijver, *Development without Destruction: The UN and Global Resource Management* (Indiana University Press, 2010), at 58.

48 UNEP Draft Principles, n. 31 above, Principle 1.

49 UN, *Yearbook of the United Nations* (UN, 1978), at 537.

50 Draft Articles on the Law of the Non-Navigational Uses of International Watercourses and Commentaries thereto and Resolution on Transboundary Confined Groundwater, in: Yearbook of the International Law Commission, Volume II, Part II (UN Doc. A/CN.4/SER.A/1994/Add.l, 1994), at 89.

51 See P. Sands and J. Peel, n. 10 above, at 310.

52 P. Birnie, A. Boyle and C. Redgwell, *International Law and the Environment* (Oxford University Press, 2009), at 193. See also E. Benvenisti, 'Collective Action in the Utilization of Shared Freshwater: The Challenges of International Water Resources Law', 90:3 *American Journal of International Law* (1996), 384, at 399 (arguing that the ILC's rejection of the concept should be reconsidered because its recognition could enhance the riparians' duty to cooperate). The Report of the United Nations Conference on Sustainable Development held in Rio de Janeiro in 2012 (Rio+20) contains one recent example of the insistence of States on including express recognition of permanent sovereignty in the context of water resources (Report

Arguably, PSNR could help dissipate certain political concerns. For instance, it could protect aquifer states as a group from foreign intervention by third States or international organizations,[53] including environmental interventions,[54] and from the intention to make shared aquifers part of the common heritage of humankind.[55] Further, PSNR could possibly contribute to allocating responsibility to the aquifer states for complying with the duties inherent to the exercise of sovereignty over the shared resource.[56] However, as shown below, PSNR focuses on the rights of states to manage natural resources under their exclusive jurisdiction (with correlative duties derived, for example, from international environmental law) without addressing the need to jointly manage resources that are shared. In addition, environmental protection based on the no-harm rule has a definite territorial scope. It does not address the environment as such (i.e., disconnected from the artificial political boundaries of states) but to the extent that significant harm is caused to the territory of another state. Considering that academic discussions suggest that PSNR might discourage transboundary cooperation and be insufficient to effectively protect the environment of shared water resources,[57] and that discussions within UN organs prove the issue of sovereignty over shared resources to be controversial and highly influenced by political concerns, the chapter explores whether

of the United Nations Conference on Sustainable Development, Rio de Janeiro, 20-22 June 2012 (UN Doc. A/CONF.216/16, 2012). In the report, states reaffirmed their commitment to the human right to safe drinking water and sanitation, which is to be progressively realized for their populations 'with full respect for national sovereignty' (ibid., at paragraph 121). Considering that groundwater constitutes approximately 97% of the fresh water on earth (C. Yamada, n. 2 above, at paragraph 12) and that a large number of aquifers are shared between two or more states (see, e.g., G. Eckstein and A. Aureli, 'Strengthening Cooperation on Transboundary Groundwater Resources', 36:5 *Water International* (2011), 549), this statement has implications for the governance of shared aquifers as well as for the fulfilment of the human right to water and sanitation.

53 F. Sindico, 'The Guarani Aquifer System and the International Law of Transboundary Aquifers', 13:3 *International Community Law Review* (2011), 255, at 261–262.

54 F.X. Perrez, *Cooperative Sovereignty: From Independence to Interdependence in the Structure of International Environmental Law* (Kluwer Law International, 2000), at 95.

55 L. del Castillo Laborde, 'The Guaraní Aquifer Framework Agreement (2010)', in: L. Boisson de Chazournes, *et al.*, n. 29 above, 196, at 207.

56 The Argentinian member of the ILC stated that permanent sovereignty places 'the primary responsibility for the use and management of each transboundary aquifer on the State where the aquifer was located'. Report of the International Law Commission on the Work of its Fifty-eighth Session (2006), Topical Summary of the Discussion held in the Sixth Committee of the General Assembly During its Sixty-first Session, Prepared by the Secretariat (UN Doc. A/CN4/577, 19 January 2007), at paragraph 10. The same member had pointed out earlier that recognizing permanent sovereignty 'was consistent with … the crucial role assigned to aquifer States in the draft articles'. ILC, Summary Record of the 2834th Meeting (UN Doc. A/CN.4/SR.2834, 19 May 2005), at 15–16.

57 See S.C. McCaffrey and Neville, n. 21 above; G.E. Eckstein, n. 22 above; M.J. Vick, n. 23 above; J. Brunnée and S.J. Toope, n. 27 above; J. Brunnée and S.J. Toope, n. 28 above. See also E Benvenisti, *Sharing Transboundary Resources: International Law and Optimal Resource Use* (Cambridge University Press, 2002), at 18.

approaching the issue from a different angle could contribute to dissipating concerns. Therefore, it does not ask whether PSNR should apply – the question around which the above discussions revolve – but whether PSNR is any different from the sovereignty exercised over resources that are shared by two or more states. The next section thus identifies distinctive characteristics of PSNR and SSNR, and conducts a compared analysis of said characteristics.

3 SOVEREIGNTY OVER EXCLUSIVE AND SHARED RESOURCES: DIFFERENT CONCEPTS

The main differences between PSNR and SSNR are based on the nature of the resources over which they are exercised (exclusive versus shared), their original purpose (strengthening political and economic self-determination versus benefit sharing and environmental protection) and their distinctive rights and duties (right to freely dispose of exclusive resources versus duty to cooperate in managing shared resources). These differences allow for the argument that PSNR and SSNR are two different concepts and constitute two different sets of rules.

