THINK-TANK ROUNDTABLE

“THE PROTECTION OF WATER DURING AND AFTER ARMED CONFLICTS”

Tuesday, 14 June 2016, from 9:30 to 17:00
World Meteorological Organisation (WMO)
7bis Avenue de la Paix, 1211 Geneva
2nd floor, Room Kruzel

A valid identity document is required to enter in WMO HQ

The Geneva Water Hub Think-Tank Roundtable on the « Protection of Water During and After an Armed Conflicts » will feed the reflexion of the Global High-Level Panel on Water and Peace launched by Switzerland in November 2015. The aims of the roundtable are the following:

- To discuss the situation of water supplies and electrical facilities in the current conflict in the Middle East;
- To assess the existing legal framework on the protection of drinking water installations and dams during and after armed conflicts;
- To identify legal gaps in the protection of water infrastructures during and after armed conflicts;
- To discuss the role of ICRC in assisting the civilian population deprived of access to water during armed conflicts;
- To discuss how humanitarian agencies such as ICRC may reduce public health risks after armed conflicts;
- To examine the scientific data and information collected by UNEP in rebuilding peace after armed conflicts;
- To identify measures to reinforce the protection of water infrastructures during and after armed conflicts.

9:30 - 10:00 Welcome of the participants and coffee.
10:00 - 10:15 Introduction and scope of the meeting.

Laurence Boisson de Chazournes, Professor, Faculty of Law, University of Geneva, Director of the Platform for International Water Law and Member of the Global High-Level Panel on Water and Peace.

François Münger, Manager, Geneva Water Hub and Swiss En-voy for Water.

Mara Tiginino, Senior Lecturer and Coordinator of the Platform for International Water Law at the Geneva Water Hub, Faculty of Law, University of Geneva.
10:15 - 12:30  SESSION 1: HOW WATER SUPPLIES AND INFRASTRUCTURES ARE USED AS STRATEGIES OF WAR?

The following questions will guide the discussion:
- What is the situation of water supplies and electrical facilities in current inter-national and non-international armed conflicts?
- Are water and energy infrastructures used as military strategies during protracted international and non-international armed conflicts?
- What are the scenarios dealing with the uses of water and energy installations as military targets during protracted international and non-international armed conflicts? More particularly, are water and energy installations targeted during international and non-international armed conflicts? Are dams and dykes also controlled during international and non-international armed conflicts?
- What are the military advantages in using water as a weapon of war during international and non-international armed conflicts?
- To the contrary how water supply can be used as a peace building process in case of a cease fire?
- How NATO armies and militaries from emerging countries can also be better involved in post-disaster and post-war infrastructures’ rehabilitation projects in partnership with NGOs and the ICRC?

12:15 - 13:30  LUNCH

13:30-15.00  SESSION 2: DOES INTERNATIONAL HUMANITARIAN LAW PROVIDE SUFFICIENT PROTECTION OF WATER IN THE DIFFERENT ROLES THAT IT MAY PLAY IN ARMED CONFLICTS?
MODERATOR: Théo Boutruche, Consultant in International Human Rights and Humanitarian Law

The following questions will guide the discussion:
- Do Article 54 of the Protocol Additional to the Geneva Conventions, relating to the Protection of Victims of International Armed Conflicts (First Protocol) and Article 14 of the Protocol Additional to the Geneva Conventions, relating to the Protection of Victims of Non-International Armed Conflicts (Second Protocol) provide a sufficient protection to objects essential to the survival of the civilian population such as drinking water installations, water supplies, and irrigation works?
- Do Article 56 of the First Protocol and Article 15 of the Second Protocol provide a sufficient protection to works and installations containing dangerous forces such as dams and dykes?
- What are the gaps in the existing legal framework on water and energy installations during non-international armed conflicts?
- Should water infrastructures such as dams be declared neutral areas during armed conflicts?
- Should we think about a special sign to protect water wells, water treatment stations and dams?
- Is the special sign of the three bright orange circles provided under Annex I to the First Protocol used to protect dams and dykes during international armed conflicts?
- What is the practice dealing with attacks against water infrastructures under international criminal law? More particularly, what is contribution of international criminal law and of the international criminal courts and tribunals to the protection of water?
- Is the human right to water used to reinforce the protection of the objects essential to the survival of the civilian population such as drinking water installations, water supplies, and irrigation works?

