



1 **Chapter 7**  
2 **The Sovereign Right to Peaceful Use**  
3 **of Nuclear Energy and International**  
4 **Environmental Law**

5 **Anguel Anastassov**

6 **Abstract** The sovereign right of States to peaceful use of nuclear energy is analysed  
7 in this chapter on the basis of current non-proliferation law and international envi-  
8 ronmental law. The exercise of this right depends on the implementation of cer-  
9 tain obligations under international law. The high bar of the legality of peaceful  
10 nuclear energy is explained by the dual-use nature of the materials and technolo-  
11 gies associated with nuclear energy and the transboundary nature of environmen-  
12 tal protection. The notion of sovereignty as independence and superiority does not  
13 serve the challenges of peaceful nuclear energy and the modern understanding of  
14 the environment as an area of common concern. Against this background, a coop-  
15 erative approach is suggested in order to successfully resolve the prevention and  
16 mitigation of nuclear accidents. The principles of international environmental law  
17 pose stringent requirements for the legal use of nuclear energy, which offer addi-  
18 tional arguments for responsible behaviours of both States and non-States' actors  
19 in cooperation with international organisations and in particular with the IAEA.  
20 The subject of sovereignty is closely linked with the responsibility and liability  
21 of States in case of nuclear environmental damage. The present nuclear liability  
22 regime should be strengthened by adopting an international legal instrument cov-  
23 ering both civil and international liabilities.

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184 are required to ensure that activities within their jurisdiction or control do not  
185 cause environmental damage to other States or areas beyond the limits of national  
186 jurisdiction. Principle 21 of the Stockholm Declaration is repeated in Principle 2  
187 of the Rio Declaration of the 1992 United Nations Conference on Environment  
188 and Development with an additional emphasis on the pursuing States' own envi-  
189 ronmental and development policies.<sup>34</sup>

190 In accordance with the obligations referred to above, a State, which exercises  
191 its sovereign right to conduct such hazardous activities as peaceful nuclear activi-  
192 ties, should ensure that these activities do not cause environmental damage to  
193 other States or areas beyond the limits of national jurisdiction. The main functions  
194 of the procedural obligations, which will be discussed below, are aimed at ensur-  
195 ing the particular conduct of the State to prevent a nuclear accident and its degrad-  
196 ing environmental consequences.

#### 197 **7.4 Principles of the International Environmental Law** 198 **and Peaceful Use of Nuclear Energy**

199 In general, environmental law has emerged and is being developed as a response to  
200 a growing concern by the international community over the environment. The envi-  
201 ronmental law follows certain principles and norms which might not always be in  
202 compliance with the law of other specialised areas. There are authors that take the  
203 view that NPT for instance cannot be interpreted as prevailing over the obligations  
204 of international environmental law.<sup>35</sup> Another point of view which in my opinion  
205 has stronger justification is that the interrelationship between two legal principles  
206 and norms might not be necessarily in conflict. A norm may assist in the interpreta-  
207 tion of another norm for example as an application, clarification, updating or modi-  
208 fication of the latter.<sup>36</sup> Several principles of international environmental law are  
209 especially pertinent<sup>37</sup> to the peaceful use of nuclear energy. The simple fact, how-  
210 ever, that the main legal instruments in the peaceful use of nuclear energy and the  
211 principles of modern environmental law have been drafted in different points of  
212 time has its implications on their compatibility. The trend in the development of  
213 international environmental law from the law protecting the basic interests of  
214 neighbouring States towards the law of the protection of the environment as a com-  
215 mon heritage of humankind could well be illustrated by the development of eco-  
216 logical aspects of peaceful nuclear energy. There is no universal legal instrument

<sup>34</sup> Rio Declaration on Environment and Development, <http://www.un.org/documents/ga/conf151/aconf15126-lannex1.htm>.

<sup>35</sup> Hofstötter 2010, p. 8.

<sup>36</sup> Report of the International Law Commission, Fifty-Eighth Session, 1 May–9 June and 3 July–11 August 2006, A/61/10, p. 407.

<sup>37</sup> Nanda 2006, p. 64.



217 comprising all rules and principles of international environmental law. Any effort  
218 to identify these should be based on the great number of treaties, binding acts of  
219 international organisations, State practice and soft law. One trend in international  
220 environmental law should be pointed out, namely avoiding enforcement measures  
221 and implementing facilitative, cooperative approach instead.<sup>38</sup>

222 The review of a number of the general principles of international environmental  
223 law illustrates certain limits of the sovereign independent States to efficiently man-  
224 age peaceful nuclear activities and the need for implementing a cooperative  
225 approach on a bilateral, regional and global basis. It may be pointed out, however,  
226 that there is no necessarily inherent tension between sovereignty and environmen-  
227 tal protection. So, States could exercise their sovereign rights, individually or col-  
228 lectively in the interest of the protection of the environment.<sup>39</sup>

#### 229 **7.4.1 General Obligation to Cooperate as Principle** 230 **of International Environmental Law**

231 The general obligation of States to cooperate illustrates the transition of the focus  
232 of modern international law from independence to cooperation and partnership.  
233 Development of the international environmental policy is guided by the general  
234 principles of international law which influence the growth of new concrete rules of  
235 international law.<sup>40</sup> Hence, the general obligation to cooperate could be first traced  
236 in public international law and then discuss more specifically the existence of such  
237 obligation in the international environmental policy.

238 The normative basis for the States' general obligation to cooperate is contained  
239 in the UN Charter. This key legal instrument made clear that political, social and  
240 economic cooperation is a fundamental necessity to enable economic development  
241 and to promote and guarantee international peace and security.<sup>41</sup> There is a close  
242 link between sovereignty and respect of international law. The UN General  
243 Assembly Declaration on Principles of International Law concerning Friendly  
244 Relations and Co-operation among States in accordance with the Charter of the  
245 United Nations states that sovereign equality includes the State's 'duty to comply  
246 fully and in good faith with its international obligations'.<sup>42</sup> The UN General  
247 Assembly clarified on many other occasions that the promotion of international  
248 peace requires the removal of various threats to peace and in particular the nuclear  
249 threat, the development of confidence-building measures, promotion and exercise

<sup>38</sup> See MEA: Working Group on Compliance and Enforcement, 30, *Environmental Policy and Law 2000*, p. 60.

<sup>39</sup> Elliott 2013, p. 374.

<sup>40</sup> Hey 1992, pp. 303–304.

<sup>41</sup> UN Charter, Articles 1(3), 11, 13.

<sup>42</sup> UN GA Res. 2625 (XXV), 24 October 1970.



396 may result in different legal obligations.<sup>73</sup> The Climate Change Convention, for  
397 instance, requires the developed country Parties 'to take the lead in combating cli-  
398 mate change and the adverse effects thereof'.<sup>74</sup> This principle implies international  
399 cooperation and partnership to protect the regional and global ecosystems.  
400 Developed and developing countries possess different abilities to deal with the  
401 various ecological problems which might arise in the course of peaceful nuclear  
402 activities. The principles described above are still evolving, and their practical  
403 application depends on the specific circumstances of the particular peaceful  
404 nuclear activity.

## 405 7.5 Cooperative Approach in the Regulation of the Safe Use 406 of Peaceful Nuclear Energy and the Role of the IAEA

407 Peaceful nuclear option cannot be effectively exercised by one State alone. The  
408 cooperation with other States on the bilateral, regional and global level is indis-  
409 pensable. The shift in the understanding of sovereignty from independence to  
410 cooperation is a part of the wider issue of resolving the environmental concerns of  
411 the modern contemporary world, and it actually covers all the main areas of the  
412 State's activity.<sup>75</sup> A specific way of implementing a cooperative approach in the  
413 regulation of the safe use of peaceful nuclear energy is by the functioning of inter-  
414 national organisations. The role of the international nuclear organisations, and in  
415 particular the IAEA<sup>76</sup> as a recognised leader in the global regulation of peaceful  
416 nuclear energy, is a debate on the legal relevance of the practice of international  
417 organisations. Actually, the *raison d'être* of creating any intergovernmental organi-  
418 sation is to achieve objectives which separate States no matter how influential they  
419 are would not be able to accomplish. In this respect, the views and practice of  
420 these subjects are distinguishable from the respective views and practice of the  
421 Member States.<sup>77</sup> The Member States and international organisations enter into  
422 various kinds of relationships, including the legal consequences of Member States

<sup>73</sup> Sands 2012, pp. 234–235.

<sup>74</sup> Article 3(1) United Nations Framework Convention on Climate Change.

<sup>75</sup> Perrez 2000, pp. 4–5.

<sup>76</sup> The present study does not include the EURATOM which has supranational powers to bind its Member States. The European Union provides a binding legal framework on nuclear safety mainly through Directive 2009/71. The nuclear safety standards established on the basis of IAEA's safety standards and the provisions of the Convention on Nuclear Safety are enforceable before the European Court of Justice and national courts of the EU Member States. The Nuclear Energy Agency as a specialised body of the Organisation for Economic Cooperation and Development serves as a forum for exchange of experience of developed countries of North America, Europe and the Asia Pacific on nuclear safety, radioactive waste and radiological protection.

<sup>77</sup> This comment has been widely accepted as one of the elements of the definition of an international organisation. See e.g., Higgins 1994, p. 46; Schermers and Blokker 1995, pp. 29–30.



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456 IAEA in order to supplement the Agency's nuclear safety standards and to make  
457 them legally binding on the Contracting Parties. These are the 1994 Convention on  
458 Nuclear Safety (CNS)<sup>85</sup> and the 1997 Joint Convention on the Safety of Spent  
459 Fuel Management and on the Safety of Radioactive Waste Management.<sup>86</sup> The  
460 implementation of the obligations undertaken by the Contracting Parties is proved  
461 by providing annual reports and participation in periodic meetings.

462 The legal nuclear regime needs to be strengthened given the fact that the possi-  
463 bility for an inspection of nuclear installations is not among the means to verify  
464 compliance. The responsibility for the safety of nuclear installations and for the  
465 prevention and mitigation of environmental damage caused by these installations  
466 to other States and commons remains the responsibility of the Installation State.<sup>87</sup>  
467 The main objective of the nuclear liability conventions, however, is to provide ade-  
468 quate compensation to victims of the nuclear damage caused by nuclear activi-  
469 ties.<sup>88</sup> Against this background, the scope of these conventions could be extended  
470 to cover cases of failure of the operator or the Installation State to take measures  
471 for the prevention and mitigation of nuclear damage. The IAEA strengthens link-  
472 ages between safety conventions, safety standards and codes of conduct in order to  
473 apply them in a synergistic manner. The Agency's Programme related to safety of  
474 nuclear installations focuses on improving the safety during site evaluation,  
475 design, construction and operation through the availability of set safety standards  
476 and their application; supporting Members States in developing the appropriate  
477 safety infrastructure; and assisting adherence to and implementation of the CNS  
478 and the Code of Conduct on the Safety of Research Reactors.<sup>89</sup>

479 The IAEA Safety Standards Series covers nuclear safety, radiation safety, trans-  
480 port safety and waste safety.<sup>90</sup> The Standards take into account the work of the  
481 United Nations Committee on the Effects of Atomic Radiation (UNSCEAR) and  
482 the Recommendations of the International Commission on Radiological Protection  
483 (ICRP). The publication categories in the series are Safety Fundamentals, Safety  
484 Requirements and Safety Guides. The Safety Fundamentals establish the safety  
485 objectives and principles of protection and safety and provide the basis for the  
486 safety requirements. The Safety Requirements determine the needs and conditions

<sup>85</sup> Convention on Nuclear Safety (5 July 1994), INFCIRC/449, <http://www.iaea.org/Publications/Documents/Infcircs/Others/inf449.shtml>.

<sup>86</sup> Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management (29 September 1997), IAEA Document GOV/INF/821-GC(41)/INF/12, <http://www-ns.iaea.org/conventions/waste-jointconvention.asp>.

<sup>87</sup> Nuclear Safety Convention, Preamble, Paragraph (iii).

<sup>88</sup> See Vienna Convention on Civil Liability for Nuclear Damage (INFCIRC/500, 20 March 1996) Conventions, Preamble; Paris Convention on Third Party Liability in the Field of Nuclear Energy, 26 July 1960, Preamble.

<sup>89</sup> The Agency's Programme and Budget 2012–2013, IAEA document GC (55)/5, August 2011, p. 119.

<sup>90</sup> The IAEA Department of Nuclear Safety and Security was established in 1996 with the specific responsibility in the preparation and review of the Agency's safety standards.



697 determined by the fact that the obligation to conduct an environmental impact  
698 assessment which so far was only binding upon contracting parties to the Espoo  
699 Convention will be binding upon any State planning to be engaged in nuclear  
700 activities that might have a significant adverse environmental impact on other  
701 States.<sup>135</sup> The ICJ has not used the Espoo Convention to make the Judgment in  
702 question, but rather customary international law. Nevertheless, the basic elements  
703 of the EIA in customary international law closely follow the main elements of the  
704 Espoo Convention. There is an obligation to prepare an EIA in situations where  
705 significant transboundary harm is likely; the likelihood of harm can be assumed  
706 for the kind of activities listed in Appendix I of Espoo; the provisions of notifica-  
707 tion and cooperation; and post-project analysis.<sup>136</sup>

### 708 **7.6.5 Prior Notification**

709 The Installation State should provide prior notification to the States likely to be  
710 affected before conducting nuclear activity on the basis of an assessment of the  
711 possible transboundary harm caused by that activity, including any environmental  
712 impact assessment. The assessment should include the available technical and all  
713 other relevant information on the risk assessment of the activity in question.<sup>137</sup> An  
714 international transboundary movement of radioactive waste should take place only  
715 with prior notification and consent of the sending, receiving and transit States in  
716 accordance with their respective laws.<sup>138</sup>

### 717 **7.6.6 Participatory and Procedural Rights in Environmental** 718 **Matters**

719 Nuclear activities are the most hazardous activities and should be conducted under  
720 certain strict rules which States should follow in the area of information exchange,  
721 consultation, access to information, public participation in decision-making,  
722 access to justice in environmental matters, early notification and assistance in the  
723 event of a nuclear accident.