3.1 The nature of the resource determines applicable concept of sovereignty

3.1.1 Sovereignty over exclusive resources

Exclusive resources are located entirely within the international borders of a state.[58] Based on the principle of territorial sovereignty, PSNR is exercised over these resources by the state concerned to the exclusion of other states.[59] Territorial sovereignty extends to the land and subsoil, internal waters, the territorial sea and the airspace above these areas.[60] As reaffirmed by UNGA Resolution 3171 (XXVIII), states exercise permanent sovereignty over all their natural resources 'on land within their international boundaries as well as those in the sea-bed and the subsoil thereof within their national jurisdiction and in the superjacent waters'.[61] Later, the law of the sea extended the exercise of sovereign rights to the continental shelf[62] and the exclusive economic zone,[63] placing both areas under the exclusive economic jurisdiction of the

58 See N.J. Schrijver, n. 47 above, at 5.
59 See P. Birnie *et al.*, n. 52 above, at 190–192.
60 See P. Sands and J. Peel, n. 10 above, at 12.
61 Permanent Sovereignty over Natural Resources (UNGA Resolution A/RES/3171(XXVIII), 17 December 1973), at paragraph 1.
62 United Nations Convention on the Law of the Sea (Montego Bay, 10 December 1982; in force 16 November 1994), Article 77.
63 Ibid., Article 56.

coastal state. Exclusive resources are then under the sole jurisdiction of the state concerned. Consequently, for instance, if the state does not exploit them, no other state can. Exclusive resources are subject to national law; international law applies only to the transboundary impacts of their utilization, if any. Further, as discussed below, the right to freely dispose of natural resources – an essential and characteristic element of PSNR – can only be exercised with respect to resources under exclusive jurisdiction.

3.1.2 Sovereignty over shared resources

As mentioned above, the term 'shared resources' in this chapter refers to resources contained in a single geological formation (i.e., groundwater, oil and natural gas) distributed over the international borders of two or more states, particularly shared aquifers.[64] The situation of shared resources is different from that of exclusive resources because the very nature of shared resources prevents dividing them into parts over which each state could exercise exclusive sovereignty. Shared aquifers constitute whole units that have been artificially divided by political boundaries.[65] As a unit, and because of the liquid condition of the resource, the utilization of an aquifer by one state affects its utilization by the other aquifer state(s).[66] For instance, water abstraction on one side of the border may alter the flow passing the international boundary.[67] Unilateral abstraction – that is, water abstraction without taking into consideration the interests of the other aquifer state(s) – may thus adversely affect the rights of the latter to an equitable share of the resource.[68] In addition, polluting activities in one area expose other areas of the reservoir to their effects.[69] Pollutants such as pesticides used in agriculture could infiltrate the aquifer through the soil and then travel in the direction of groundwater flow.[70] Thus,

64 The chapter then does not discuss shared resources such as migratory species or the portion of the atmosphere above the territory of a limited number of States because they are of a different nature. In fact, the Special Rapporteur was of the view that it was not appropriate to deal with other resources under the topic of shared natural resources 'as they had characteristics that were far too different from those of groundwaters, oil and gas, and could be and in fact were dealt with more appropriately elsewhere'. See C. Yamada, n. 2 above, at paragraph 4.

65 S. Puri, *Internationally Shared (Transboundary) Aquifer Resources Management: Their Significance and Sustainable Management* (International Hydrological Programme, UNESCO, 2001), at 11.

66 Ibid., at 16–20.

67 Ibid., at 16.

68 The principle of equitable and reasonable utilization is one of the corner stones of the Draft Articles on the Law of Transboundary Aquifers. See Draft Articles, n. 1 above, Articles 4–5.

69 See S. Puri, n. 65 above, at 17.

70 See C. Yamada, n. 2 above, at paragraph 27. See also R.M. Stephan, 'The Draft Articles on the Law of Transboundary Aquifers: The Process at the UN ILC', 13:3 *International Community Law Review* (2011), 223.

in view of the effects one state's water use has on that of the other(s), the exercise of permanent sovereignty (exclusive and exclusionary) is at odds with the actual nature of a shared resource. In addition, a shared aquifer is not subject to the exclusive jurisdiction of any one aquifer state: if one state does not exploit the resource, the other state(s) could. Naturally, their use must take into account the legitimate interests of the other aquifer state(s). Insistence of one state on exercising exclusive sovereign rights over the portion of the shared resource within its territory is therefore in conflict with the rights of the other states over the same resource.[71] Since any acts of disposition by one state (e.g., a contract for water abstraction with a private company) affect, and likely harm, the rights and legitimate interests of the other state(s) concerned,[72] aquifer states are to cooperate and manage the resource jointly.

