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**DRAFT REPORT OF THE INTERNATIONAL LAW COMMISSION
ON THE WORK OF ITS FIFTY-NINTH SESSION**

Rapporteur: Mr. Ernest Petric

CHAPTER V

SHARED NATURAL RESOURCES

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A. Introduction

1. The Commission, at its fifty-fourth session (2002), decided to include the topic “Shared natural resources” in its programme of work and appointed Mr. Chusei Yamada as Special Rapporteur.¹ A Working Group was also established to assist the Special Rapporteur in sketching out the general orientation of the topic in the light of the syllabus prepared in 2000.² The Special Rapporteur indicated his intention to deal with confined transboundary groundwaters, oil and gas in the context of the topic and proposed a step-by-step approach beginning with groundwaters.³
 2. From its fifty-fifth (2003) to fifty-eighth (2006) sessions, the Commission received and considered three reports from the Special Rapporteur.⁴ During this period, the Commission established three working groups: the first in 2004, chaired by the Special Rapporteur, assisted in furthering the Commission’s consideration of the topic and the second in 2005, chaired by Mr. Enrique Candioti, reviewed and revised the 25 draft articles on the law of transboundary aquifers proposed by the Special Rapporteur in his third report (A/CN.4/551 and Corr.1 and Add.1) taking into account the debate in the Commission; and the third in 2006, chaired by Mr. Enrique Candioti, completed the review and revision of the draft articles submitted by the Special Rapporteur in his third report.
 3. At its fifty-eighth session (2006), the Commission, following its consideration of the report of the Working Group containing 19 draft articles⁵ and the report of the Drafting Committee,
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- ¹ *Official Records of the General Assembly, Fifty-seventh Session, Supplement No. 10 (A/57/10 and Corr.1)*, paras. 518-519. The General Assembly, in paragraph 2 of resolution 57/21 of 19 November 2002, took note of the Commission’s decision to include the topic “Shared natural resources” in its programme of work. See also Assembly resolution 55/152 of 12 December 2000.
- ² *Ibid.*, *Fifty-fifth Session, Supplement No. 10 (A/55/10)*, annex, p. 314.
- ³ *Ibid.*, *Fifty-seventh Session, Supplement No. 10 (A/57/10 and Corr.1)*, para. 529.
- ⁴ A/CN.4/533 and Add.1 (first report), A/CN.4/539 and Add.1 (second report), and A/CN.4/551 and Corr.1 and Add.1 (third report).
- ⁵ At the 2878th and 2879th meetings, on 18 and 19 May 2006. At the latter 2879th meeting the Commission decided to refer the 19 draft articles to the Drafting Committee.

adopted on first reading draft articles on the law of transboundary aquifers consisting of 19 draft articles,⁶ together with commentaries thereto,⁷ and decided, in accordance with articles 16 to 21 of its statute, to transmit the draft articles, through the Secretary-General, to Governments for comments and observations, with the request that such comments and observations be submitted to the Secretary-General by 1 January 2008.⁸

B. Consideration of the topic at the present session

4. At the present session, the Commission had before it the fourth report of the Special Rapporteur (A/CN.4/580), which was introduced by the Special Rapporteur at the 2921st meeting, on 18 May 2007. On the same day, the Special Rapporteur gave an informal briefing intended particularly for new members of the Commission on the draft articles on the law of transboundary aquifers. The Commission considered the fourth report at its 2930th and 2931st meetings, on 4 and 5 June 2007, respectively.

5. At its 2920th meeting, on 17 May 2007, the Commission established a Working Group on Shared natural resources, under the Chairmanship of Mr. Enrique Candioti, to assist the Special Rapporteur in considering a future work programme, taking into account the views expressed in the Commission. The Working Group held [4] meetings on 18 May, on 4 and 5 June and on ... July 2007. [At its ... meeting, on ... July 2007, the Commission took note of the report of the Working Group (see part C below).]