<sup>135</sup> Cletienne 2010, p. 64.

<sup>136</sup> Boyle 2011, p. 9.

<sup>137</sup> Prevention of Transboundary Harm from Hazardous Activities. Report of the International Law Commission to the General Assembly. Articles 7 and 8.

<sup>138</sup> See IAEA, General Conference Resolution GC(XXXIV)/RES/530 on Code of Practice on the International Transboundary Movement of Radioactive Waste, Principle 5, 21 September 1990, 30 ILM 556 (1991).



## 832 7.7 Environmental Nuclear Damage and Liability of States

833 There are generally no agreed criteria to calculate the pure environmental damage  
834 under international law and in particular under the nuclear liability conventions.  
835 One of the reasons for this could be sought in difficulties to differentiate environ-  
836 mental nuclear damage<sup>165</sup> from other damage caused to people and property, the  
837 costs of preventive measures, the reinstatement of the environment, as well as any  
838 economic loss if this is permitted under the general law of civil liability of the  
839 competent court. Certainly, some models implemented in national legal systems  
840 may be used; however, the economic value of the environment should be taken  
841 into consideration, as well as the long-term impact on the nuclear environmental  
842 damage. The environmental damage caused by a nuclear accident is an essential  
843 element of the absolute liability of the operator of a nuclear installation and the  
844 Installation State. It should be pointed out that the nuclear environmental damage  
845 that spreads beyond the borders of the State could incur State liability. The repara-  
846 ble nuclear environmental damage should cover all the harm or injury caused as a  
847 result of the impaired environment. In classical international law, concepts such as  
848 the international legal personality and State's sovereignty have been intimately  
849 linked.<sup>166</sup> Since the principle of individual and State responsibility for injurious  
850 consequences is discussed elsewhere in this book, we will focus our analysis only  
851 on some specific aspects of the principle of State responsibility and liability for  
852 environmental nuclear damage. A number of issues, such as State liability for  
853 nuclear environmental damage caused to the global commons and civil nuclear lia-  
854 bility, are not included in this analysis.

### 855 7.7.1 Liability Regime for Environmental Nuclear Damage

856 The United Nations Charter does not explicitly refer to the principle above. Article  
857 74 of the Charter underlines, however, that the policy of the UN members must  
858 be based on the general principle of good neighbourliness and should take into  
859 account 'the interests and well-being of the rest of the world, in social, economic  
860 and commercial matters'. So, the scope of discretionary action of the States aris-  
861 ing from the principle of their sovereignty over national resources is determined  
862 by another principle of good neighbourliness and such adage as *sic utere tuo ut*  
863 *alienum non laedas* (you should use your property in such a way as not to cause  
864 injury to your neighbour's).

865 In accordance with the above principle, the peaceful use of nuclear energy  
866 should not cause damage to the environment of other States or areas beyond the

<sup>165</sup> See Horbach 1999.

<sup>166</sup> Oppenheim wrote in 1905 that 'States solely and exclusively are the subjects of international law'. *International Law*, p. 18.



925 ICJ judgement of the 1996 Advisory Opinion on the ‘Legality of the Threat  
926 or Use of Nuclear Weapons’ stated that there is a general obligation in interna-  
927 tional law upon States to ensure that activities performed within their territories  
928 or under their jurisdiction or control do not cause transboundary damage to the  
929 environment.

930 The international judicial decisions refer to a breach of international obligation  
931 which constitute an internationally wrongful act, namely commission or omission  
932 that is attributable to the State. The standard to determine the breach of such an  
933 obligation is based on obligations relating to conduct or results. For instance, the  
934 Nuclear Safety Convention envisages a number of procedural obligations aimed at  
935 performing certain conduct by the Contracting Parties in order to comply with  
936 safety standards. In the *Corfu Channel Case*,<sup>176</sup> the ICJ took the view that a State  
937 commits an internationally wrongful act when it allows its territory to be used in  
938 such a way as to cause harm or injury to the territory, persons or property of  
939 another State.

940 International law permits for certain circumstances to exclude a wrongful act  
941 committed by the State, and these have been described by the International Law  
942 Commission in its 2001 Articles on State responsibility<sup>177</sup> as follows: consent of a  
943 State, self-defence, countermeasures, force majeure and fortuitous events, distress  
944 and necessity.

### 945 ***7.7.3 The Absolute Liability of a State for Environmental*** 946 ***Nuclear Damage***

947 The peaceful use of nuclear energy is a highly risky business which implies certain  
948 difficulties in proving the fault or negligence on the part of an operator, particu-  
949 larly in the event of delayed damage years after the possible accident. This justifies  
950 the liability of a State which allows peaceful nuclear activities on its territory or  
951 under its jurisdiction or control.

952 The absolute State liability for nuclear environmental damage has been  
953 acknowledged mainly by certain legal instruments related to outer space. This  
954 principle was included in Article VII of the Treaty on Principles Governing the  
955 Activities of States in the Exploration and Use of Outer Space, including the moon  
956 and other celestial bodies.

<sup>176</sup> *Corfu Channel Case*, Judgment of 9 April 1949: I.C.J. Reports 1949, p. 4.

<sup>177</sup> Articles on Responsibility of States for Internationally Wrongful Acts—ARSIWA—(2001) UN Doc. A/56/10, *Yearbook of the International Law Commission, 2001*, vol. II, Part Two, [http://untreaty.un.org/ilc/texts/instruments/english/commentaries/9\\_6\\_2001.pdf](http://untreaty.un.org/ilc/texts/instruments/english/commentaries/9_6_2001.pdf); Draft Articles on the Responsibility of International Organizations (DARIO), UN Doc A/66/10, para 87, *Yearbook of the International Law Commission, 2011*, vol. II, Part Two, [http://untreaty.un.org/ilc/reports/2011/All%20languages/A\\_66\\_10\\_E.pdf](http://untreaty.un.org/ilc/reports/2011/All%20languages/A_66_10_E.pdf).





957 The principle of absolute liability is in line with the Polluter Pays Principle.  
958 The latter, however, is restricted only to the economic part of the nuclear environ-  
959 mental damage, whereas the principle of absolute liability of a State is a legal con-  
960 cept which covers compensation for the environmental nuclear damage.

#### 961 **7.7.4 Legal Consequences of Responsibility and Liability** 962 **for Nuclear Environmental Damage**

963 In accordance with the 2001 Articles on State Responsibility for Wrongful Acts,  
964 the responsible State is obliged to cease the illegal act, to provide assurances and  
965 guarantees of the non-repetition of such an illegal act and to repair the damage  
966 caused by it. The reparation of the nuclear environmental damage may take vari-  
967 ous forms, i.e. restitution, compensation and satisfaction. The assessment of com-  
968 pensation should be determined according to the civil law rules. The ICJ supported  
969 the requests for compensation, for instance in the Case Concerning the Gabčíkovo-  
970 Nagymaros Project<sup>178</sup> by declaring that Slovakia and Hungary suffered nuclear  
971 damage, and hence, they both were entitled to compensation. The 1986 Chernobyl  
972 accident caused damage to many countries, but no State brought claims for com-  
973 pensation before the international courts. The victims of the accident were com-  
974 pensated in accordance with their national laws and with reference to the nuclear  
975 liability conventions.

976 In conclusion, the principle of prevention of nuclear accidents, which is linked  
977 with the precautionary principle, should be one of the key objectives of the nuclear  
978 liability regime. The numerous nuclear liability conventions have created a com-  
979 plicated nuclear liability regime which has been proved in cases of major acci-  
980 dents like Chernobyl and Fukushima as not adequate.<sup>179</sup> Therefore, a newly  
981 drafted international legal instrument should cover both civil and international  
982 liabilities.<sup>180</sup>

### 983 **7.8 The Role of Non-state Actors in the Environmental** 984 **Governance of Peaceful Nuclear Energy**

985 States and international organisations are important but not the only actors in global  
986 environmental governance. Activities of subnational agents such as municipalities,  
987 business institutions and non-governmental organisations (NGOs) at local, national,  
988 regional and global levels are crucial for sound environmental management.

<sup>178</sup> *Gabčíkovo-Nagymaros Project (Hungary/Slovakia)*, Judgment, I.C.J. Reports 1997, p. 7.

<sup>179</sup> Van Dyke 2006, p. 33.

<sup>180</sup> Zeidan 2012, p. 508.

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International  
humanitarian law,  
nuclear weapons  
and the prospects for  
nuclear disarmament

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## International Humanitarian Law (IHL) – General Principles<sup>4</sup>

IHL is considered one of the oldest branches of public international law. Terms such as law of armed conflict, *jus in bello*, or IHL have been generally used as synonymous. This body of law defines the legal boundaries of the uses of various types of weapons.

IHL has evolved to meet contemporary developments and is not limited to certain types of weaponry. There are a number of general principles of a customary nature which are based on military manuals of various countries that should be considered with reference to the legality of nuclear weapons,<sup>1</sup> as follows:

1. *The right to adopt means of injuring the enemy is not unlimited.* In accordance with this principle the combatants are not unrestricted in their use of weapons even where there is a lack of a specific prohibition relating to those weapons.<sup>2</sup>

2. *It is prohibited to use weapons or tactics that cause unnecessary aggravated devastation and suffering.* In other words, any action in armed conflict should be proportionate to the legitimate aims of the conflict.

3. *It is prohibited to effect reprisals that are disproportionate to legitimate military objectives, or disrespectful of persons, institutions and resources by the laws of military conflict.* International humanitarian law protects civilians and civilian populations, civilian objects, the natural environment,<sup>3</sup> the wounded, sick, shipwrecked, prisoners of war,<sup>4</sup> medical establishments and personnel.<sup>5</sup>

4. *It is prohibited to use indiscriminate methods and means of warfare that do not distinguish between combatants and civilians and other non-combatants.* The legal protection of civilians and other non-combatants is a fundamental principle of international humanitarian law.

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<sup>4</sup> Some of the views of the author in this publication were used in his article Angel Anastassov. "Are Nuclear Weapons Illegal? The role of public international law and the International Court of Justice". *Journal of Conflict and Security*, Oxford University Press, 2010, Volume 15, Issue 1, pp. 65-87.

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<sup>1</sup> Written Statement of the Government of New Zealand, 20 June 1995. The Statement was delivered to "furnish information" to the ICJ with reference to the Order of the Court of 1 February 1995 on the request by the UN General Assembly for an Advisory Opinion related to the question of legality of the threat or use of nuclear weapons.

<sup>2</sup> This general principle was proclaimed for the first time in the Declaration Renouncing the Use, in Time of War, of Explosive Projectiles Under 400 Grammes Weight, St Petersburg, 29 November – 11 December 1868.

<sup>3</sup> Articles 51 (6), 52 (1) and 52 (2) of 1977 Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I).

<sup>4</sup> Art 46 of the First Geneva Convention 1949, Art 47 of the Second Geneva Convention 1949 and Art 13 of the Third Geneva Convention 1949.

<sup>5</sup> Articles 19 and 24 of the First Geneva Convention 1949.

'direct violation of the United Nations Charter', 'contrary to the rule of international law and to the laws of humanity', and 'a crime against mankind and civilization'.<sup>21</sup> Under Article 10 of the Charter, resolutions of the UN General Assembly are recommendatory only and not legally binding. Equally important however is the fact that resolutions often incorporate or rely on existing customary international norms that by definition create legal obligations.

In conclusion, it should be pointed out that although nuclear weapons are the only weapons of mass destruction not expressly subject to general prohibition by a treaty, there is a considerable body of international law - treaty law, customary international law and state practice which circumscribes the illegality of nuclear weapons. Equally important is highlighting the merits of a comprehensive abolition of nuclear weapons through international legal instruments.

### *Gaps in International Humanitarian Law*

Speaking of the IHL in general, we should not forget that its legal regime has certain gaps<sup>22</sup> related mainly to the following:

- The notion of a protected person is applicable mainly to enemy nationals. Nationals of third (neutral or co-belligerents) States are not covered by the Geneva Convention IV as long as their States of nationality have normal diplomatic relations with the State in which they find themselves.
- The second classification in the Geneva Convention IV is between "own territory" and "occupied territory". The provisions relevant to the own territory are not particularly developed (Art. 27 – 46) and cannot protect all endangered human rights although they offer some basic protection. In accordance with the Geneva Convention IV its application ceases to apply "in occupied territory ... one year after the general close of military operations". In the case of such occupation, the inhabitants of the territory would be in a disadvantaged position.
- The basic mechanisms for the implementation of humanitarian law have either proved inadequate or are absent in cases of a non-international armed conflict. IHL is not relevant in situations of acts of violence such as internal disturbances and tensions since the trigger for the applicability of IHL is an armed conflict.
- Current IHL does not cover all instances of violations of public international law. New international actors other than States have emerged, whereas the international legal framework is mainly State-centered.