After the rise of international environmental awareness in the early 1970s, marked by the adoption of the 1972 Declaration of the United Nations Conference on the Human Environment (Stockholm Declaration),[73] international instruments began addressing shared natural resources and acknowledging their distinct nature. UNGA Resolution 3129 (XXVIII) calls on states to ensure effective cooperation for the conservation and harmonious exploitation of shared resources based on a system of information and prior consultation.[74] This resolution takes note of the Declaration adopted by the Fourth Conference of Heads of State or Government of Non-aligned Countries, which stresses in similar wording the importance of cooperation based on information and prior consultation in managing resources common to two or more States.[75] In the CERDS, above-cited Article 2 is dedicated to exclusive resources and above-cited Article 3 to shared resources, clearly acknowledging their distinct

71 See B.A. Godana, *Africa's Shared Water Resources: Legal and Institutional Aspects of the Nile, Niger and Senegal River Systems* (Frances Pinter, 1985), at 55; G. Handl, 'The Principle of "Equitable Use" as Applied to Internationally Shared Natural Resources: Its Role in Resolving Potential International Disputes over Transfrontier Pollution', 14 *Revue Belge de Droit International* (1978), 41, at 43.

72 N. Matz-Lück, 'The Benefits of Positivism: The ILC Contribution to the Peaceful Sharing of Transboundary Groundwater', in: G. Nolte (ed.), *Peace through International Law* (Springer, 2009), 125, at 130.

73 Stockholm Declaration on the Human Environment, found in: Report of the UN Conference on the Human Environment (UN Doc. A/CONF.48/14/Rev.1, 16 June 1972) ('Stockholm Declaration').

74 Cooperation in the Field of the Environment Concerning Natural Resources Shared by Two or More States (UNGA Resolution A/RES/3129(XXVIII), 13 December 1973), at paragraphs 1 and 2.

75 Economic Declaration adopted by the Fourth Conference of Heads of State or Government of Non-aligned Countries, held at Algiers from 5 to 9 September 1973 (UN Doc. A/9330), at 72, found at: <http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N74/037/44/PDF/N7403744.pdf?OpenElement>.

nature.[76] These two provisions offer the basis of a legal regime for each type of resource – that is, PSNR for exclusive resources based on possession, disposal and the right to nationalization; and SSNR for shared resources based on cooperation, information exchange and prior consultation. This process of recognizing the essential differences between these two types of resources led to the UNEP Draft Principles, which, as mentioned above, outline the basic elements of SSNR: equitable utilization, no harm, exchange of information and consultation, and transboundary cooperation. The UNGA took note of the UNEP Draft Principles and asked all states to use them as guidelines in their relations regarding shared resources.[77]

In sum, the nature of the resource determines the applicable concept of sovereignty. PSNR is exercised over resources located entirely within the international borders of a State and in areas under its exclusive economic jurisdiction. SSNR, on the other hand, is exercised over natural resources forming a single unit but distributed over the territories of two or more states and of which the use by one state affects the use by the other(s). Applying the principle of PSNR to shared resources places the emphasis on notions of exclusivity and protection of territorial interests, which are at variance with the nature of shared resources.

3.2 Sovereignty over exclusive and shared resources has different purposes

3.2.1 PSNR: Strengthening political and economic self-determination

The principle of PSNR started to take shape during the decolonization process begun in the 1950s. Newly independent States and developing countries, especially in the Latin American region, strongly advocated international recognition of their rights to freely dispose of their natural resources in order to strengthen their rights to self-determination and to achieve and protect their economic independence.[78] The discussions did not address the management of shared natural resources.

Several UNGA resolutions confirm that the initial purpose of recognizing the principle of PSNR was to ensure political and economic self-determination – not to regulate shared resources. In chronological order, Resolution 523 (VI) considered that 'the under-developed countries have the right to determine freely the use of their natural resources', and recommended facilitating the

76 Notes 45 and 46 above. See also E. Benvenisti, n. 57 above, at 16 (arguing that these two articles represent a clash between permanent sovereignty and the management of shared resources that is almost irreconcilable).

77 Cooperation in the Field of the Environment Concerning Resources Shared by Two or More States (UNGA Resolution A/RES/34/186, 18 December 1979), at paragraph 3.

78 See N. Schrijver, *Sovereignty Over Natural Resources: Balancing Rights and Duties* (Cambridge University Press 1997), at 82–118.

movement of machinery, equipment and industrial raw materials to these countries through commercial agreements that 'shall not contain economic or political conditions violating [their] sovereign rights'.[79] In addition, Resolution 626 (VII) on the right to exploit freely natural wealth and resources, also known as the 'nationalization resolution', recalled that 'the right of peoples freely to use and exploit their natural wealth and resources is inherent in their sovereignty', and recommends that all states 'refrain from acts, direct or indirect, designed to impede the exercise of the sovereignty of any State over its natural resources'.[80] Furthermore, Resolution 1515 (XV) recommended that 'the sovereign right of every State to dispose of its wealth and its natural resources should be respected'.[81] No reference to shared natural resources is found in any of these resolutions, which recognized PSNR, more than anything else, as a constitutive element of the right to self-determination.[82]

Similarly, the purpose of Resolution 1803 (XVII) on PSNR was to safeguard political and economic self-determination.[83] The Draft Articles on the Law of Transboundary Aquifers include this resolution in the preamble, despite the fact that shared resources were neither considered in the negotiations nor included in the text of Resolution 1803 (XVII). This resolution recognizes 'the inalienable right of all States freely to dispose of their natural wealth and resources in accordance with their national interests', and calls for 'respect for the economic independence of States'.[84] The preamble of the resolution clearly shows that the purpose was to address the situation of newly independent states and especially to ensure the economic development and economic independence of developing countries in general (newly independent or not).[85] This is also clear from the declaratory part, which lays down the basic elements of PSNR, including the right to freely dispose of natural

79 Integrated Economic Development and Commercial Agreements (UNGA Resolution A/RES/523(VI), 12 January 1952).

80 The Right to Exploit Freely Natural Wealth and Resources (UNGA Resolution A/RES/626(VII), 21 December 1952).

81 Concerted Action for Economic Development of Economically Less Developed Countries (UN Doc. A/RES/1515(XV), 15 December 1960).