1. Introduction by the Special Rapporteur

6. The Special Rapporteur recalled that the Commission at its session in 2006 completed, on first reading, the draft articles on the law of transboundary aquifers. Since written comments and observations of Governments were expected by 1 January 2008, the second reading of the draft articles would have to be deferred until the sixtieth session of the Commission in 2008. The fourth report therefore only addressed one particular aspect concerning the relationship between

⁶ At the 2885th meeting, on 9 June 2006.

⁷ At the 2903rd, 2905th and 2906th meetings on 2, 3 and 4 August 2006.

⁸ At the 2903rd meeting, on 2 August 2006.

the work on transboundary aquifers and any future work on oil and gas. The Special Rapporteur proposed that the Commission should proceed with the second reading of the draft articles on the law of transboundary aquifers in 2008 and treat that subject independently of any future work by the Commission on oil and gas. The looming prospect of a water crisis that would affect hundreds of millions of people, particularly in the developing world, required an urgent formulation of an international legal framework for reasonable and equitable management of water resources, international cooperation, as well as settlement of disputes.

(a) Relationship between the work on groundwaters and that on oil and gas

7. The Special Rapporteur prefaced the discussion by addressing the similarities and dissimilarities between oil and gas on the one hand and aquifers on the other, from scientific and technical perspectives, as well as in the light of the political, economic and environmental aspects, noting that in the main, there existed a close similarity between the physical features of a non-recharging aquifer and the reservoir rock of oil and gas. On the whole, however, the differences pointed to the need for separate treatment. The Special Rapporteur highlighted the fact that freshwater was a life supporting resource vital for the human being for which there existed no alternative resource. Freshwater was also (a) a vital resource for hygienic living of the human being; (b) indispensable for food production; and (c) an essential ingredient of natural ecosystems and organic life of the planet. These considerations necessitated a management policy of groundwaters that was to be different from that of oil and gas.

(b) Oil and gas

8. The Special Rapporteur reached the above conclusions by offering an overview of the opposing theories relating to the origin of oil and gas, their formation, the history of the modern oil industry and the impact of exploitation on the environment, primarily noting that the organic material source theory, in particular the *kerogen* origin theory now prevailed over the earlier inorganic source theory. According to the *kerogen* theory, living organisms (animal and plant) that accumulated at the bottom of oceans and lakes, together with sediment, fossilized and formed material called "*kerogen*". With the combined effect of bacteria, geothermal heat and underground pressure, *kerogen* turns into petroleum and residual water. This process of formation and accumulation of hydrocarbons occurred over long periods stretching hundreds of

millions of years. Although such processes were continuing, for practical purposes, any current recharge of hydrocarbons in existing oil fields was negligible. Accordingly, oil and natural gas should be considered a non-renewable resource.

9. Underground pressure forces the petroleum and water to move upward through rock formations until such petroleum and water were stored in pores of reservoir rock. The reservoir rock was a geological formation, which usually consisted of sand, sandstone or various kinds of limestone. The reservoir rock was usually of marine origin and the water was brine.⁹ Petroleum and water were distributed within the reservoir rock vertically in the order of their densities: natural gas, in the upper zone, oil in the lower zone where both oil and natural gas existed, and water, in the bottom zone. The gas zone was not sharply separated from the oil zone. However, there was a transition zone between the oil and water zones, or between the gas and water zones in the absence of oil. A cap rock overlaying the reservoir rock functioned as a seal that prevented further upward movement of oil and natural gas and it only shot up when a well was drilled through the cap rock. As oil and natural gas often coexisted in the same reservoir rock although they also existed singly, they should be treated as one resource for the purpose of any work of the Commission.

10. As for the history of the modern oil industry, it was not until 1859 that E.L. Drake successfully drilled the first oil well in Pennsylvania. The production over the years had increased exponentially in almost every continent and on continental shelves.¹⁰ It was now taking place within the jurisdiction of more than 70 States and reached millions of barrels per day.