The applicability of IHL to the use of nuclear weapons is a well recognised doctrine in for instance the USA military manuals. The Air Force in its 2009 manual, recognises that the use of nuclear weapons is subject to the principles of the law of war generally. The manual states, in particular, "Under international law, the use of nuclear weapons is based on the same

<sup>21</sup> Similar resolutions include Resolution 36/100 of 9 December 1981 entitled 'Declaration on the Prevention of Nuclear Catastrophe' and others adopted at each regular session of the UN General Assembly.

<sup>22</sup> Mastorodimos Konstantinos. The utility and limits of International Human Rights Law and International Humanitarian Law's parallel applicability. Electronic copy available at: <http://ssrn.com/abstract=1539986>

targeting rules applicable to the use of any other lawful weapon, i.e. the counterbalancing principles of military necessity, proportion, distinction, and unnecessary suffering”.<sup>23</sup>

## The Characteristics of Nuclear Weapons as Explosive Devices

Nuclear weapons have a number of severe consequences, particularly when used in highly populated areas. The ICJ in its 1996 Advisory Opinion pointed out that nuclear weapons are explosive devices whose energy results from the fusion or fission of an atom. Immense quantities of heat and energy are released by a nuclear explosion, as well as powerful and prolonged radiation. The Court concluded that the first two causes of damage are vastly more powerful than the damage caused by conventional weapons. Certainly, the phenomenon of radiation is specific to nuclear weapons.

The damage caused by nuclear weapons can last for a number of years, distinguishing them from any other weapons of mass destruction, due to their extreme cruelty.

These features of nuclear weapons have been advanced in the course of modernization of contemporary nuclear forces.

The humanitarian approach to nuclear weapons extends beyond legal aspects and covers moral and political dimensions as well. This approach entails an emphasis on actual consequences and not only on the effect intended or claimed by users of the weapon. On that basis, evidence and critical investigation are important elements of any humanitarian lens.<sup>24</sup>

One argument that nuclear possessors States used in their position on the legality of nuclear weapons at the ICJ in 1995 was that effects of some nuclear weapons, such as a “small number of accurate attacks by low-yield weapons against an equally small number of military targets in non-urban areas”<sup>25</sup> are controllable. This is partly true for a small segment of the arsenal and for specific circumstances. The USA argued that radiation is “inherent” and is a “by-product” of the nuclear weapon whereas the explosive, heat and blast effects are the primary effects. It is stated that since radiation is a secondary effect of a nuclear weapon, its effects do not violate humanitarian constraints. The 1925 Geneva Protocol codifies certain prohibitions against poisonous, or other gases and analogous liquids, materials and devices. The USA is of the view that these rules cover weapons that kill by inhalation or other means of absorption of poison into the body and are not applicable to nuclear weapons, which kill mainly by explosion.<sup>26</sup>

The issue of reprisal for another State’s unlawful use of nuclear weapons is of particular relevance. It is highly questionable however that a nuclear weapon could be used in such a manner that is proportionate to the unlawful use.

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<sup>23</sup> Quoted in: D. Granoff, J. Granoff. International humanitarian law and nuclear weapons: Irreconcilable differences. Bulletin of the Atomic Scientists 2011. The online version of the article can be found at: <http://bos.sagepub.com/content/67/6/53>

<sup>24</sup> J. Borrie and T. Caughley. How are the humanitarian approaches relevant to achieving progress on nuclear disarmament? In: R. Johnson (ed). *Decline or Transform: Nuclear Disarmament and Security Beyond the NPT Review Process*, Acronym Institute. 2012, pp. 35 – 37.

<sup>25</sup> International Court of Justice (1995). Public sitting held on Wednesday, November 15 at 10 a.m. at the Peace Palace. Available at: [www.icj-cij.org/doctrines/files/95/5947.pdf](http://www.icj-cij.org/doctrines/files/95/5947.pdf)

<sup>26</sup> US Government (1995) ICJ Memorandum/GA App. 23025. Quoted in: D. Granoff, J. Granoff. International humanitarian law and nuclear weapons: Irreconcilable differences. Bulletin of the Atomic Scientists 2011. The online version of the article can be found at: <http://bos.sagepub.com/content/67/6/53>

more separate and dissenting opinions (or declarations) and of the greater and greater length attached to the decisions of the ICJ. The *Nuclear Weapons Advisory Opinion* itself takes up 41 pages, against 326 pages for the Declarations and Separate and Dissenting Opinions.

The progressive development of international law and recent state practice has provided a basis for closer examination of the jurisprudence of the ICJ on the question of the legality of nuclear weapons.<sup>30</sup> In Resolution 49/75 K (1994) the Court was requested by the UN General Assembly to render an advisory opinion on the question 'Is the threat or use of nuclear weapons in any circumstance permitted under international law?' The framing of the question and whether the Court should identify a permission norm or a prohibition one, was the subject of lengthy discussion.<sup>31</sup> Finally, the Court took the view that it is necessary to define whether international law contained a prohibition of nuclear weapons.

The Advisory Opinion taken by the ICJ has provided a number of important conclusions related to the military security of States, encompassing the law of collective security, the law of armed conflict and the international law of arms control.<sup>32</sup>

### The ICJ Advisory Opinion on Nuclear Weapons and IHL

The Court reviewed a number of treaties limiting the possession, testing and proliferation of nuclear weapons and found that there was no specific and comprehensive norm either in customary or in conventional humanitarian law, which prohibits nuclear weapons.<sup>33</sup>

The argument raised by a number of States was that the UN General Assembly resolutions on nuclear weapons reflected a customary law prohibition, which was not accepted by the Court. It was underlined that the essence of customary international law is the actual practice and *opinio juris* of States<sup>34</sup> and the UN resolutions have not reflected that essence. The Court came to the conclusion as well that nuclear weapons have not been subject to prohibition by international treaties banning the use of poisoned weapons, chemical, bacteriological or toxic weapons.<sup>35</sup> Paradoxically, nuclear weapons, which have arguably greater destructive effects than other weapons of mass destruction, are not yet prohibited and the Court simply stated the obvious fact, the lack of a conventional prohibition norm.

Since the Court upheld that there was no specific prohibition of nuclear weapons, any limitation of their use had to be looked at under the general principles of international humanitarian law. The Court underlined that international humanitarian law is basically composed of two branches of international law, namely laws and customs of war (the so-called 'Hague Law', which includes the 1899 and 1907 Hague Conventions) and norms on

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<sup>30</sup> S. Sur, 'Avis consultative CIJ, 8 juillet 1996, Licéité de la menace ou de l'emploi des armes nucléaires'. Préface de l'ouvrage: Marie-Pierre Lanfranchi, Théodore Christakis, *La licéité de l'emploi d'armes nucléaires devant la Cour internationale de Justice*, Economica, 1997, pp. 1-7.

<sup>31</sup> *Nuclear Weapons Advisory Opinion*, Declarations of President Bejaoui and Judge Ferrari Bravo and the Separate Opinions of Judges Ranjeva and Guillaume.

<sup>32</sup> P.J. Myjer, 'The Law of Arms Control, Military Security and the Issues: An Introduction,' in: *Issues of arms control law and the Chemical Weapons Convention*, Martinus Nijhoff Publishers, 2001, p. 4.

<sup>33</sup> *Ibid.*, paras. 58-63.

<sup>34</sup> *Ibid.*, para. 64.

<sup>35</sup> *Ibid.*, para. 55.

The current arms control paradigm developed during the Cold War presupposes that the possession of nuclear weapons has been associated with special treatment such as responsibilities, privileges and international bargaining power and the simple fact that the first five nuclear-armed States are P5 permanent members of the UN Security Council.

The prospects for nuclear disarmament would depend on many factors and basically on the democratic principles and values, on the respect of the interests of each State and the international community as a whole. This is not an easy process since it intersects with the sovereignty of the States and their independence.

There should be certain conditions in place which would permit the nuclear weapon States to give up their nuclear weapons without risking greater international instability.

The conditions that have been referred to often are the following: non-proliferation of nuclear weapons; greater transparency into the nuclear programmes of key countries of concern; efficient verification methods of detecting violations of disarmament obligations; strong and credible enforcement measures to deter possible violations of disarmament obligations; resolve the regional conflicts that can motivate rival States to acquire and maintain nuclear weapons.

Certainly, these conditions do not exist at present. So, it is quite clear that if someone wants to postpone the real nuclear disarmament for an indefinite period, the international community should wait until the above issues will be adequately resolved. From another perspective, no matter how influential the non-nuclear weapons States are, no matter how many Resolutions will be adopted by the UNGA, the nuclear weapons States should decide themselves (and not by a public pressure) to start nuclear disarmament.

There are no near-term prospects for a Comprehensive Nuclear Convention that will lead to the outlawing of nuclear weapons and their elimination. A more realistic concept would involve using a multilayered approach engaging different types of players and negotiations and the implementation of different practical measures. Among these are: reversing of the nuclear plans of North Korea and Iran, strengthening the IAEA's safeguards, implementation of a New Strategic Arms Reduction Treaty (New START), entry into force of the CTBT, negotiation of a verifiable Fissile Material Cut-off Treaty and certainly, adding new territories to already established nuclear-weapon-free-zones (NWFZ) in various parts of the world. Hundred and fifteen States have already been included in the established NWFZ, which represent around 39% of the world population.

Among the "exotic" options for nuclear disarmament is the so called "wildfire" approach in accordance to which it is time to change the philosophy of the game. With this in mind two steps are proposed: 1) negotiate and bring into force a ban on the acquisition, possession, transfer and use of nuclear weapons (without the participation of nuclear weapons States); 2) Nuclear weapons States may join after entering into force of the convention in question through an accession Protocol on time-bound disarmament steps and verification provisions.

Another avenue could include efforts to advance IHL<sup>53</sup> through renewed efforts by the International Committee of the Red Cross, which could launch a Fourth Protocol additional to

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<sup>53</sup> See International Humanitarian Law and Nuclear Weapons. Examining the humanitarian approach to nuclear disarmament. Nuclear Abolition Forum. October 2011, Issue No. 1, p. 33.

БЪЛГАРСКА АСОЦИАЦИЯ ПО МЕЖДУНАРОДНО ПРАВО  
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## CWC – SUCCESS STORY AND MODEL TO BE FOLLOWED BY OTHER NON-PROLIFERATION REGIMES

*Prof. Anguel Anastassov\**

The year 2012 is marked by the fifteenth anniversary of the entering into force of the CWC. This is a good occasion to devote the discussion of one of the panels in the 75<sup>th</sup> conference of the ILA to this multilateral treaty and some of the opportunities and challenges to its legal regime. The CWC is the first multilateral treaty to ban an entire category of weapons of mass destruction (WMD) and to provide for the international verification of the destruction of these weapons. In addition, it encourages international cooperation between States Parties in the peaceful uses of chemistry, and provides assistance and protection to States Parties that are threatened or attacked by chemical weapons. The CWC 188 States Parties already represent about 98% of the global population and landmass, as well as 98% of the worldwide chemical industry.<sup>1</sup>

### 1. Brief history of chemical disarmament

The CWC was agreed upon as a result of nearly twenty years of negotiations<sup>2</sup> in the Geneva-based Conference on Disarmament. The efforts of States to ban chemical weapons however started in 1675 when the first international agreement to prohibit the use of poison bullets was concluded between France and Germany. The 1874 Brussels Convention prohibited the employment of poison or poisoned weapons, and the use of arms, projectiles or material to cause unnecessary suffering. An agreement of the contracting parties to abstain from the "use of projectiles, the sole purpose of which is the diffusion of asphyxiating or deleterious gases" was reached by the 1899 Hague Conventions.

Chemical weapons were used during World War I on a massive scale and it resulted in 90,000 deaths and over one million casualties. The use of chemical weapons prompted the conclusion of the 1925 Geneva Protocol for the Prohibition of the Use of Asphyxiating, Poisonous or Other Gases, and Bacteriological Meth-

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<sup>1</sup> States that have neither signed nor acceded to the CWC are: Angola, Egypt, North Korea, Somalia, South Sudan and Syria.

<sup>2</sup> The author has participated in the final years of the CWC negotiations as a member of the Delegation of Bulgaria in the Conference on Disarmament. Currently he is associated with the Technical Secretariat of the Organisation for the Prohibition of Chemical Weapons. The views expressed during the panel discussion were his own and did not necessarily represent those of the OPCW.

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Weapons Convention or CWC<sup>5</sup>, was submitted to the Conference on Disarmament on 3 September 1992. The text of the Convention was endorsed by the United Nations General Assembly in December 1992 with the request of the UN Secretary-General that it be opened for signature in Paris on 13 January 1993.

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In accordance with the UN General Assembly resolution, the UN Secretary-General was requested to provide services required to initiate the work of the 'Preparatory Commission' for the future Organisation for the Prohibition of Chemical Weapons. The Preparatory Commission was engaged in activities necessary for the effective implementation of the CWC and considered certain outstanding issues from 1993 until shortly after the CWC entered into force on 29 April 1997 after the fifty-fifth ratification performed by Hungary. The Preparatory Commission reported a number of major achievements such as the development of a general training scheme for inspectors, development of draft documents such as the Headquarters Agreement, OPCW Staff and Financial Regulations, OPCW Health and Safety Policy and Regulations, OPCW Confidentiality Policy, and the OPCW Media and Public Affairs Policy.