82 Recommendations Concerning International Respect of the Right of the Peoples and Nations to Self-determination (UNGA Resolution A/RES/1314(XIII), 12 December 1958), at preamble, refers to permanent sovereignty as a 'basic constituent of the right to self-determination'.

83 Permanent Sovereignty over Natural Resources (UNGA Resolution A/RES/1803(XVII), 14 December 1962).

84 Ibid., preamble, at paragraph 4.

85 Resolution A/RES/1803(XVII), ibid., attaches 'particular importance to the question of promoting the economic development of developing countries and securing their economic independence' and notes that 'the creation and strengthening of the inalienable sovereignty of States over their natural wealth and resources reinforces [such] independence'.

resources.[86] Evidently, the purpose of Resolution 1803 (XVII) was not to provide principles for the governance of shared natural resources, but to safeguard states' rights to self-determination and freedom from foreign intervention through protecting the right to explore, develop and dispose of natural resources within a state's national jurisdiction. It reaffirms PSNR as a constituent of the right to political and economic self-determination[87] and sets forth principles to deal with specific economic situations between states and foreign investors such as profit sharing, enforcement of investment agreements and nationalization. Shared natural resources are rightly omitted, not only because the nature of exclusive resources is different from that of shared resources, but also because the right to dispose freely of natural resources applies only to exclusive resources. This last point is discussed further in section 3.3 below.

Subsequent UNGA resolutions continued to recognize PSNR in similar terms. Resolution 2158 (XXI) states the freedom of developing countries to choose the manner in which the exploitation and marketing of their natural resources should be carried out addressing foreign investment and cooperation for development.[88] Resolution 3171 (XXVIII) reaffirms PSNR, supports developing countries and peoples under colonial or racial domination 'in their struggle to regain effective control over their natural resources' and affirms nationalization as an expression of sovereignty to safeguard natural resources under exclusive jurisdiction.[89] Resolution 1803 (XVII) was further elaborated in the 1974 Declaration on the Establishment of the New International Economic Order (NIEO Declaration)[90] and in the CERDS, which continued to reflect the conflicting interests of developed and developing countries. The NIEO Declaration provides that the new international economic order should be founded on full respect, inter alia, for the principle of PSNR, including the right to nationalization, and the right to restitution as well as full compensation for the exploitation and depletion of, and damages to, natural resources during foreign occupation, colonial domination or apartheid.[91] The CERDS, in turn, provides for PSNR and the rights to regulate and exercise authority over foreign investment and the activities of transnational corporations within the state's

86 These elements also include the right and duty to exercise permanent sovereignty in the national interest; exploration, development and disposition of natural resources; earnings on imported capital are governed by national law; the right to nationalization; sovereign equality; international cooperation shall further independent national development; and foreign investment agreements must be freely entered into. Ibid.

87 Ibid., preamble refers to UNGA Resolution A/RES/1314(XIII), n. 82 above.

88 Permanent Sovereignty over Natural Resources (UNGA Resolution A/RES/2158(XXI), 25 November 1966), at paragraphs 3, 5 and 7.

89 UNGA Resolution A/RES/3171(XXVIII), n. 61 above, at paragraphs 1–3.

90 Declaration on the Establishment of a New International Economic Order (UNGA Resolution A/RES/3201(S-VI), 1 May 1974).

91 Ibid., at paragraph 4(e)–(f).

national jurisdiction, and to nationalize, expropriate or transfer ownership of foreign property awarding appropriate compensation.[92]

In sum, the aim of developing countries advocating the recognition of PSNR was to secure effective control over resources under their exclusive jurisdiction and to ensure that their exploitation benefited local rather than foreign interests. Rules on shared resource management emerged through a different process and had a different purpose.

3.2.2 SSNR: Regulating benefit sharing and environmental protection

Rules on shared resource management focused initially on allocating the economic benefits derived from the resource, particularly in the context of international watercourses. States sharing a transboundary river developed forms of cooperation that gradually distanced them from theories of absolute sovereignty.[93] Later, with the rise of environmental awareness marked by the adoption of the above-cited Stockholm Declaration, principles regulating the utilization and environmental protection of shared resources – that is, equitable sharing, no harm, information exchange and transboundary cooperation – began to play a stronger role.[94] It was then that the tension between the exercise of PSNR and the management of shared resources surfaced.[95]

Water laws were the first international laws to pioneer in regulating shared natural resources because of the need to manage the sharing of economic benefits from international watercourses. Early codification efforts focused on apportioning economic benefits derived from uses such as navigation,[96] hydropower generation,[97] and agricultural and industrial uses.[98] The first

92 CERDS, n. 30 above, Article 2(2).

93 Two absolute sovereignty theories have been developed in the context of international watercourses: absolute territorial sovereignty and absolute territorial integrity. The former, also known as the 'Harmon Doctrine', is used by upper riparian States to claim the right to do whatever they choose with the water regardless of its effect on lower riparians. The latter is invoked by downstream States to claim that upstream States can do nothing that affects the quantity or quality of the water that flows down the river. See N. Sanchez and J. Gupta, 'Recent Changes in the Nile Region May Create an Opportunity for a More Equitable Sharing of the Nile River Waters', 58:3 *Netherlands International Law Review* (2011), 363, at 378. For a discussion on the evolving nature of national sovereignty in international water law, with a focus on China, see P. Wouters, 'The Yin and Yang of International Water Law: China's Transboundary Water Practice and the Changing Contours of State Sovereignty', 23:1 *Review of European, Comparative and International Environmental Law* (2014), 67.