15:00 - 15:15 COFFEE BREAK

15.15 - 16.45 SESSION 3: ENHANCING THE PROTECTION OF WATER DURING AND AFTER ARMED CONFLICTS UNDER PEACE-BUILDING, COOPERATION AND ENFORCEMENT FRAMWORKS.
MODERATOR: David Jensen, Head of the Environmental Cooperation for Peace-building Programme, United Nations Environment Programme (UNEP)

The following questions will guide the discussion:
- How rapid intervention forces may be used to respond to the lack of access to water during and after armed conflicts?
- What are the conditions for the intervention of armed forces to provide water supplies to the civilian population?
- Are engineers who repair water-supply installations and dams protected during and after armed conflicts?
- Do judicial and quasi-judicial bodies play a role in the promotion of the respect of international law during and after international and non-international armed conflicts?
- Is water included in peace treaties concluded after an armed conflict?
- Is there room for the development of an international instrument on the protection of water during and after armed conflicts?

16.45 - 17.00 CONCLUSIONS AND WAY FORWARD
Laurence Boisson de Chazournes, Professor, Faculty of Law, University of Geneva, Director of the Platform for International Water Law and Member of the Global High-Level Panel on Water and Peace.
Annex A : List of Participants to the Roundtable by Alphabetical Order.