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The Preparatory Commission was unable however to reach agreement on certain issues<sup>6</sup> deriving from the Paris Resolution such as the Rules of Procedure regarding the First Session of the Conference of States Parties, guidelines for detailed procedures for verification and conduct of inspections and some other subject-matters.

## 2. The four pillars of the CWC

### *The First Pillar – Chemical Weapons Disarmament*

States Parties are required in accordance with Art. IV and V of the CWC to destroy their chemical weapons and chemical weapons production facilities (CWPFs), including the submission of detailed plans for destruction and annual declarations on the status of destruction operations.

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The CWC envisages three categories of chemical weapons – Category 1 which includes the most toxic chemicals, including those which have previously been weaponised; Category 2 which are precursor chemicals required for the production of Category 1 chemicals; and Category 3 which are unfilled munitions and specialised equipment.

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The Convention divides toxic chemicals and precursors that could be used as chemical weapons into three Schedules. Schedule 1 chemicals have been used as chemical weapons in the past and/or have very few or no peaceful uses, and thus pose the most direct threat to the Convention. Schedule 2 chemicals are primarily precursors to Schedule 1 chemicals and most have some industrial uses. Schedule 3 chemicals are produced in large quantities commercially but in some cases were used as chemical warfare agents and can also serve as precursors to

<sup>5</sup> Convention on the prohibition of the development, production, stockpiling and use of chemical weapons and on their destruction. Organisation for the Prohibition of Chemical Weapons, The Hague, 2000, 165 pages.

<sup>6</sup> Final Report of the Preparatory Commission for the Organisation for the Prohibition of Chemical Weapons to the First Session of the Conference of the States Parties of the Organisation for the Prohibition of Chemical Weapons. Document PC-XVI-37. 15 April 1997.

to enter into contracts, to acquire and dispose of property and to institute legal proceedings. In addition, the CWC explicitly stipulates a number of rights and obligations of the OPCW under international law, for example, competence to launch claims internationally, to enter into international agreements in its own right and to take independent decisions within the scope of its responsibilities.

The treaty negotiators agreed that the two policy-making bodies, the Executive Council and the Conference of the States Parties (CSP) adopt decisions by a two-thirds majority vote. In the case of the CSP, decisions on matters of substance should be taken as far as possible by consensus. If consensus is not possible, the Conference takes decisions by a two-thirds majority of members present and voting. Despite these provisions in the CWC however, during the 15-year history, almost all decisions by both bodies have been made by consensus. It has been noticed that the policy on insisting on making decisions by consensus has resulted in a trend of deferring important decisions and sometimes coming to decisions which are watered down for political reasons.

The OPCW is not a United Nations agency, but it has a working relationship with the United Nations. In accordance with paragraph 27 of Part XI of the Verification Annex of the Convention, the OPCW could place its resources at the disposal of the Secretary General to conduct a possible investigation of alleged use of chemical weapons in a State not Party to the CWC. The United Nations and the OPCW have concluded a Supplementary Arrangement to the Relationship Agreement. The Arrangement clarifies the necessary modalities for conducting an investigation of alleged use of chemical weapons if requested by the United Nations Security Council.

#### **4. CWC and advances in science and technology**

There are significant developments, including a growing intersection between chemistry and biology which are affecting the implementation of the CWC. Synthesis of new chemical structures is expected to bring many benefits to people, including new medical treatment. As experience has shown in the past with respect to other areas of science and technology, in particular in nuclear energy, the capacity to design new chemical compounds could be used for not peaceful purposes. New chemical structures could be used as possible chemical warfare agents in a much faster way than in the past due to the shorter time requirements from research and development to full-scale manufacturing.

The advances in science and technology have a certain impact on the prohibitions envisaged in the Convention and perhaps there is a need to strengthen the general purpose criterion used in this legal instrument. The technological and scientific advances could be used for the destruction of old and abandoned chemical weapons and those dumped at sea. The new challenges emanating from advances in the life sciences increase the overlap between the legal regimes of the CWC and the BWC and their future interactions.

#### **5. CWC and countering chemical terrorism**

The CWC does not directly address chemical terrorism, but certainly, the achievement of the objectives of the Convention is in itself an indispensable contribution to anti-terrorist efforts by the international community. Most of the official

documents issued by the OPCW on chemical terrorism point out the following elements: promotion of universal adherence to the Convention; full implementation of the legislative measures required by Art. VII on national implementation; full implementation of the provisions of Art. IV and V related to the destruction of chemical weapons; full implementation of the provisions of Art. VI related to activities not prohibited by the Convention; ability of the OPCW to respond to the assistance and protection provisions under Art. X.

The CWC is directed at the activities of States rather than individuals and this limitation in a sense, was addressed by the UN Security Council Resolution 1540 adopted in 2004<sup>11</sup>. The Resolution calls on States to criminalise the possession, transfer or transport of WMD to non-state actors. The Resolution explicitly refers to the CWC and the OPCW in respect to the fact that none of the obligations set forth in this document should be interpreted so as to conflict with or alter the rights and obligations of States Parties to the Chemical Weapons Convention.

The Resolution imposes three basic obligations on States:

Firstly, to refrain from providing any form of support to non-State actors that attempt to develop, acquire, manufacture, possess, transport, transfer or use nuclear, chemical or biological weapons and their means of delivery;

Secondly, to adopt and enforce appropriate effective laws which prohibit any non-State actor from manufacturing, acquiring, possessing, developing, transporting, transferring or using nuclear, chemical or biological weapons and their means of delivery, in particular for terrorist purposes, as well as from attempting to engage in any of the foregoing activities, participate in them as an accomplice, assist or finance them.

Thirdly, to take and enforce effective measures to establish domestic controls to prevent the proliferation of WMD and their means of delivery, including establishing appropriate controls over related materials.

A question might arise whether the instrument of a challenge inspection could be used in the countering of chemical terrorism? The fact that this type of inspection has never been used by the OPCW does not mean that it is ineffective. Certainly, the legal possibility of requesting a challenge inspection has to be based on sufficient information on the preparatory activities of a terrorist group. The International Court of Justice held in *Military and Paramilitary Activities in and Against Nicaragua* case<sup>12</sup> that not all of the activities of the Contras were attributable to the USA, but an "effective control" is necessary on the part of the State. The International Criminal Tribunal for the Former Yugoslavia (ICTY) decided however that a degree of control should be contextual, so it lowered the standard as used by the term "overall control".<sup>13</sup> Therefore, if a State Party allows certain activities prohib-

<sup>11</sup> The United Nations Security Council Resolution is available in UN document S/RES/1540, dated 28 April 2004.

<sup>12</sup> Case Concerning Military and Paramilitary Activities in and against Nicaragua (*Nicaragua v. United States of America*, ICJ, 27 June 1986).

<sup>13</sup> Antonio Cassese. The *Nicaragua* and *Tadić* Tests Revisited in Light of ICJ Judgment on Genocide in Bosnia. *European Journal of International Law*, 2007, Vol. 18, No. 4. Available at <http://ejil.oxfordjournals.org/content/18/4/649.full>

ited by the Convention to take place on its territory or a place under its jurisdiction or control, it is legally possible to make a conclusion that this State Party does not comply with the Art. VII of the CWC on national implementation measures. Having said that, a State Party can request a challenge inspection to resolve non-compliance concerns referred to above. The OPCW has continued to provide support to the United Nations counter-terrorism strategy and actively participates in the work of the Counter-Terrorism Implementation Task Force.

#### **Conclusions**

The success or the failure of the legal regime of the Chemical Weapons Convention would depend mainly on the progress achieved with respect to the four pillars on which the CWC has been based. These yardsticks could be used in order to measure the accountability of the OPCW. Since its existence, the Organisation has efficiently translated the provisions of the Convention into a workable regime. As the disarmament mandate will gradually come to a completion, the credibility of the CWC regime will be judged on the basis of reprogramming the tasks of the Organisation to both prevention of the re-emergence of chemical weapons and the expansion of the verification to potential new threats.

**INSTITUTE OF INTERNATIONAL LAW**

**SOFIA**

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**BIODIVERSITY**

**IN THE BLACK SEA**

**INTERNATIONAL LEGAL AND INSTITUTIONAL  
FRAMEWORK**

2012

### ABSTRACT

This publication touches upon an important subject matter of modern international law. The author is of the view that the original rich and unique biodiversity of the Black Sea is a result of the semi-enclosed geography of this regional sea, the active inflow from several major rivers, the lack of oxygen at certain depths of the sea and the existence of two layers of water with two different levels of salinity.

The Black Sea is however facing a potential ecological disaster. The problems of an ecosystem degradation and biodiversity loss have been linked with factors such as eutrophication, chemical pollution, oil pollution, introduction of alien species and marine litter. In addition, wild species and their habitats have been under massive overexploitation. The pollution of the environment and the loss of biodiversity are alarming problems especially in the light of turning the Black Sea into an important transport venue for oil and gas.

Effective measures for the conservation of natural resources are now urgent and among them is the establishment of an adequate network of marine protected areas. However, marine protected sites in the Black Sea countries as a whole, and especially in the offshore zone, are not developed enough. Furthermore, another urgent objective is to increase the biodiversity of commercial fish species.

For the purposes of the study six universal legal instruments were analysed:

- (1) Convention on Wetlands of International Importance Especially as Waterfowl Habitat;



- (2) UNESCO Convention concerning the Protection of the World Cultural and Natural Heritage;
- (3) Convention on International Trade in Endangered Species of Wild Fauna and Flora;
- (4) Convention on the Conservation of Migratory Species of Wild Animals;
- (5) Convention on Biological Diversity;
- (6) International Treaty on Plant Genetic Resources for Food and Agriculture.

The participation of the Black Sea coastal States in some International Maritime Organisation Conventions was also discussed. The United Nations Convention on the Law of the Sea was recognised as a legal document which makes a significant contribution to the protection and preservation of the marine environment. Furthermore, the Convention on the Protection of the Black Sea Against Pollution (Bucharest Convention) and its Protocols were recognised as an important element of the Black Sea regional governance system. Given the EU membership of Bulgaria and Romania and Turkey's association with the EU, the European legislation and policy measures are considered a substantial part of the Black Sea governance system under the conditions of a fully-fledged membership of the EU in the Bucharest Convention.

The specific issue of river-born pollution and its effect on the biodiversity in the Black Sea provides an excellent opportunity for analysis of the two different respective families of the legal regimes related to marine pollution and biodiversity via transboundary watercourses.

A conclusion is reached that the unique biodiversity of the Black Sea could be saved through an efficient legal and institutional framework which could be achieved mainly by active participation of the Black

Sea coastal states in the existing universal legal instruments, by joining some new conventions such as the International Convention for the Control and Management of Ships' Ballast Water and Sediments, and by closing the existing gaps in the regional sea governance structure.

The range of water temperatures at the surface of the Black Sea is from  $-1.2^{\circ}\text{C}$  in winter to  $+32^{\circ}\text{C}$  in summer with the mean annual level varying from  $12^{\circ}\text{C}$  in the northwest to  $16^{\circ}\text{C}$  in the southeast of the basin. The waters below 500 m have a constant temperature of about  $9^{\circ}\text{C}$ .

Ecological modelling studies and analysis of the long-term time series data has shown that the structure of the food web in the Black Sea has undergone significant perturbations over the past 40 years. The Black Sea system is an excellent test basin to study how the marine web responds to these perturbations that, to various degrees, occur in the world's oceans.<sup>15</sup> Pollution and inflow of hazardous substances, including oil is a key challenge for the region. Each country has specific "hot spots" with very high concentrations of pollution (pesticides, heavy metals) in sediments. All coastal margin habitats in at least one country are considered to be in a critical status.<sup>16</sup>

#### REASONS FOR ECOSYSTEM DEGRADATION AND BIODIVERSITY LOSS

The Black Sea and its contiguous waters are used for shipping, fishing, aquaculture, mineral exploitation, tourism, recreation, military exercises and for liquid and solid waste disposal. In addition, the seabed and the catchment area are under permanent pressure from other human activities, including urban development, industry, and agriculture. Agriculture especially is the main contributor to water degradation in the Danube Basin<sup>17</sup>, as the main tributary of the Black Sea, through

<sup>15</sup> OVERFISHING of top predators eroded the resilience of the Black Sea system regardless of the climate and anthropogenic conditions. Authors: Llope, M., Daskalov, G. M., Rouyer, T. A., Mihneva, V., Chan, K.-S., Grishin, A. N. and Stenseth, N. C. *Global Change Biology*, March 2011, Vol. 17, Issue 3, p. 1251–1265.

<sup>16</sup> OPTIONS for Delivering Ecosystem-based Marine Management. A review of operational objectives in European Regional Seas. EC collaborative project. July 2011, p. 13–14. Available at: [http://pcwww.liv.ac.uk/~tknights/ODEMM\\_Deliverable\\_6.pdf](http://pcwww.liv.ac.uk/~tknights/ODEMM_Deliverable_6.pdf)

<sup>17</sup> ЛОЗАНОВА, Цветанка. Международноправни аспекти на опазването на водите на река Дунав от замърсяване. — В: *Симпозиум с международно участие „Опазване чистотата на река Дунав“*. София, 1989, с. 221 — 229.