94 See E. Brown Weiss, n. 16 above, at 199–210.

95 See E. Benvenisti, n. 57 above, at 16–18.

96 Convention on the Regime of Navigable Waterways of International Concern (Barcelona, 20 April 1921; in force 31 October 1922).

97 Convention Relating to the Development of Hydraulic Power Affecting More Than One State (Geneva, 9 December 1923; in force 30 June 1925).

international rulings on water disputes also centred on allocating economic benefits. For instance, the Permanent Court of International Justice (PCIJ) found in the *River Oder* case that the benefits of navigation are to be shared among riparians according to a common legal right based on a community of interest in a navigable river and on sovereign equality.[99] The foundation of shared resource management may arguably be said to be found in this international ruling.[100]

In the 1970s, shared resource governance developed further as a response to transboundary environmental challenges. Despite a few preceding articulations of environmental protection of shared water resources,[101] environmental rules on shared resources firmly began to emerge only after the Stockholm Declaration. Principles such as state responsibility for transboundary environmental harm and international cooperation for environmental protection started to settle.[102] In 1973, UNGA Resolution 3129 (XXVIII) on 'cooperation in the field of the environment concerning natural resources shared by two or more states' considered it necessary to ensure effective cooperation between states through 'the establishment of adequate international standards for the conservation and harmonious exploitation of natural resources common to two or more States'.[103] It also considered that cooperation between states sharing natural resources and interested in their exploitation 'must be developed on the basis of a system of information and prior consultation'.[104] The UNGA requested the Governing Council of the United Nations Environment Programme (UNEP) to report on measures adopted for implementing resolution 3129 (XXVIII).[105] Significantly, UNGA Resolution 2995 (XXVII) on 'cooperation between states in the field of the environment' had addressed the issue from the perspective of exclusive resources a year earlier,[106] showing that shared and exclusive

98 Declaration of Montevideo Concerning the Agricultural and Industrial Use of International Rivers, Inter-American Conference 1933, in: Yearbook of the International Law Commission, Volume II, Part Two (UN Doc. A/CN.4/SER.A/1974/Add.l, 1974), at 58.

99 PCIJ 10 September 1929, *Territorial Jurisdiction of the International Commission of the River Oder*, Judgment No. 16 (Ser. A, No. 23), ('*River Oder*'), at 27.

100 A.S. Al-Khasawneh, 'Do Judicial Decisions Settle Water-related Disputes?', in: L. Boisson de Chazournes *et al.*, n. 29 above, 341, at 346 (stating that together with the doctrine of limited territorial sovereignty, the doctrine of community of interest underlies the development of the basic principles of international water law).

101 See, e.g., Helsinki Rules on the Uses of the Waters of International Rivers (International Law Association, August 1966), found at: <http://www.internationalwaterlaw.org/documents/intldocs/helsinki_rules.html>.

102 See, e.g., P.H. Sand, 'The Evolution of International Environmental Law', in: D. Bodansky, J. Brunnée and E. Hey (eds.), *The Oxford Handbook of International Environmental Law* (Oxford University Press, 2007), 29, at 33–36.

103 para. 1

104 para. 2

105 para. 3

106 Cooperation between States in the Field of the Environment (UNGA Resolution A/RES/2995(XXVII), 15 December 1972).

resources were perceived as requiring different rules. Otherwise, adopting two separate resolutions on the same issue – one for exclusive resources and one for shared resources – would have been unnecessary.

In 1978, the Inter-governmental Working Group of Experts on Natural Resources Shared by Two or More States, established by the UNEP Governing Council in compliance with resolution 3129 (XXVIII), issued a report containing the UNEP Draft Principles. Resolution 34/186 took note of the Draft Principles and requested of all member states to use them as guidelines and recommendations in the formulation of bilateral or multilateral conventions regarding natural resources shared by two or more states.[107] Neither Resolution 3129 (XXVIII) nor Resolution 34/186 refer to PSNR. Moreover, UNEP Draft Principle 3 also proves that shared and exclusive resources were rightly regarded as meriting different environmental rules. First, it reproduces Principle 21 of the Stockholm Declaration in paragraph 1:[108]

> States have, in accordance with the Charter of the United Nations and the principles of international law, 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.[109]

Paragraph 2 then confirms that shared and exclusive resources are perceived as different by stating that the principles set forth in paragraph 1 'apply to shared natural resources'.[110] Clearly, if paragraph 1 also applied to shared resources, paragraph 2 would have been unnecessary. The UNEP Draft Principles introduce the bases for environmental protection of shared resources, including cooperation,[111] transboundary environmental impact assessment,[112] and exchange of information, consultation and prior notification of planned measures that could have adverse effects on the environment.[113] Although adopted as recommendations, most of the UNEP Draft Principles reflect existing customary law.[114]

To sum up, the purpose of international instruments on shared natural resources was to regulate the utilization and environmental protection of shared resources – not to ensure the right to self-determination. Moreover, instruments on shared resources before the Draft Articles on the Law of

107 UNGA Resolution A/RES/34/186, n. 77 above, at paragraphs 2 and 3.
108 UNEP Draft Principles, n. 31 above, Principle 3.1.
109 Stockholm Declaration, n. 73 above, Principle 21 (emphasis added).
110 UNEP Draft Principles, n. 31 above, Principle 3.2.
111 Ibid., Principles 1 and 2.
112 Ibid., Principle 4.
113 Ibid., Principles 5–7.
114 See P. Birnie *et al.*, n. 52 above, at 603.