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<thead>
<tr>
<th>Name</th>
<th>Position and Experience</th>
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<tr>
<td>Laurence BOISSON DE CHAZOURNES</td>
<td>Professor, Faculty of Law, University of Geneva, Member of the High-Level Panel on Water and Peace. Laurence Boisson de Chazournes is Professor at the University of Geneva and the Director of the Platform for International Water Law at the Geneva Water Hub (<a href="http://www.genevawaterhub.org/fr">www.genevawaterhub.org/fr</a>). She has widely published in the areas of international environmental law, international water law, international economic law and dispute settlement. Laurence Boisson de Chazournes received the Elizabeth Haub Prize for Environmental Law in 2008. A Senior Counsel to the World Bank between 1995 and 1999, Laurence Boisson de Chazournes has since then advised international organizations as well as States. She is also a counsel before the International Court of Justice (ICJ) and has acted in renowned international environmental law cases (<em>Legality of the Threat or Use of Nuclear Weapons</em> (1996), <em>Pulp Mills on the River Uruguay</em> (2010) and <em>Whaling in the Antarctic</em> (2014)). She is also an arbitrator.</td>
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<td>Théo BOUTRUCHE</td>
<td>Independent Consultant in International Human Rights and Humanitarian Law. Théo Boutruche holds a Ph.D in international law and is currently a legal adviser with the MENA Programme of the International Com-mission of Jurists. He has previously worked as an employee or as a consultant for various organisations such as Amnesty International, ICTJ, Save the Children and the UN Office of the High Commission-er for Human Rights including in conflict and post-conflict settings (Palestine, Lebanon, Iraq, Georgia, and DR Congo). He also has extensive experience in teaching international law in various univer-sities, including at the University College London. His areas of ex-pertise include international human rights law, international human-itarian law (IHL), in particular, conduct of hostilities, law of targeting, law of occupation, and regulation of weapons; transitional justice and international criminal law.</td>
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<td>Christian Bréthaut</td>
<td>Manager of the Education and Knowledge Component of the Geneva Water Hub. Dr Christian Bréthaut holds a PhD in Geosciences and Environment from the University of Lausanne. He leads the Geneva Water Hub’s Education and Knowledge component since August 2014. His area of expertise is the analysis of water policies and the issues associated with the management of cross border rivers. Christian Bréthaut’s particular focus within the domain of water management is the capacity of institutions to adapt, the water-food-energy-ecosystems Nexus and the exploration of the link between science and policy.</td>
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<td>Javier CORDOBA</td>
<td>Head of Sector, ICRC Water &amp; Habitat Unit. After completing his studies in Geology (MSc) and Hydrogeology (Post-graduate) in 1999, Javier Cordoba worked for the Centre of Hydrogeology of Neuchâtel (CHYN) and the Swiss Federal Institute of Technology (EPFL) as a project manager in the field of Hydroge-ology. In 2001, he joined the International Committee of the Red Cross (ICRC) for whom he has been working on the field for more than 10 years in advising, developing, coordinating, and implement-ing Water &amp; Habitat programs in armed conflicts and fragile state, such as in Afghanistan, Iraq, Gaza, West Bank, RDC, Zimbabwe and Haiti. Since 2012, Javier Cordoba works at the ICRC HQ in the Water &amp; Habitat Unit as Head of Sector, providing managerial and</td>
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<tr>
<td><strong>Franck GALLAND</strong></td>
<td><strong>Academic history</strong></td>
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| Managing Director of the Environmental Emergency & Security Services | Franck GALLAND has a master degree in international affairs from the Ecole Supérieure de Commerce de Marseille (Kedge Business School) and is currently considered as one of the leading French expert in strategic and geopolitical issues related to water. He also made extensive research on the vulnerabilities of critical infrastructures such as water supply systems. He is the author of three well-received books:  
He has also written more than thirty research papers on strategic and security challenges concerning water, in reviews of international relations and defence (cf. www.frstrategie.org/barreFRS/chercheurs/f_galland.php).  
He is a speaker who is regularly invited to defence and security institutes, both in France and abroad, to talk about the problems connected to water resources and the security of critical infrastructures. These have included l’Institut des Hautes Etudes de la Défense Nationale in Paris, the Royal United Services Institute in London and the China Institute for International Strategic Studies in Beijing.  
Lastly Franck GALLAND is a Special Advisor to the Chairman of the French High Committee for Civil Defence (HCFDC), an Associate Researcher at the Fondation pour la Recherche Stratégique (FRS) in Paris and a member of the Security and Safety Group of the International Water Association (IWA).  
**Professional background** |
| Between 1997 and 2001, as Director of operations at the Miallot & Associés practice (Mazars & Guérard group) specialising in international risk management, Mr GALLAND was working for major French groups in emerging markets, including Lyonnaise des Eaux.  
Between 2001 and 2004, he was attached to the Vice-President Business Development of Ondeo Services (international activities of Suez-Lyonnaise des Eaux), as Group Risk Manager. He was appointed in 2004 Vice-President Corporate Security of Suez Environnement, in charge of all the international assets of this international leading water company.  
At the end of 2010, after spending ten years within the Suez group, Mr GALLAND chose to devote the second half of his career to an entrepreneurial project. He therefore created Environmental Emergency & Security Services, an engineering consultancy in urban resilience, with the aim of assisting local authorities and water and energy operators in anticipating and managing major crisis situations due to natural disasters (floods, hurricanes, etc.). |

In his past and current position, he personally performed worldwide more than sixty vulnerability assessments on water supply systems and on emergency preparedness and crisis response issues for utilities.

F. GALLAND is an active member of the French Army reserve since the end of his military service. Currently Lt-Colonel he is serving as a water expert at the CETID (Centre d’Etudes Techniques d’Infrastructure de la Défense, Technical Study Center for Infrastructures of the French MoD). He served several times in operations. Mentioned in Despatches, he has been awarded the Cross of Military Valour, the Combattant Cross and several other French and foreign military decorations.

He is also Knight of the French National Order of Merit and the Order of Academic Palm.

### Stephanie HAWKINS

**PhD Researcher, University of Strathclyde**

Stephanie Hawkins is a PhD researcher in law at the University of Strathclyde. Her current research focuses on transboundary groundwater governance, with attention to concepts of power and justice in law and institutions. Her previous research has centered on hydro-hegemony and international law in the case of the Israel-Palestine water conflict.

### Karen HULME

**Professor, Faculty of Law, Essex University**

Professor Karen Hulme specialises in the protection of the environment during armed conflict, and has research interests in environmental human rights. She has been involved in discussions with UNEP, ICRC, and the ILC’s Special Rapporteur for on the topic of Protection of the Environment in Relation to Armed Conflict. Karen has also undertaken consultancy work with the Essex Business and Human Rights Project on the extractives industry.