## INTERNATIONAL LEGAL AND POLITICAL INSTRUMENTS

The international legal and institutional framework<sup>30</sup> plays an indispensable part in the protection of the Black System and protection of biodiversity. It consists of universal legal instruments<sup>31</sup>, specific IMO conventions, Black Sea governance system and European legislative and policy measures. The river-born pollution and its effect on the biodiversity in the Black Sea provides an excellent additional opportunity for an analysis of the two different respective families of the legal regimes, pertinent to marine pollution and biodiversity via transboundary watercourses.<sup>32</sup>

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<sup>30</sup> Outside the scope of present study are some specific legal subject-matters, including maritime delimitation in the Black Sea. See MARITIME Delimitation in the Black Sea (*Romania v. Ukraine*). I.C.J. General List 132, Judgment of 3 February 2009. On the delimitation in the enclosed seas see ALEXANDROV, Stanimir, Delimitation of the Continental Shelf in an Enclosed Sea. Hague Yearbook of International Law, 1992, p. 3–32; LATHROP, Coalter. Maritime Delimitation in the Black Sea (*Romania v. Ukraine*). Available at: [http://scholarship.law.duke.edu/cgi/viewcontent.cgi?article=5222&context=faculty\\_scholarship](http://scholarship.law.duke.edu/cgi/viewcontent.cgi?article=5222&context=faculty_scholarship); EVANS, D. Malcolm. Maritime Boundary Delimitation: Where Do We Go From There? – In: *The Law of the Sea. Progress and Prospects*. Edited by Freestone, David, Barnes, Richard and Ong, M. David. Oxford University Press, 2006, p. 137–160.

<sup>31</sup> The participation of the Black Sea coastal states in the universal legal instruments see in the Attachment 1.

<sup>32</sup> VINOGRADOV, Sergei. Marine Pollution via Transboundary Watercourses – An Interface of the “Shoreline” and “River-Basin” Regimes in the Wider Black Sea Region. – *The International Journal of Marine and Coastal Law*, Vol. 22, no. 4, December 2007, p. 585–619. See as well BOYLE, A. Land-Based Sources of Marine Pollution: Current Legal Regime. *Marine Policy*, 1992, p. 20–35, and NOLLKAEMPER, A. Legal Protection of the Marine Environment from Pollution of International Watercourses: Recent Developments. *Marine Pollution Bulletin*, 1993, p. 298–301.

chemicals in quantities not likely to affect human health or the environment provided they are imported for the purpose of research or analysis or by an individual for his or her own personal use in quantities reasonable for such use.

### III. UNITED NATIONS LAW OF THE SEA CONVENTION (LOSC)

The LOSC<sup>57</sup> refers to generally “accepted” international rules and standards<sup>58</sup> in regard to the exercise of prescriptive jurisdiction. It is largely agreed that standards are generally “accepted” when they meet the criteria of “widespread and representative participation”<sup>59</sup>. The LOSC has been recognised as a legal instrument which has made a significant contribution to the protection of the marine environment. Despite the fact that LOSC does not mention explicitly the subject-matter of biodiversity, it has a number of references which provide a certain normative basis for efficient management of the marine living resources.

Of particular importance are the following features:

- \* The inclusion for the first time in a treaty document the general obligation to protect and preserve the marine environment (Art. 192 and Art. 194);

<sup>57</sup> The United Nations Law of the Sea Convention is available at: [http://www.un.org/depts/los/convention\\_agreements/texts/unclos/unclos\\_e.pdf](http://www.un.org/depts/los/convention_agreements/texts/unclos/unclos_e.pdf). The participation of the Black Sea coastal states in the LOSC is available in Attachment 2.

<sup>58</sup> МУЛЕШКОВА, Ирина. Някои аспекти на историческото развитие на принципа на свободата на откритото море във връзка с риболова. — *Проблеми на морското право*, 1986, № 1, с. 70 — 76; ТЕПАВИЧАРОВ, Христо. Режимът на риболова според Конвенцията на ООН по морско право. — *Проблеми на морското право*, 1983, Т. 8, с. 73 — 89; ШИШКОВ, Ангел. Международният режим на морското дъно и откритото море в полза на всички народи. — *Правна мисъл*, 1976, № 5, с. 68 — 77.

<sup>59</sup> YANKOV, Alexander. Commentary. — In: Soons, A.H.A. (ed.) *Implementation of the Law of the Sea Convention Through International Institutions*, Proceedings of the 23<sup>rd</sup> Annual Conference of the Law of the Sea Institute, Noordwijk aan Zee, 1989. Honolulu, Law of the Sea Institute, University of Hawaii, 1990, p. 463 — 470.

and geographically disadvantaged States, “the requirements of developing States in the sub-region or region in harvesting part of the surplus and the need to minimize economic dislocation in States whose nationals have habitually fished in the zone or which have made substantial efforts in research and identification of stocks”.<sup>70</sup> Nationals of other States fishing in the exclusive economic zone must comply with the conservation measures and with the other terms and conditions established in the laws and regulations of the coastal State, of which the coastal State must give due notice.<sup>71</sup>

The Black Sea could be qualified as a semi-enclosed sea in accordance with Art. 122 of the LOSC since it is “surrounded by two or more States and connected to another sea or the ocean by a narrow outlet or consisting entirely or primarily of the territorial seas and exclusive economic zones of two or more coastal States”. States bordering an enclosed or semi-enclosed sea should cooperate with each other in the exercise of their rights and in the performance of their duties under the LOSC. To this end they should endeavour, directly or through an appropriate regional organisation: to coordinate the management, conservation, exploration and exploitation of the living resources of the sea; and to coordinate the implementation of their rights and duties with respect to the protection and preservation of the marine environment.<sup>72</sup>

### *EEZ Zones in the Black Sea*

The EEZ in the Black Sea have been defined by a series of national and bilateral legal instruments the summary<sup>73</sup> of which is provided below.

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<sup>70</sup> Ibid, Art. 62(3).

<sup>71</sup> Ibid, Art. 62(4) and (5).

<sup>72</sup> Ibid, Ar. 123.

<sup>73</sup> The summary of EEZ in the Black Sea has been prepared on the basis of the valuable information referred to by Prof. Nilufer Oral, Bilgi University, Istanbul, Turkey. It is available at: [http://www.blacksea-commission.org/\\_socio-economy-eez.asp](http://www.blacksea-commission.org/_socio-economy-eez.asp)

## BLACK SEA REGIONAL GOVERNANCE SYSTEM

The Black Sea regional governance system covers mainly the Convention on the Protection of the Black Sea Against Pollution and its Protocols, memoranda and declarations.<sup>97</sup> Given the specifics of the ‘shoreline’ regimes and those governing international watercourses<sup>98</sup> (‘drainage/river-basin’ regimes), the 1994 Convention on Cooperation for the Protection and Sustainable Use of Danube deserves a special analysis.

### *1. Convention on the Protection of the Black Sea against Pollution*

The 1992 Black Sea Convention<sup>99</sup> is the first regional environmental agreement ratified by all the Black Sea coastal countries. It is predestined to prevent, reduce and control any kind of pollution within the territorial sea and exclusive economic zone of all Black Sea States, with peculiar emphasis on such kinds of pollution as:

- \* Pollution by hazardous substances and matter (Article VI);
- \* Pollution from land-based sources (Article VII and the Protocol on the Protection of the Black Sea Marine Environment Against Pollution from Land-based Sources);

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<sup>97</sup> Attachment 3 of this publication contains a table of the main legal documents administered by the Commission on the Protection of the Black Sea Against Pollution.

<sup>98</sup> Del CASTILLO-LABORDE, Lilian et al. Legal Approaches.—In: *Transboundary Water Resources Management: A Multidisciplinary Approach*. (Ganoolis, J., Aureli, A. and Fied, J., eds.). Weinheim, Germany, Wiley-VCH Verlag, doi: 10.1002/9783527636655.ch6.

<sup>99</sup> The text of the 1992 Black Sea Convention is available at: [http://www.blacksea-commission.org/\\_convention-fulftext.asp](http://www.blacksea-commission.org/_convention-fulftext.asp)

## ROLE OF COASTAL AND MARINE PROTECTED AREAS IN THE BLACK SEA BIODIVERSITY

Most international legal instruments designed to protect biodiversity have developed mechanisms<sup>137</sup> for the designation and management of marine protected areas (MPAs) as a means to achieve their objectives. A generally accepted definition of an MPA refers to “any area of intertidal or subtidal terrain, together with its overlying water and associated flora and fauna, historical and cultural features, which has been reserved by law or other effective means to protect part or all of the enclosed environment”.<sup>138</sup>

The international regime on MPAs is based, in the first place, on the LOSC, which sets out global obligations and the jurisdictional framework for all uses and activities at sea. The LOSC contains limited express references to marine areas and never uses the term “marine protected areas” or any similar expression. During the UNCLOS III, the concept of special areas was met with considerable hostility given the strong interference with legitimate uses of the sea, above all fisheries and navigation.<sup>139</sup>

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<sup>137</sup> On the issue of compensatory mechanisms allocating financial resources in exchange for the establishment of protected areas see MATZ, Nele. Protected Areas in International Nature Conservation Law: Can States Obtain Compensation for their Establishment? *Max-Planck Institut für ausländisches öffentliches Recht und Völkerrecht*, 63, 2003, pp. 693 – 716.

<sup>138</sup> General Assembly of the IUCN, Resolution 17.38. February 1988.

<sup>139</sup> See for instance, the legislative history of Article 234 on ice-covered areas, which has been included in the LOSC because of the insistence of Canada which had concerns about the Arctic marine environment. See ROSENNE, S. and YANKOV, A. (eds.) and NORDQUIST, M. H. (ed. in-chief) *United Nations Convention on the Law of the Sea 1982. A Commentary*. Vol. IV. Dordrecht; Boston; London, Martinus Nijhoff Publishers, 1991, p. 392 – 398.



**EXPERIENCE  
OF OTHER GOVERNANCE SYSTEMS IN PREVENTING  
THE LOSS OF MARINE BIODIVERSITY**

The experience and good practices of the three Regional Conventions could be of interest in preventing the loss of biodiversity in the Black Sea, namely, HELCOM for the Baltic Sea, OSPAR for the North Sea, and the Barcelona Convention for the Mediterranean Sea.

The Baltic Marine Environment Protection Commission or the Helsinki Commission, is the governing body of the **Convention on the Protection of the Marine Environment of the Baltic Sea Area**, signed in 1992. HELCOM's main goal is to protect the marine environment of the Baltic Sea from all sources of pollution, and to restore and safeguard its ecological balance and biodiversity.

Within the framework of HELCOM, a Baltic Sea Action Plan was agreed by all contracting parties, including the European Community, at the ministerial meeting held in Krakow in November 2007. Since the Black Sea actually shares the very same concerns as the Baltic: loss of biodiversity because of eutrophication, land-base pollution, hazardous substances, and maritime transport (including oil transfers), the institutional mechanisms developed in HELCOM, involving Russia, the States in the region and the European Community, can be used as a tool for its environmental recovery.

HELCOM has developed Indicator Fact Sheets that provide information on the recent state and trends of the Baltic Sea. HELCOM

## CONCLUSIONS

The research on the biodiversity in the Black Sea provides useful lessons for marine biodiversity in general. Activities impacted on from marine biodiversity could be used not only in the sea with respect to fisheries and mineral extraction, but over land in agriculture and industry as well as on the coast for aquaculture, coastal fisheries and recreational activities.

The legal and institutional framework which governs the various aspects of biodiversity, including the respective threats to it, need to be further strengthened. The pollution of the environment and loss of biodiversity are alarming problems especially in the light of turning the Black Sea into an important energy transport route of oil and gas.

The experience of legal governance structures of other European seas, especially the Mediterranean Sea could be of particular importance.

There is a need for the development of, and improvement in, the existing monitoring and reporting system used for contaminants in the Black Sea. An improvement should provide comparable data sets for pollutant loads (from direct discharges and river inputs) and for other parameters. The acceptance of standardized methods by all countries is also an important issue which needs to be addressed as well as funding for suitable equipment and staffing. Operational national quality assurance programmes for the inter-comparison/intercalibration of chemical concentration and flow data from point sources is also needed.

Given the specific features of the Black Sea and especially the fact that the Danube River appears to be the principal source of land-based marine pollution, the efforts of the coastal states should be harmonized with those non-coastal states that belong to the Danube River and other inflowing transboundary rivers. The unique biological diversity of the Black Sea could be saved through an efficient legal and institutional framework. The existence of two different legal regimes of the Black Sea biodiversity and marine pollution from transboundary watercourses raises the question of their compatibility and practical effectiveness.

Some legal gaps in the governance structure of the Black Sea could be identified as follows: no legally binding document for fisheries and conservation of living resources in the Black Sea; no Integrated Coastal Zone Management Protocol or other legal instrument in that area; no regional instrument for marine protected areas; no regional legal instrument and initiatives to deal with introduction of harmful invasive/ alien species.

In addition, there is a strong need for coordination, cooperation and harmonization between the EU and the Black Sea Commission monitoring programmes to avoid duplication of efforts, human and financial resources.

To sum up, creation of a “blue economy” initiative covering the Black Sea region would be a marine version of the green economy, which should be seen as a strategic policy framework for the present and future generations.