Transboundary Aquifers do not make any reference to PSNR.[115] Like the Draft Articles, these instruments contain the principles of equitable use, no harm to other states, exchange of information and cooperation. But, unlike them, they do not refer to PSNR as an element of shared resource management. This analysis clarifies that applying PSNR to shared resources clashes with the origin, purpose and evolution of the international legal regimes applicable to exclusive resources, on the one hand, and to shared resources, on the other. In an attempt to respond to states' requests for the protection of their territorial interests and to balance the conflicting sovereign rights of the aquifer states, the Draft Articles ignore the developments here described, and bring the principle of PSNR to the governance of shared aquifers, thus placing emphasis on the associated notions of exclusivity and protection of territorial interests.

The last step in this analysis focuses on the distinguishing rights and duties of PSNR and SSNR. This will help us to better understand why they are conceptually different and constitute distinct legal regimes.

3.3 Distinguishing rights and duties regarding exclusive and shared resources

3.3.1 The right to freely dispose of exclusive resources

In the exercise of PSNR, every state has the right to freely dispose of, explore and exploit its own natural resources. This includes the rights of a state to use its resources for the benefit of its people, to regulate the activities of foreign investors and to nationalize foreign property. Among the correlative duties, states have the obligation to exercise PSNR for national development, to promote environmental protection and the sustainable use of natural resources, and to comply with international law regarding the fair treatment of foreign investors.[116] Of all these rights and duties, the essential and characteristic element of PSNR that truly distinguishes it from SSNR is the right to freely dispose of natural resources – that is, the right to transfer ownership of resources (e.g., by selling or giving) without external intervention. So understood, this right of free disposition can only be exercised with respect to resources under exclusive national jurisdiction.

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115 See, e.g., UNGA Resolution A/RES/3129(XXVIII), n. 74 above; UNGA Resolution A/RES/34/186, n. 77 above; UNEP Draft Principles, n. 31 above; United Nations Economic Commission for Europe (UNECE) Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Helsinki, 17 March 1992, in force 6 October 1996) ('UNECE Water Convention').

116 UNGA Resolution 626(VII), n. 80 above; UNGA Resolution 1803(XVII), n. 83 above; UNGA Resolution 2158(XXI), n. 88 above; UNGA Resolution 3171(XXVIII), n. 61 above. See also N. Schrijver, n. 78 above, Chapters 9 and 10.

The right of a state to freely dispose of its natural resources entitles it, *inter alia*, to enter into agreements with other states or non-state actors with respect to such resources in accordance with international law.[117] This right to conclude agreements is exercised solely by the state concerned over resources under its exclusive jurisdiction. Any such act of disposition regarding a shared aquifer needs to be jointly executed by the aquifer states. For instance, if one of the aquifer states grants a license for water abstraction to a private entity causing over-abstraction, this could lower the water table in the aquifer, deplete the resource and also destroy the geological formation,[118] thereby affecting the right to an equitable share of the other aquifer state(s).[119] Unilateral disposition of the shared resource (i.e., disposition without taking into account the legitimate interests of the other aquifer state(s)) would thus conflict with the principle of equitable and reasonable utilization, which is one of the cornerstones of the Draft Articles. In addition, to materialize equity in managing shared resources, any act of disposition needs to be jointly executed – for example, through joint management mechanisms.[120] Contracts for exploiting the resource cannot be unilaterally signed without the risk of affecting the rights of the other aquifer states to a reasonable and equitable share.

Since a state can freely (without involving any other state) dispose only of resources under its exclusive jurisdiction, PSNR does not encompass shared resources. SSNR does not confer to each state the right to freely dispose of the shared resource but the right to an equitable share therein, which is to be achieved through cooperation. Therefore, SSNR comprises a set of rules different than that of PSNR.

3.3.2 The duty to cooperate in managing shared resources

Shared resource management is based on four basic principles: (1) equitable and reasonable utilization; (2) no harm; (3) prior notification, consultation and exchange of information; and (4) cooperation, which have been recognized in international treaties[121] and jurisprudence.[122] Accordingly, the Draft

117 See Schrijver, n. 78 above, at 262.

118 C. Yamada, 'Codification of the Law of Transboundary Aquifers (Groundwaters) by the United Nations', 36:5 *Water International* (2011), 557, at 561.

119 See, e.g., M. O¨ztan and M. Axelrod, 'Sustainable Transboundary Groundwater Management under Shifting Political Scenarios: The Ceylanpinar Aquifer and Turkey-Syria Relations', 36:5 *Water International* (2011), 671, at 679–680.

120 Draft Articles, n. 1 above, Article 7. See also O McIntyre, 'Utilization of Shared International Freshwater Resources: The Meaning and Role of "Equity" in International Water Law', 38:2 *Water International* (2013), 112, at 116–117.