11. In general, States or their political subdivisions retained the right to lease oil fields under their jurisdiction. In exceptional cases, oil and gas were treated as private property of the owner of the land above the reservoir rock. Petroleum was explored, produced and traded¹¹ by private

⁹ It is worth noting in respect of groundwaters that submarine aquifers also exist.

¹⁰ The survey and extraction of groundwaters is predominantly land-based.

¹¹ Compared to groundwaters, there are differences in which oil and gas are internationally traded.

oil companies or State enterprises. Activities of State enterprises in this context would be deemed to be of a commercial nature under current international law. As oil and natural gas were fluid, exploitation by one party may affect other parties in another jurisdiction sharing an oil field. However, information on this aspect was not readily available and extensive research would be required in the future.

12. As regards pollution it seemed to be minimal in relation to oil and natural gas stored in reservoir rock itself. On the other hand, the exploitation of an oil field and transportation of petroleum had a risk of causing significant harm to the environment. Uses of petroleum as an energy source emitting large amounts of greenhouse effect gases were also a major contributing factor to global warming. Similarly, waste disposal of petrochemical products was a source of environmental concerns.

(c) The draft articles on the law on transboundary aquifers adopted on first reading

13. The Special Rapporteur also informed the Commission that UNESCO whose experts assisted the Commission in the development of the draft articles on the law of transboundary aquifers was organizing regional seminars, in association with regional organizations, to brief and sensitize Governments on the draft articles adopted on first reading with a view also to encouraging them to submit their comments on the text. Such meetings were planned for European States in Paris in May and for North American, Latin American and Caribbean States in Montreal in September. UNESCO was also seeking regional cooperating partners to organize sessions for Asian and African States. Arrangements were also made with the Asian-African Legal Consultative Organization for the Special Rapporteur to brief its session in Cape Town in July 2007 on the draft articles.

2. Summary of the debate

(a) Relationship between the work on groundwaters and that on oil and gas

14. In their comments, members of the Commission focused their particular attention on the relationship between the work on groundwaters and that on oil and gas. Members welcomed the report of the Special Rapporteur, which succinctly and starkly made a good case for the separate

treatment of the law on transboundary groundwaters and issues concerning law and gas and, on the whole, they agreed with the Special Rapporteur's overview on the similarities and dissimilarities and the recommendation that the Commission should proceed with and complete the second reading of the law of transboundary aquifers independently of any future work on oil and natural gas.

15. However, members expressed different views regarding whether and how the Commission should deal with oil and gas. Some members viewed it essential that the Commission take up the matter only once it completes the second reading of the law of transboundary groundwaters, including deciding whether or not oil and gas should be considered at all. It was noted that the debate in the Sixth Committee on the matter during the sixty-first session (2006) appeared to be inconclusive as to the direction that the Commission should take and bearing in mind the complexity of the subject these members advocated a more cautious approach. In this connection, it was suggested that some additional preliminary research work, preferably with the assistance of the Secretariat, be carried out, on State practice, including on treaty practice before taking a definitive position on whether the progressive development and codification of the law in the area was merited. It was pointed out in this regard that the Secretariat had already done some work on maritime delimitation which could be updated and tailored to assist the Commission in its work.¹²

16. Some other members recalled that the topic as originally conceived in the 2000 syllabus¹³ already included the study of oil and gas, and a step-by-step approach, beginning with groundwaters was proposed by the Special Rapporteur. As such, there was no further need to

¹² United Nations, *Handbook on the delimitation of maritime boundaries*, Sales No. E.01.V.2. See also *Maritime Boundary Agreements, 1970/84*, Sales No. E.87.V.12; 1942/69, Sales No. E.91.V.11; 1985/9, Sales No. E.92.V.2; and *Current Developments in State Practice*, Sales No. E.87.V.3 No. I; Sales No. E.89.V.7 No. II; Sales No. E.92.V.13 No. III; Sales No. E.95.V.10 No. IV.