## **Are Nuclear Weapons Illegal? The Role of Public International Law and the International Court of Justice**

Anguel Anastassov\*

### **Abstract**

Conventional international law contains various limitations on nuclear weapons, such as possession, testing, deployment, use or threat of use. There are a number of general principles of customary nature that could be considered as well with reference to the legality of these weapons of mass destruction. It is argued that given the current threats in the nuclear proliferation, a comprehensive abolition of nuclear weapons through international legal instruments is crucial. This article examines the jurisprudence of the International court of justice (ICJ) on the question of the legality of nuclear weapons in the light of progressive development of international law and recent state practice. It is suggested that modern technological and political developments in the area of nuclear weapons might be supportive of another advisory opinion by the ICJ that could enhance the debate on the comprehensive legal prohibition of nuclear weapons. Possible subject-matter to be included in a request to the ICJ to render an advisory opinion might be whether nuclear-weapon States fulfil their obligation and bring to a conclusion negotiations leading to the comprehensive and effective abolition of these weapons of mass destruction. The article concludes that an appropriate framing of the request would reinforce the practical measures towards effective nuclear disarmament under the law. The ICJ could contribute to changing the whole concept of global and individual States' security based on a comprehensive convention creating legal obligations for both states and non-states actors.

### **1. Introduction**

This article seeks to review the development of international law relating to nuclear weapons through the analysis of the current arms control and disarmament agreements and the jurisprudence of the International Court of Justice (ICJ, or the Court). A number of significant legal findings were made by the Court in its advisory opinion of 1996. A conclusion was drawn that recent technological and political developments in the area of nuclear armories might be supportive of

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weapons are by nature indiscriminate and it is not possible to ensure the protection of the civilian population in an attached territory, nuclear weapons are indirectly prohibited by the Protocol's provisions on indiscriminate or area attacks.<sup>28</sup> The Protocols therefore apply to the use of nuclear weapons only in so far as they set out general principles of international humanitarian law that codify or represent customary international law.<sup>29</sup> This conclusion has been supported by such national case law as the *Shimoda* case.<sup>30</sup> In this case, the District Court of Tokyo emphasized that the use of nuclear weapons was not expressly prohibited by international law, but it felt that the use of a particular weapon was to be ascertained in light of the principles of international law applicable to the conduct of warfare, in particular the prohibition on indiscriminate bombardment of an undefended city and the prohibition on inflicting unnecessary suffering.

An authoritative expression of humanitarian law with reference to the legality of nuclear weapons can be found in the Statute of the International Criminal Court.<sup>31</sup> The Statute states the principles of civilian immunity and proportionality governing the extent of permissible damage to civilian society and the environment arising from attacks on military objectives.

A question arises as to whether the resolutions of the UN General Assembly represent evidence of customary international law. The most frequently quoted example by the commentators is the 'Declaration on the Prohibition of the Use of Nuclear and Thermonuclear Weapons',<sup>32</sup> which states, *inter alia*, that the use of nuclear weapons is a 'direct violation of the UN Charter', 'contrary to the rule of international law and to the laws of humanity' and 'a crime against mankind and civilization'.<sup>33</sup> Under Article 10 of the Charter, resolutions of the UN General Assembly are recommendatory only and not of binding force. Equally important, however, is the fact that resolutions often incorporate or rely on existing customary international norms that by definition create legal obligations.

In conclusion, it should be pointed out that although nuclear weapons are the only weapons of mass destruction not expressly subject to general prohibition by treaty, there is a considerable body of international law – treaty law, customary international law and state practice – that circumscribes the illegality of nuclear weapons. Equally important is highlighting the merits of a comprehensive abolition of nuclear weapons through international legal instruments.

<sup>28</sup> I Dettler, *The Law of War* (2nd edn CUP, Cambridge 2007) 240.

<sup>29</sup> Written Statement of the Government of New Zealand 20 June 1995 (n 12).

<sup>30</sup> *Shimoda et al v The State*, Tokyo District Court (7 December 1963) [1964] 8 *Jap Annu Intl L* 231 available at <<http://www.icrc.org/ihl-nat.nsf/46707c419d6bdfa24125673e00508145/aa559087dbcf1af5c1256a1c0029f14d?OpenDocument>>.

<sup>31</sup> Statute of International Criminal Court, adopted in Rome on 17 July 1998.

<sup>32</sup> UNGA Res 1653 (XVI) (24 November 1961).

<sup>33</sup> Similar resolutions include Res 36/100 (9 December 1981) entitled 'Declaration on the Prevention of Nuclear Catastrophe' and others adopted at each regular session of the UN General Assembly.

#### **D. Nuclear Weapons and Protection of the Environment**

The Court considered whether the threat or use of nuclear weapons is in compliance with the obligations related to the *protection of the environment*. In the ICJ's view the States had a duty 'to take environmental considerations into account in assessing what is necessary and proportionate in the pursuit of legitimate military objectives'.<sup>67</sup> The Court did not accept the argument that the use of nuclear weapons was prohibited by the general environmental treaties or by customary environmental law.<sup>68</sup> The study conducted by the International Committee of the Red Cross pointed out that there is a customary norm that methods of warfare causing 'widespread, long-term and severe' damage to the natural environment is prohibited and destruction of the environment should not be used as weapon.<sup>69</sup> Not surprisingly, the threshold criteria for violation of Article I of the ENMOD Convention are either 'widespread, long-lasting or severe'. The same prohibitions are listed in Articles 35(3) and 55 of Additional Protocol I. Those three criteria were also reflected in the Rome Statute of the International Criminal Court.

A key subject-matter is whether the norm referred to above is of customary nature and if so whether it applies to all types of weapons, both conventional and nuclear. This is one of the controversial issues; there is no consensus among members of the international community. The general criteria<sup>70</sup> for an established custom norm of international law are its duration, uniformity, consistency of the practice; generality of the practice; *opinio juris* and *necessitates*. France, the United Kingdom and the United States have made reservations to the Additional Protocol I that its rules apply to them in respect of conventional weapons, but not nuclear weapons.

#### **E. Commitments by the NWS not to Use Nuclear Weapons**

The ICJ unanimously held that any use of nuclear weapons 'should be compatible' with the negative security assurances provided by the five NWS to non-nuclear weapon NPT parties.<sup>71</sup> These assurances were an essential part of the *quid pro quo* for an indefinite extension of the NPT and they remain as such central to the ongoing viability of the NPT regime. The question arises of whether the non-use statements made by the five NWS were legally binding. The ICJ considered the reciprocated unilateral actions of the NWS, describing the nega-

<sup>67</sup> Nuclear Weapons Advisory Opinion (n 38) [30].

<sup>68</sup> Nuclear Weapons Advisory Opinion (n 38) [30] and [33].

<sup>69</sup> J-M Henckaerts, 'Study on Customary International Humanitarian Law: A Contribution to the Understanding and Respect for the Rule of Law in Armed Conflict' (2005) *Intl Rev Red Cross* (87) (No 857), 202.

<sup>70</sup> I Brownlie, *Principles of Public International Law* (4th edn Clarendon Press, Oxford 1995) 5.

<sup>71</sup> Nuclear Weapons Advisory Opinion (n 38) 36 [105 (D)].

to 'protect and improve the environment for present and future generations'.<sup>87</sup> The Judge pointed out that the precautionary principle<sup>88</sup> allows New Zealand to bring this case before France has conducted the nuclear tests.<sup>89</sup> Judge Koroma underlined the proper standard that he believes the Court should have applied to determine whether New Zealand had established the legal basis for its Request.<sup>90</sup> Judge Palmer pointed out that a risk-benefit analysis should be performed which showed that a prima facie case had been established.<sup>91</sup> The Judge compared this analysis to a law of torts calculation and underlined that the International Law Commission had supported this type of test in its draft Articles entitled 'risk of causing significant transboundary harm'.<sup>92</sup> In the view of Judge Palmer 'the Court has a responsibility to declare, develop and uphold international law'.<sup>93</sup>

## 6. Is There any Future Role for the ICJ in Outlawing Nuclear Weapons?

Certainly, the ICJ should not be asked to render an advisory opinion on the same subject related to the legality of threat or use of nuclear weapons, because of the applicability of the principle of *res judicata*. There are a number of aspects though, related to the legal status of nuclear weapons that could be raised as a request for an advisory opinion of the 'principal judicial organ of the United Nations' (Charter Art 92).

More than a decade after the issuing of the advisory opinion of the ICJ on the legality of nuclear weapons, NWS have made little progress on disarmament negotiations. Some NWS continue to oppose nuclear disarmament negotiations in any of the main international fora including the Conference on Disarmament, the UN General Assembly and the NPT review process. Therefore, the most promising subject-matter for an item to be included in a possible request to the ICJ to render an advisory opinion would be perhaps whether NWS fulfil their obligation and bring to a conclusion negotiations leading to comprehensive and effective abolition of nuclear weapons. Article VI of the NPT obliges parties to the treaty to pursue negotiations in good faith on measures relating to nuclear

<sup>87</sup> ICJ Rep (1995) 288 (85) 342 quoting the Stockholm Declaration on the Human Environment, Principle 1 (16 June 1972). The Declaration is available at <<http://www.unep.org/Documents.Multilingual/Default.asp?DocumentID=97&ArticleID=1503>>.

<sup>88</sup> The most widely used description of the precautionary principle is found in Article 15 of the Rio Declaration of 1992: 'In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.'

<sup>89</sup> ICJ Rep (1995) 288 (n 85) 342.

<sup>90</sup> ICJ Rep (1995) 288 (n 85) 373.

<sup>91</sup> ICJ Rep (1995) 288 (n 85) 404-5.

<sup>92</sup> ICJ Rep (1995) 288 (n 85) 405.

<sup>93</sup> ICJ Rep (1995) 288 (n 85) 417.

## 7. Conclusion

The idea of abolition of nuclear weapons is becoming increasingly possible and necessary.<sup>108</sup> Certainly, the obligations, responsibilities and controls needed should be discussed at an appropriate negotiating forum open to all States.

Effective nuclear disarmament would be possible by agreeing on a framework of separate legal instruments or a comprehensive NWC. Every year since 1996 resolutions in favour of a NWC have been adopted by the General Assembly of the UN. A draft of such a convention has already been circulated by the UN Secretary General to all UN members.<sup>109</sup>

The author belongs to those that share the view that an advisory opinion by the ICJ in favour of concluding negotiations on effective measures leading to nuclear disarmament in accordance with Article VI of the NPT would play a tremendous role in the authoritative interpretation of this legal instrument.

The need for changing the whole concept of global and individual States' security and outlawing of nuclear weapons is becoming more obvious. The ICJ is best placed to contribute to the achievement of this objective. What is needed is a careful examination of possible aspects of a question to be addressed by the ICJ. An appropriate framing of the request and a successful return to the ICJ would energize the practical measures towards effective nuclear disarmament under the law. A comprehensive NWC would set up a regime creating legal obligations for both States and non-State actors – groups and individuals. A new opinion from the ICJ on particular important aspects of the abolition of nuclear weapons would increase the legal weight towards achieving a reasonably secure non-nuclear world.

<sup>108</sup> Editorial 'Nuclear Weapons Treaty: An Idea Whose Time Has Come' (Winter 2008) *Disarmament Diplomacy* 2.

<sup>109</sup> Letter dated 17 December 2007 from the Permanent Representatives of Costa Rica and Malaysia to the UN addressed to the Secretary-General. UN Doc A/62/650 (18 January 2008) contains as Annex the Convention on the Prohibition of the Development, Testing, Production, Stockpiling, Transfer, Use and Threat of Use of Nuclear Weapons and on their Elimination.



## **CAN THE COMPREHENSIVE NUCLEAR-TEST-BAN TREATY BE IMPLEMENTED BEFORE ENTRY INTO FORCE?**

by **Anguel Anastassov\***

1. Introduction
2. Vienna Convention on the Law of Treaties and entry into force clause
3. Legal basis for nuclear test ban
4. CTBT entry into force and possible provisional application
5. Legal basis for provisional application of the CTBT
  - 5.1 1969 Vienna Convention on the Law of Treaties and principles of public international law
  - 5.2 The customary rule on a nuclear test ban
  - 5.3 The status of the CTBT Preparatory Commission as well defined international organization
6. Provisional operation of the CTBT verification system
7. Conclusion

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## 1. INTRODUCTION

The end of nuclear testing has been a goal and dream of a number of generations for five decades. The actual date of entry into force of the Comprehensive Nuclear-Test-Ban Treaty (CTBT, or Treaty), however, is still unclear at this stage. One of the lessons learned by the international community is that mere negotiations of an arms control treaty are not enough. The *raison d'être* of creating an international treaty is that it be implemented. Without implementation, the treaty just conserves certain normative provisions elaborated through the international negotiations for an indefinite time in the future.

Modern international law offers certain legal practices to implement relevant norms in a treaty that formally does not meet the requirements for entry into force. In this article an attempt has been made, bearing in mind the existing international legal practice and the present stage of the Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization activities, to study alternative means of applying the CTBT provisionally. The analysis has been done on the basis of international treaty law, international organizations and arms control. The article pretends neither to propose concrete practical steps towards the full implementation of the CTBT, nor to ignore the importance of its entry into force. The intention of the author is to look for alternatives that might be helpful to achieve a safer world, without nuclear explosions. The article is intended to provide ideas for possible debate, which appropriate conclusion would definitely promote the values of nonproliferation and peace in the years to come.

The article begins by analysing the Vienna Convention on the Law of Treaties as an authoritative basis for provisional application of international treaties. It then considers the CTBT and the legal prerequisites for provisional application. The article concludes with an assumption that the completion of the CTBT verification regime would accelerate the need to discuss alternative means of applying CTBT without substituting its entry into force.