121 See, e.g., UNECE Water Convention, n. 115 above; Agreement on Cooperation for the Sustainable Development of the Mekong River Basin (Chiang Rai, 5 April 1995; in force 5 April 1995); Revised Protocol on Shared Watercourses in the Southern African Development Community (Windhoek, 7 August 2000; in force 22 September 2003). See also S.C. McCaffrey, n. 17 above, Part IV.

Articles provide that each aquifer state has the right to an equitable and reasonable share[123] as well as the obligations not to cause significant harm,[124] to cooperate in managing the resource,[125] and to regularly exchange data and information on the condition of the aquifer.[126] Of all these principles, the duty to cooperate is the essential and characteristic element that to the fullest degree distinguishes SSNR from PSNR, because while states can manage their exclusive resources to the exclusion of other states (assuming the absence of transboundary environmental harm), they must develop joint mechanisms to ensure the equitable sharing and environmental protection of their shared resources.

The duty to cooperate is one of the cornerstones of shared resource management.[127] Cooperation is the basis for the equitable utilization and protection of an aquifer, and is fulfilled through procedural obligations such as exchanging information and establishing joint management mechanisms.[128] As discussed above, the actual nature of shared resources requires states to cooperate. Since the use by one state affects the use by the others, the only way in which a shared resource can be effectively and efficiently managed is by engaging all the states concerned in a cooperative effort. By contrast, the management of an exclusive resource does not need to include any other state. Transboundary cooperation only takes place when activities related to an exclusive resource affect the territory of other states.

Concerning shared water resources specifically, the duty to cooperate arguably stems from the 'community of interest' that exists between riparian states.[129] As the PCIJ found in the *River Oder* case, such a community of interest 'becomes the basis of a common legal right, the essential features of which are the perfect equality of all riparian States in the user [sic] of the whole

122 See, e.g., ICJ 25 September 1997, *Gabčíkovo-Nagymaros Project* (*Hungary v. Slovakia*), [1997] ICJ Rep 7 ('*Gabčíkovo-Nagymaros*'); ICJ 20 April 2010, *Pulp Mills on the River Uruguay (Argentina v. Uruguay*), [2010] ICJ Rep. 14 ('*Pulp Mills*').

123 Draft Articles, n. 1 above, Articles 4–5.

124 Ibid., Draft Article 6.

125 Ibid., Draft Article 7.

126 Ibid., Draft Article 8.

127 For a detailed description of the evolution of the duty to cooperate in international water law, see C. Leb, 'The UN Watercourses Convention: The Éminence Grise behind Cooperation on Transboundary Water Resources', 38:2 *Water International* (2013), 146. See also C. Leb, *Cooperation in the Law of Transboundary Water Resources* (Cambridge University Press, 2013). On the practicalities of achieving cooperation, see C.W. Sadoff and D. Grey, 'Cooperation on International Rivers', 30:4 *Water International* (2005), 420.

128 O. McIntyre, 'The World Court's Ongoing Contribution to International Water Law: The *Pulp Mills* Case between Argentina and Uruguay', 4:2 *Water Alternatives* (2011), 124. See also S. Schmeier, *Governing International Watercourses: River Basin Organizations and the Sustainable Governance of Internationally Shared Rivers and Lakes* (Routledge 2013).

129 Chapter 2 of this dissertation discusses the legal nature of the principle of community of interest, its role in the exercise of sovereignty over shared water resources and trends indicating the evolution of the principle.

course of the river and the exclusion of any preferential privilege of any one riparian State in relation to the others'.[130] The scope of the community of interests in the *River Oder* case was limited to the interests that riparians had in exercising the right of navigation. Afterwards, water treaties and judicial decisions gradually extended its scope to non-navigational uses.[131] For instance, the International Court of Justice (ICJ) confirmed in the *Gabčíkovo-Nagymaros* case that the community of interests between riparian states also covered non-navigational issues. Indeed, after quoting the principle of community of interests as stated in the *River Oder* case, the ICJ affirmed: '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 Non-navigational Uses of International Watercourses by the United Nations General Assembly'. As the Court stated next, '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 resources of the Danube – with the continuing effects of the diversion of these waters on the ecology of the riparian area of the Szigetköz- failed to respect the proportionality which is required by international law'.[132] States sharing water resources thus have the right to an equitable share taking into consideration the correlative rights of the other states, and the duty to utilize the resource in a joint manner. Any attempt to unilaterally assume control of said resources, thereby depriving another state of its equitable share, would infringe the rights derived from the community of interest.

Furthermore, according to the arbitral tribunal in *Rhine Chlorides*, which also quoted the *River Oder* case, 'When the States bordering an international waterway decide to create a joint regime for the use of its waters, they are acknowledging a 'community of interests' which leads to a 'community of law' (to quote the notions used … in the [*River Oder* case]).'[133] Establishing a joint management mechanism for the shared river thus admits the existence

130 *River Oder*, n. 99 above, at 27.

131 This section addresses judicial decisions related to community of interests. Water treaties relevant to the principle of community of interests are discussed in Chapter 2 of this dissertation.

132 *Gabčíkovo-Nagymaros*, n. 122 above, at paragraph 85. The Court considered 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 resources of the Danube – with the continuing effects of the diversion of these waters on the ecology of the riparian area of the Szigetköz- failed to respect the proportionality which is required by international law'.