¹³ *Official Records of the General Assembly, Fifty-fifth Session, Supplement No. 10 (A/55/10)*, annex.

prevaricate on whether or not the Commission should take up the remaining part of the topic, irrespective of the final outcome of such an exercise. In this context, it was necessary that the Commission establish a clear timetable that would lead to the commencement of work on oil and gas as a matter of priority. While acknowledging that some delegations in the Sixth Committee had expressed concern regarding the complexity of taking up oil and gas, the point was made that it was precisely because such resources would have transboundary context and *a fortiori* parts thereof would fall under the jurisdiction of another State that guidelines would be useful to provide adequate protection to the resource in question and promote cooperation in inter-State relations. The sharing of the resource did not at all imply any qualification of the sovereignty of the State over the resources within its territory. Similarly, it was pointed out that the shared character of the resource was the essential character in the Commission's choice in dealing with a particular resource within the context of the topic. Although oil and gas might not be vital to human life as groundwaters, such resources were of strategic importance to States and the search for energy resources was one of the pressing issues of contemporary times. An elaboration of a regime for their exploitation would provide legal clarity, and would help to foster peace and stability among States. There was State practice on which to proceed. Indeed, there were more agreements in this field than on groundwaters.

17. Yet some other members observed that while it may not be necessary to complete the consideration of groundwaters first before the Commission begins work on oil and gas, including through the conduct of background research work, it would still be necessary to bear in mind the possible impact that the two subjects may have on each other and such a relationship should not be rejected *a priori*.

18. While indeed the two subjects would be treated independently of each other some members noted that there were already certain aspects in the law relating to transboundary aquifers which may be relevant in respect of the oil and gas, and this was the case with respect to provisions concerning general principles, in particular concerning sovereignty, equitable and reasonable utilization, the obligation not to cause significant harm, as well as the general obligation to cooperate, even though in some instances the content of the rule or obligation may not be same.

19. Some other members stressed the differences in the characteristics between groundwater and oil and gas, noting in particular that States deal with oil and gas as an economic and industrial necessity. Accordingly, a different approach was called for, in particular the principle of unitization for joint development was essential in developing the regime on oil and gas.

(b) The draft articles on the law of transboundary aquifers adopted on first reading

20. Some members welcomed the completion by the Commission of the draft articles on the law of transboundary aquifers adopted on first reading, acknowledging also that the briefing by the Special Rapporteur during the current session only helped to highlight the significance of the topic and its relevance in relations among States. Some other members looked forward to embarking on a second reading of the text once comments and observations from Governments were received. The work undertaken thus far was based on well-founded principles of international law and had preserved a crucial balance that revolves around the permanent sovereignty of States over natural resources, their reasonable and equitable utilization, their preservation and protection and the obligation not to cause significant harm. The work would also help in fostering cooperation among States.

21. Regarding the final form, some members favoured model principles, including in the form of a model convention for use bilaterally or regionally taking into account specific needs of the States concerned, while some other members expressed preference for a framework convention. It was also pointed out that the two possibilities should not be considered to be exclusive of each other. Yet some members felt that it was premature to decide on the final form.

22. Some members also welcomed the initiative by UNESCO to organize regional meetings to sensitize Governments on the draft articles and expressed the hope that all regions will manage to benefit from such meetings. Despite the accomplishment of the Commission there was still much that needed to be done in terms of disseminating knowledge regarding the importance of groundwaters and their regulation.

3. Special Rapporteur's concluding remarks

23. The Special Rapporteur expressed his appreciation to members for their positive reaction to the recommendation that the Commission proceed with the second reading of the law of transboundary aquifers independently of issues concerning oil and gas. Although some different views had been expressed on whether or not a decision had been made that oil and gas were part of the topic, the Special Rapporteur felt that there was a general recognition of the need to conduct preliminary studies on oil and gas, including a compilation of State practice.

C. Report of the Working Group on Shared natural resources

[to be inserted]