## 2. VIENNA CONVENTION ON THE LAW OF TREATIES AND ENTRY INTO FORCE CLAUSE

Given that the Vienna Convention on the Law of Treaties has widely been recognised as basic source of international law, it is worth looking at the *travaux préparatoires* clarifying the main intentions of the participants of the negotiating process.

As stated in the course of discussions among International Law Commission (ILC) members, the inclusion of a clause on 'provisional entry into force in a treaty' served a useful purpose where: (1) the subject matter was urgent; (2) the immediate implementation of the treaty was of great political significance; or

In analysing possible options for entry into force of the Protocol to the Biological and Toxin Weapons Convention (BTWC), such well known experts as Graham Pearson and Nicholas Sims, underlined that if a CTBT approach were to be taken for entry into force, it would be contrary to the objective of achieving the rapid entry into force of the Protocol. Consequently, an approach analogous to that for entry into force of the CTBT would be 'inappropriate', 'invidious' and 'highly inefficient' for the entry into force of the BTWC Protocol.<sup>36</sup>

## 5. LEGAL BASIS FOR PROVISIONAL APPLICATION OF THE CTBT

In this section, the author analyzes whether or not there are enough grounds for the possible provisional application of the CTBT.

There are certain technical prerequisites related to the level of readiness of the CTBT verification regime and the verifiability of the CTBT that are not subject of this article. The CTBT verification system is unprecedented in its kind. For the first time in arms control history an international organization has been mandated to develop a technical system to monitor the implementation of certain Treaty provisions. From the point of view of arms control theory, verification comprises three main components: the establishment of facts, their legal assessment and the reaction called forth by the determination of any violation.<sup>37</sup> Unlike other international treaties, the CTBT does not rely on an on-site inspection (OSI) regime as the only means of verification compliance. In the CTBT verification regime the OSI measures are final ones. The CTBT depends mostly on International Monitoring System (IMS), a globally linked network of 321 monitoring stations and 16 laboratories located in more than 90 countries.<sup>38</sup>

### 5.1 1969 Vienna Convention on the Law of Treaties and principles of public international law

The 1969 Vienna Convention has been widely accepted as the benchmark for legal interpretation of international treaties. In accordance with Article 18(b) of the 1969 Vienna Convention, a state that has expressed its consent to be

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36. G.S. Pearson and N.A. Sims, 'Strengthening the Biological Weapons Convention Evaluation Paper. Article XX: Entry into Force', <[www.bradford.ac.uk/acad/sbtwc/evaluation/evalu5.pdf](http://www.bradford.ac.uk/acad/sbtwc/evaluation/evalu5.pdf)>.

37. S. Sur, 'A Legal Approach to Verification in Disarmament and Arms Limitation', in Sur, ed., *supra* n. 22, at pp. 7-8.

38. A. Sands, 'Chapter III. The CTBT Verification Regime', in J. Mendelsohn, ed., *White Paper on the Comprehensive Nuclear-Test-Ban Treaty* (Washington, DC, Lawyers Alliance for World Security 2000) pp. 25-32.

bound by a treaty is under the obligation not to defeat the object and purpose of that treaty prior to its entry into force provided that such entry into force *is not unduly delayed*. The question of delay is a matter of judgment which should depend on the level of readiness and practical significance of the CTBT verification regime.

Strictly speaking there is no legal obligation for a ratifier to apply a particular treaty prior to entry into force. At the same time, once a state ratifies a treaty, it gives its clear consent to be bound by the treaty after entry into force. In this respect we may see a difference in legal status between states that have signed and states that have ratified the same treaty, which has not yet entered into force. Article 18 of 1969 Vienna Convention does not make a distinction between these two categories in the sense that they both shall have an obligation 'not to defeat the object and purpose of a treaty prior to its entry into force'.

The CTBT is a typical example of a law-making treaty, which by definition creates general norms for the future conduct of the parties, and the obligations are the same for all parties. One of the recognized classics of the theory of international law, Ian Brownlie underlined in his fourth edition of the *Principles of Public International Law* that 'even an unratified treaty may be regarded as evidence of generally accepted rules, at least in the short run'.<sup>39</sup> The same author quotes the practice of the International Court of Justice (ICJ) in the *Gulf of Maine*<sup>40</sup> and *Libya-Malta Continental Shelf*<sup>41</sup> cases, when certain aspects of the UN Convention on the Law of the Sea were given evidential weight at the time before entry into force.

*In the case of the prohibition of nuclear testing even official policy statements can become legally binding.* The ICJ ruled out in 1974 that the unilateral statements by the French government that France intended to cease conducting the atmospheric nuclear tests in the South Pacific could have a legally binding effect.<sup>42</sup> As some legal experts underlined, 'the nuclear tests cases may have provided a basis for thinking that there are many forms of international commitments that are not the treaties in technical sense of the Vienna Convention, and it may very well be that a customary law of treaties, embracing a much wider range of international agreements than under the Convention, continues to exist and to give binding force to international undertakings of one sort or another'.<sup>43</sup>

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39. I. Brownlie, *Principles of Public International Law*, 4th edn. (Oxford, Clarendon Press 1995) p. 12.

40. *Ibid.*, at p. 13.

41. *Ibid.*, at p. 13.

42. ICJ, *Nuclear Tests (Australia v. France)*, Judgment of 20 December 1974, *ICJ Reports* (1974) p. 253, <[www.icj-cij.org/docket/files/58/6093.pdf](http://www.icj-cij.org/docket/files/58/6093.pdf)>.

43. Quoted in K.M. Kartcher and G.R. Pitman, 'Alternative Approaches to Arms Control in a Changing World', *Disarmament Diplomacy*, Issue No. 62 (January-February 2002) p. 11.

## 6. PROVISIONAL OPERATION OF THE CTBT VERIFICATION SYSTEM

Though the CTBT does not explicitly refer to the technique of provisional application, it does not in any way rule it out. A valid question arises whether the CTBTO Preparatory Commission has already been performing some provisional application's activities at the present stage. There are a number of elements beyond the simple establishment of the Preparatory Commission, which under the quoted UN publication above is already a form of provisional application. These elements give us enough legal arguments in favour of making a conclusion on existence of conditions, at least, for provisional application of the CTBT. Of course, some treaty's provisions have already had an operative effect prior to its entry into force, for instance those regulating the processes of signature, ratification, entry into force itself, reservations, depositary and so on.

The formal provisional application might be an intermediate tool for the full-fledged implementation of the CTBT after meeting the requirements of Article XIV(1). A number of questions arise as to which parts of the verification system may be put into operation at the stage of provisional application of the Treaty. Some of the possible answers can be found in a Protocol to be considered and agreed by the Conference under Article XIV(2) of the CTBT.<sup>66</sup>

Unlike the Technical Secretariat of the CTBTO, which before entry into force is a provisional one, the already certified IMS stations are not provisional. They are quite ready to deliver data to the IDC, which is not provisional either. Otherwise it will not be possible to comply with the provisions of Article IV(1) of the CTBT underlining the fact that at entry into force, the verification regime shall be capable of meeting the verification requirements of the CTBT. As of March 2008 almost two thirds of the IMS stations are already transmitting data to the IDC, many of them continuously. Obviously the verification regime, once even established 100%, should not be frozen for an indefinite future where several states might decide, in the light of national interests, to ratify the CTBT and thus to help it enter into force. In other words, the verification regime should be an operational one. This is actually the only way to keep it up to date with the highest level of modern technology. The Commission has already launched the concept of *provisional operation and maintenance* of IMS stations.<sup>67</sup> The issue has been at the centre of the activities of the Policy-Making Organs of the Commission. The Executive Secretary of the CTBTO Preparatory Commission Ambassador Tibor Tóth underlined in his statement at the Conference on facilitating entry into force of CTBT in September 2005 that 'in the coming years the task of provisionally operating and maintaining the system will become more dominant'.

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66. See Annex 'Operational Protocol on the Provisional Application of Certain Provisions of the CTBT'.

67. Document CTBT/PC-14/1/Annex II, Appendix V.

A matter of particular interest is the question of the goals of a 'declared' and accepted provisional application of the CTBT in addition to those elements of provisional application which have already been touched upon above. The main objective would be to legitimise the *raison d'être* of the CTBT and to help achieving its object and purpose. The provisional nature of the CTBTO Preparatory Commission activities would relate to time and not to legal effects.

The CTBT should be applied provisionally by all states which have signed and ratified it on the basis of the general principle of *pacta sunt servanda*. States that have already ratified the CTBT should not be required to take additional legal steps to be included in the provisional application. The executive branches of the States Signatories may decide to implement the CTBT provisionally without going into a time-consuming and sometimes difficult ratification process. Opt-out option should be available as well. The legal obligation to perform the Treaty should be subject to the possibility to terminate the provisional application by notice to the Depository in writing, including a statement of the extraordinary event related to the subject-matter of the CTBT which the state regards as jeopardizing its supreme interests. Provisional application of the CTBT should terminate upon its entry into force.

Speaking strictly in terms of Article 25 of the 1969 Vienna Convention, the 'negotiating States' should not be only the states that have already ratified CTBT. From an abstract legal point of view even a state that has ratified a treaty may decide not to support a provisional application. And this might be the case, especially bearing in mind that a nuclear test ban norm normally requires reciprocity. The fact that a state neither ratifies, nor accepts a provisional application would be a good reason for another state to follow the same line of behaviour. It is not the intention here to make a concrete prognosis as to who will be for and respectively against, but rather to provide an objective analysis of the possible practical implications for the CTBT if some states agree on its provisional application.

The negotiating states may utilise *specific devices* to put the CTBT into provisional operation. The very nature of the provisional application presupposes the idea that these devices should not be subject to additional ratification by the respective states. They should be officially signed, or in the case of reaching a conference agreement, the respective state should not break the consensus rule. A sufficient reason to persuade a state to accept a provisional operation device would be to enjoy the right of verification and contribute to perform its basic obligations in accordance with Article I. The easiest way would be to declare through an *Operational Protocol*<sup>68</sup> that the Treaty will be applied *mutatis mutandis*. Of course, the states are free to make interpretative statements in signing the Operational Protocol and especially to describe the conditions under

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68. We propose to name the Protocol for provisional application 'Operational Protocol' in order to distinguish it from CTBT and its Protocol. See the Annex at the end of this article.

further to so-called third parties, which in this case would be just parties not members of the Commission. The Commission is working actively towards the legal mechanism in this direction. The exchange of information to third parties is going outside the direct effects of the CTBT and defining the relevant procedures should be done on the basis of the consent of all member states.

Until the CTBT enters into force, the NWSs with active test sites may voluntarily agree to periodic inspections of their test sites by observers on behalf of the Organization and States Signatories to increase confidence that clandestine nuclear testing has not occurred.<sup>72</sup>

## 7. CONCLUSION

It is expected that the CTBT verification regime would be near 90-95% completion within the next several years. A question arises concerning the reason for maintain an expensive and state-of-the art global monitoring system without making some of the key CTBT provisions operational. The provisional application option would allow the CTBT signatory states to implement the Treaty and support the continued maintenance of the verification regime. At the same time, the CTBT has been in limbo for more than ten years and there are no good prospects of meeting the stringent requirements for entry into force in foreseeable future. The provisional application may help to overcome some temporary political obstacles impeding the implementation of the Treaty and temporarily bolster its legal authority and prevent it being undermined by transitory forces.<sup>73</sup> It seems reasonable to consider provisional application of the CTBT now, with the recognition that are complex political, financial and institutional factors which should be carefully analysed.<sup>74</sup>

There are two likely alternatives in the foreseeable future: a CTBT without entry into force but with continued commitment by NWSs to their respective unilateral moratoria; or resumption of nuclear testing by one or more countries. The practical implications of the later go beyond the normal thinking of responsible human beings and outside this study. The former may serve for a certain time but a number of issues over compliance are likely to appear. Some form of provisional application of the CTBT undertaken by those who had ratified it could go some way to addressing the issues of compliance, but in the view of some authors, this would be close to impossible to establish without at the very least the five NWSs, and probably India and Pakistan, as well.<sup>75</sup> And since the participation of some of the influential NWS, as well as India, Pakistan and

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72. Johnson and Kimball, *supra* n. 18, at p. 7.

73. R. Johnson, 'Is it time to consider provisional application of the CTBT?', *Disarmament Forum* (2006/2) p. 31, available at <[www.unidir.org/pdf/articles/pdf-art2491.pdf](http://www.unidir.org/pdf/articles/pdf-art2491.pdf)>.

74. *Ibid.*, at p. 36.

75. Kartcher and Pitman, *supra* n. 43, at p. 12.

DPR of Korea would be quite uncertain at this stage, the whole legal framework should be taken into consideration in favour of advancing the provisional application of the CTBT through an Operational Protocol.

The entire complex of norms deserve mention: the growing number of signatures and ratifications of the CTBT; the ratifications of the 1963 Moscow Treaty and other treaties limiting nuclear tests; customs norms on nuclear test ban and provisional application of treaties; unilateral declarations with legal effect; the work of the CTBTO Preparatory Commission and the technical level of readiness of the IMS network; the contribution of the academics, media and a number of NGOs, as well as the role of the soft law on nuclear test ban. These factors would help to cover the gap between now and entering into force of the CTBT.

## ANNEX

### OPERATIONAL PROTOCOL ON THE PROVISIONAL APPLICATION OF CERTAIN PROVISIONS OF THE CTBT

[Note: The draft Operational Protocol might serve as a starting point for more detailed and streamlined formulations of CTBT provisional application to be elaborated by the Conference on Article XIV(2).]