133 Permanent Court of Arbitration, *Case Concerning the Auditing of Accounts between the Kingdom of the Netherlands and the French Republic pursuant to the Additional Protocol of 25 September 1991 to the Convention on the Protection of the Rhine against Pollution by Chlorides of 3 December 1976*, Arbitral Award, 12 March 2004, found at: <http://www.pca-cpa.org/upload/files/Neth_Fr_award_English.pdf>, at paragraph 97.

of a community of interests, which in turn creates a community of law between riparian states. The tribunal also found that agreement of action and mutual support – i.e. cooperation- are part of the community of interest by stating that 'Solidarity between the bordering States is undoubtedly a factor in their community of interest'.[134] Finally, in the *Pulp Mills* case, the ICJ links further the principle of community of interests with the duty to cooperate. As noted by the Court, 'the parties have a long-standing and effective tradition of co-operation and co-ordination through CARU [Comisión Administradora del Río Uruguay, the joint management mechanism set up by the parties]'.[135] The Court stated next that 'By acting jointly through CARU, the Parties have established a real community of interests and rights in the management of the River Uruguay and in the protection of its environment.'[136] The relation between cooperation and community of interests has also been acknowledged in state practice.[137]

In sum, PSNR confers to a state the right to freely dispose of natural resources under its exclusive jurisdiction. This right is not conferred over shared resources because, based on their very nature, unilateral acts of disposition may affect the entitlements of the other state(s) concerned. SSNR, in turn, requires states to cooperate in managing shared resources. The duty to cooperate does not apply to exclusive resources because they are managed to the exclusion of other states and cooperation only takes place if activities related to their utilization have transboundary impact. In the case of shared water resources, the duty to cooperate stems from the community of interest existing between riparian states.

4 Conclusion

The inclusion of PSNR in the ILC Draft Articles on the Law of Transboundary Aquifers is a response to the political concerns of states advocating the protection of their interests in their shared aquifers via PSNR. This creates an overlap in which PSNR seems to encompass shared natural resources. Arguably, the recognition of PSNR over shared aquifers might be instrumental in achieving

134 Ibid.

135 Pulp Mills on the River Uruguay (Argentina v. Uruguay) Judgment, I.C.J. Reports 2010, para. 281.

136 Ibid. See also Owen McIntyre, 'The contribution of procedural rules to the environmental protection of transboundary rivers in light of recent ICJ case law' in Laurance Boisson de Chazournes, Christina Leb and Mara Tignino (eds), *International law and freshwater: The multiple challenges* (Edward Elgar 2013), pp. 247-8.

137 See, e.g., Indus Waters Treaty (Karachi, 19 September 1960; in force 1 April 1960), Article VII.1; Protocol for Sustainable Development of Lake Victoria Basin, East African Community (Arusha, 29 November 2003; in force December 2004), Article 4.2(k); 1995 Protocol on Shared Watercourses in the Southern African Development Community (SADC) Region (Maseru, 16 May 1995; in force 29 September 1998), Article 2.2.

geopolitical purposes, such as protecting aquifer states as a group against foreign (political, environmental or ideological) intervention. It may also be argued that PSNR contributes to allocating the responsibilities for the use and protection of shared aquifers to the aquifer states. However, as scholarly writings point out, applying PSNR to shared aquifers might discourage transboundary cooperation and be insufficient to effectively protect the environment. States would perceive any possible violation of their right to an equitable share as an infringement of their sovereignty and invoke PSNR in order to avoid such violation, bringing to the fore ideas of exclusive entitlement and protection of territorial interests that tend to deter joint action. As scholars also point out, environmental protection under PSNR – based on the no-harm rule- does not address the environment as such but to the extent that significant harm is caused to the territory of another state. Furthermore, as shown by the *travaux préparatoires* of the Draft Articles and other international instruments, applying PSNR over shared natural resources gives rise to controversy based on political concerns, making debates on this issue within UN organs more complex and negotiations less easy.

This chapter proposes approaching the issue from a different angle. Instead of asking whether PSNR should apply, it asked whether PSNR is any different from the sovereignty exercised over shared resources. The examination of distinctive characteristics of PSNR and SSNR showed three main differences. First, PSNR is exercised exclusively by one State over the natural resources located entirely within its national boundaries and in areas under its exclusive economic jurisdiction (exclusive economic zone and continental shelf), while SSNR is exercised jointly by two or more States over resources distributed over their respective territories and where utilization by one State affects utilization by the other(s). Second, the original purpose of PSNR was to ensure political and economic self-determination, while that of SSNR was to regulate the benefit sharing from, and the environmental protection of, shared resources. Third, the essential and characteristic right under PSNR to freely dispose of natural resources does not apply to resources that are shared, while the essential and characteristic duty under SSNR to cooperate does not apply to resources under exclusive jurisdiction. Based on these differences, the chapter argues that PSNR and SSNR are conceptually different, constituting distinct legal regimes.

Understanding PSNR and SSNR as different sets of rules could promote that shared resource management continues to be increasingly focused on cooperation and environmental protection, and less and less oriented to satisfy state's territorial interests. Additionally, awareness of the differences between PSNR and SSNR could make debates about the issue of sovereignty more straightforward and facilitate negotiations, particularly in the light of future discussions on the law of transboundary aquifers included in the agenda of the UNGA.