#### **Preamble**

The States Members of the Preparatory Commission (hereinafter referred to as 'the Member States'),

*Underlining* the objective of the CTBT to contribute effectively to the prevention of the proliferation of nuclear weapons in all its aspects, to the process of nuclear disarmament and therefore to the enhancement of international peace and security,

*Concerned* about the slow pace of ratification process and slim prospects of entering into force of the CTBT in a near future,

*Called* for the early signature and ratification of the CTBT by all States that have not yet done so and for them to refrain from acts which would defeat its object and purpose in the meantime, by, inter alia, preserving the announced moratoria on nuclear testing,

*Have agreed* as follows:

#### **Article I. Purpose of the Operational Protocol**

The purpose of this Operational Protocol is to put the CTBT into effect on a *mutatis mutandis* basis even though the Treaty as a whole has not yet entered into force.

#### **Article II. The Organization and scope of activities**

1. The Preparatory Commission shall be the principal organ of the Organization. It shall consider any questions, matters or issues within the scope of the CTBT, including those relating to the powers and functions of the Executive Council and the Technical Secretariat, in accordance with the CTBT and its provisional application.



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विकासको लागि योजना : अवस्था, चुनौती र धर्ती	सोपानाथ मैनाली	1
औद्योगिक विकासको चुनौतीमाथि औद्योगिक नीतिको भूमिका	सुबोधका शर्मा	10
प्रौद्योगिक विकास : अर्थव्यवस्थाको समृद्धता र पूर्वाधार	प्रद्युम्नप्रसाद चौहान	29
मानव अधिकार सम्मान विकास र सामाजिक न्याय (प्रकारशुभाको कथा)	जयमती शर्मा	38
Shaping Tomorrow's Economy Challenges and Choices for Nepal	Dev Raj Dahal	42
Knowledge Management in Government Some Perspectives	Ram Babu Nepal	64
Saving and Economic Growth in South Asia: Evidence from Time Series Analysis	Dr. Udaya Raj Regmi	79
TVET and Secondary School Education in Nepal: A case study of Hetauda, Makwanpur	Kamal Phuyal and Takayoshi Kusago	92
Weaknesses and Improvement in Public Service Delivery in Nepal	Dr. Badri Pokhrel	132
Poverty Trap and Aspiration Failure. An Analysis in Nepalese Context	Ram Prasad Mainali	141
Potentiality of Public Private Partnership in Urban Service Delivery in Nepal: An Overview	Prakash Regmi	148
Micro Credit: Meeting the Challenges of feminizing Poverty	Bharat Mani Pandey	165
Export Trade Scenario (Specially from 1976-1992) of Nepal Towards India and Some Lessons Learned	Dr. Suman Kumar Regmi	173
International Legal Framework for Food Security and Intellectual Property Right	Prof. Bogana Nedelcheva and Dr. Angel Anastassos	181

# International Legal Framework for Food Security and Intellectual Property Rights

Prof. Bojana Nedelcheva, Dr. Anguel Anastassov

## Abstract

This article deals with one of the most pressing problems faced by the modern world, namely the increasing crisis of food security and the sustainable approaches to ensuring its viability in the years to come. This topic is closely linked with the eradication of extreme poverty and hunger, the role of knowledge and technology and the implementation of the respective intellectual property rights.

It is noted that the subsidised agricultural production in developed countries slows down world prices which is not beneficial to agricultural progress in the developing countries.

Special emphasis is put on the development of agricultural biodiversity and its role in ensuring food security. It is underlined that implementing intellectual property rights leads to monopolisation of seeds breeding which turns into market control by a few commercial varieties owned by several powerful companies. This trend creates increasing challenges to food security since dependence just on a few varieties is followed by a considerable decrease of crop productivity.

## Introduction

The question of food security could be analysed from various standpoints— at the level of a separate household, at a country or regional basis, or as a global subject-matter.

A number of international legal instruments have included a reference to food as a basic legally binding right. In accordance with the Universal Declaration of Human Rights everyone has a right to a standard of living adequate for the health and well-being of himself and his family, including food. The right to food was recognised by the international Covenant on Economic, Social and Cultural Rights in 1967.

It was underlined at the World Food Summit held in 1996 that food should not be used as an instrument for political and economic pressure and it was reaffirmed the necessity of refraining from taking measures which are not in accordance with international law and that endanger food security. In 2004, member States of the Food and Agriculture Organisation (FAO) adopted a set of 'Voluntary Guidelines' to support the progressive realization of the right to adequate food in the context of national food security.

There is a view that a broader concept of food sovereignty should be adopted which is based on the human right to food, to self-determination, on indigenous rights to

agriculture in order to ensure the production of basic foods.<sup>44</sup> Domestic subsidies encourage national production, which increases supplies on world markets and slows down world prices. Hence, the producers in developing countries are in enormous difficulties competing in their home markets which in turn are detrimental to the agricultural development and food security in these countries.

#### **International legal framework for food security**

The international legal framework dealing with food security could be grouped into the following areas: a) human rights treaties; b) international treaties linked with the environment; c) agriculture-related framework; d) legal instruments focused on intellectual property rights and trade.<sup>45</sup> The present analysis is based on the link between the intellectual property rights and various international legal instruments.

#### **Human Rights Related Treaties**

The International Covenant on Economic, Social and Cultural Rights provides the legal basis for the right to adequate food and the right to be free from hunger. The right to food is realised when all human beings have economic access to food or means for its procurement. Taking into account the problems of both food-importing and food-exporting countries, States Parties have an obligation to ensure an equitable distribution of world food supplies in relation to need. Promoting sharing of knowledge is ensured by the right to "benefit from the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author".<sup>46</sup>

Human rights treaty bodies recommend that governments, international organisations and private actors consider the human rights norm when negotiating intellectual property rights in order to promote the effective realization of the right to food.

#### **International Treaties Linked with the Environment**

The *Convention on Biological Diversity (Biodiversity Convention)*<sup>47</sup> contains several important contributions related to food security and intellectual property rights. The establishment of a special programme on agro-biodiversity in 1996, which aims at promoting the conservation and sustainable use of genetic resources for food and agriculture, deserves special mention. In accordance with Art. 16 of the Biodiversity Convention, the intellectual property rights should not undermine the Convention. It is

<sup>44</sup> Commission on Human Rights, The right to food. Report submitted by the Special Rapporteur on the right to food Juan Ziegler, in accordance with Commission on Human Rights resolution 2003/25, E/CN.4/2004/10, 9 February 2004, para. 31.

<sup>45</sup> CULLET Philippe. Food security and intellectual property rights in developing countries. Graduate Institute of Development Studies, Geneva, March 2004, p. 17.

<sup>46</sup> Art. 15 (c), International Covenant on Economic, Social and Cultural Rights, available at <http://www.unhcr.org/english/law/cescr.htm>

<sup>47</sup> The Biodiversity Convention is available at <http://www.cbd.int/doc/legal/cbdi-en.pdf>

relevant to food security are: plant varieties rights, patents, industrial designs, trademarks, geographical indications, confidential information, copyright and database rights.

The need to enhance the food security in developing countries necessitates adequate policies for supply, distribution and consumption elements of the food chain. The FAO has noted that the availability of policy options to poor countries have been hampered by several factors including:

- Limited resources for public spending programmes;
- The dilemma between remunerative prices for local producers and prices that a large number of poor households can afford, thus making border protection less attractive, despite high bound tariffs;
- Major constraints on foreign exchange availability leading to pressure to boost production of export crops.<sup>58</sup>

An important question is whether the implementation of the intellectual property rights and patents in particular, always serve as an incentive for food security. Certainly, along with their indispensable role in promoting the state-of-the-art science and technology, there are occasions which demonstrate that it is not the case. A failure to meet the validity standards for instance, may be the result of known use of a substance or an obvious starting step in a process. This course of action would result in significant social costs when the IPRs are improperly awarded.<sup>59</sup>

Certainly, there might be cases in which permitted strong intellectual property claims over genetic material may produce negative effects on research and innovation at the expense of wider policy objectives such as conservation and sustainable use of biodiversity, agriculture, human rights and trade. This conclusion is based on the report submitted by the European Community to the third meeting of the Ad-Hoc Open-Ended Working Group on Access and Benefit-Sharing of the Biodiversity Convention.<sup>60</sup>

An emerging issue relates to the harmonisation of the existing international legal framework that should follow the same standards of protection. Having said that each individual country should have the opportunity to set up systems for intellectual property protection taking into account its specific economic conditions and achieving broader development objectives. A certain degree of freedom was provided by the TRIPS Agreement and ensured by the respective *sui generis* clause for governments to tailor such systems to address various aspects of food security. Hence, certain countries

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<sup>58</sup> FAO. Incorporating Food Security Concerns in a Revised Agreement on Agriculture. FAO Round Table on Food Security in the Context of the WTO Negotiations on Agriculture. Discussion paper, 20 July 2001.

<sup>59</sup> MERGES Robert. Intellectual Property Rights, Input Markets and the Value of Intangible Assets. Available at <http://www.law.berkeley.edu/files/iprights.pdf>

<sup>60</sup> OLDHAM, Paul. *Global Status and Trends in Intellectual Property Claims: Genomics, Proteomics and Biotechnology*. Available in document UNEP/CBD/WG-ABS/3/INF/4, Bangkok, 11 January 2005.

are states parties to the UPOV convention, whereas some others could use other alternatives. For instance, as much importance is attached to the interests of farmers as of those of breeders in the African Model Legislation for the Protection of the Rights of Local Communities, Farmers and Breeders, and for the Regulation of Access to Biological Resources. This model law developed in the year 2000 by the African Union (formerly the Organisation the Organization for African Union) is available for consideration by the member governments. A system for the protection of plant variety rights has been established by the European Union legislation and has been operating since 27 April 1995. The system allows intellectual property rights, valid throughout the EU, to be granted for plant varieties.

The exercise of the intellectual property rights objectively leads to monopolization of seeds breeding which further turns into market domination by a few commercial varieties. This phenomenon creates increasing risks to food security since dependence on just a few varieties is followed by a considerable drop of crop productivity, especially in distorted weather conditions.

The Biodiversity Convention underlined the inapplicability of the 'common heritage' concept for plant genetic resources, pointing out the 'state sovereignty' over natural resources. In accordance with Art. 15 of this legal instrument, national governments have the authority to determine the access to genetic resources which is subject to prior informed consent of the provider country and the fair and equitable share of benefits. It is assumed that the exercise of such authority will provide an opportunity to benefit from industrial use of their biogenetic resources which in turn would ensure food security. However, there are a number of reasons to question the bargaining position of individual developing countries as follows:

- Countries lack the scientific and technological capacity to capture the benefits from agro-biodiversity themselves.
- Apportioning the benefits in a fair manner maybe unfeasible, since new plant varieties are often the product of generations of breeding and cross-breeding by farmers throughout the world.
- Countries are increasingly interdependent and not even biodiversity-rich developing countries are self-sufficient. Practically, every country is dependent upon non-indigenous genetic resources essential for food and agriculture.
- The concentration of the world's biodiversity richness in the tropical zone many not necessarily correspond with the geography of agro richness, especially of the major food crops.<sup>61</sup>

Certain aspects of food security relate to the development dimension of the intellectual property rights and especially the protection and promotion of the traditional

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<sup>61</sup>TANSEY Geoff, RAJOTTE Tasmin. The Future Control of Food. A Guide to International Negotiations and Rules on Intellectual Property, Biodiversity and Food Security. 2008, p. 158-159.

Third, IPR systems in agricultural areas profile the interactions and investments in a way that places the economic incentives above long-term sustainability and public interest. The obligation to secure possible patent claims in advance of sharing new findings does not stimulate the freedom and speed of scientific exchange. IPRs on research tools, products and processes potentially leads to underutilisation of technologies.

A special emphasis should be put on the unresolved subject-matter in traditional and indigenous systems. These systems quite often do not respond to western standards of publication and disclosure, nor do local farmer communities have clear views of private ownership of knowledge on plant genetic resources.

Alternatives for resolving at least part of these concerns include strengthening the capacity of those countries and local farmers who do not benefit from IPRs in order to defend their interests at the WTO, bilateral trade and institutional cooperation agreements.

#### Conclusion

Various aspects of the relationship between intellectual property and food security could be considered from a different perspective. Above all, policy capacity building requires a multi-disciplinary approach, so in addition to law and regulations, food security and Intellectual property should take into consideration economics and finance, science and technology, ethics, medicine, agriculture and culture in general.

The rights of the source countries where intellectual property rights are obtained over biological resources should be recognised. In practical terms, it is often difficult to distinguish the source of plant derivatives where genetic material may contain elements from several sources which have not been properly documented.

A number of provisions laid down in the TRIPS Agreement and the Biodiversity Convention require promotion of international technical and scientific cooperation in the field of sustainable use of biological diversity. There is no convincing evidence that these provisions have been implemented for various reasons. The technology transfer for traditional food crops could be determined upon the food security requirements of developing countries. In addition, the right of farmers to save and exchange seed should be supported, as well as the implementation of the exception from liability of research utilizing protected varieties.

Finally, it should be pointed out that the intellectual property rights protection for biotechnology innovation is only part of the policy options for improvement of food security for developing countries. The food security challenges could be successfully resolved in combination with other measures, including reforming trade policies and enhancing the role of science and technology, in particular the genomics and synthetic biology.