### Ronald JAUBERT

Ronald Jaubert is Professor in development studies at the Graduate Institute of International and Development Studies and at the Faculty of Geoscience and Environment at the University of Lausanne. His areas of research focus on the management of water resources and agricultural policies in the Middle East and in Sub-Saharan Africa. He currently leads two research programmes on the utilisation and management of water: a programme on small irrigation and food security in Niger and a pro-grame on water management in the
<table>
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<th><strong>Professor, Graduate Institute of International and Development Studies</strong></th>
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<td>Orontes basin (Lebanon, Syria and Turkey). This latter project is carried out by a large interdisciplinary group of researchers including engineers from Lebanon, Syria, Turkey and Europe. The Orontes programme focuses on the challenges of access to water in the Syrian conflict in a perspective of a post-conflict reconciliation.</td>
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<th><strong>David JENSEN</strong></th>
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<tr>
<td>Head of Environmental Cooperation for Peacebuilding Initiative, UNEP</td>
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<td>David Jensen is the Head of Environmental Cooperation for Peace-building Initiative at the United Nations Environment Programme (UNEP). He has over 15 years of experience in assessing and addressing natural resources, conflict and peacebuilding, and has worked for UNEP on a range of different crisis response operations since 2003. Mr. Jensen holds a MSc in Biology from Oxford University (UK) and an undergraduate degree in Geography from the University of Victoria (Canada).</td>
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<th><strong>Amanda KRON</strong></th>
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<td>Legal Advisor for the Post-Conflict and Disaster Management Branch, UNEP</td>
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<td>Amanda Kron works as Legal Advisor at the Post-Conflict and Disaster Management Branch of UNEP. She holds an LL.M from Uppsala University (Sweden) with a specialization in international law. Prior to joining UNEP, she served as research assistant at the International Law Commission, where she focused on protection of the environment in relation to armed conflicts.</td>
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<th><strong>David MICHEL</strong></th>
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<td>Executive-in Residence at the Geneva Centre for Security Policy and a Non-resident Fellow at The Stimson Center in Washington, DC.</td>
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<td>David Michel is Executive-in Residence at the Geneva Centre for Security Policy and a Non-resident Fellow at The Stimson Center in Washington, DC. He was previously Director of Stimson’s Environmental Security Program. His work explores the emerging governance challenges and security risks posed by global environmental change, focusing on transboundary water management, global warming, and maritime resources policy. He has advised the US National Intelligence Council and the Departments of Defense, Energy, and State on water and climate policy issues.</td>
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<td>Name</td>
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| François MÜNGER    | Manager of the Geneva Water Hub and Swiss Special Envoy for Water at SDC. He has launched the Geneva Water Hub, in 2015, an international platform for hydro-politics in International Geneva. Former head of the Global Programs Water Initiatives at SDC, that he has launched, developed and profiled during eight years. He has worked previously as a scientific researcher for the Swiss Federal Institute of Technology EPFL, as director of a dams & deep boreholes project in Africa, as chief of SDC water Program in Central America and as Senior water specialist in the World Bank. He holds:  
- MSc in geophysics and mineralogy (Uni of Lausanne)  
- MSc. in hydrogeology (Uni of Neuchatel)  
- MSc. in environmental engineering and biotechnologies (EPFL).  
- CAS in geological hazards (UniGe). |
| Zaki SHUBBER       | Lecturer in law and water diplomacy at the UNESCO-IHE Institute for Water Education in Delft, The Netherlands. She holds an LLM in Water Governance and Conflict Resolution from the University of Dundee and an LLM in Public International Law from the University of London. Prior to joining UNESCO-IHE, she worked as a lawyer in London. She now focuses on water law at a national and international level as well as on the judicial and non-judicial settlement of water disputes. |
| Britta SJÖSTEDT    | Lecturer, Faculty of Law, University of Lund. Dr. Britta Sjöstedt is a lecturer at the Faculty of Law, Lund University, Sweden, researching and teaching public international law, in particular, international environmental law and international humanitarian law. Her PhD thesis focused on questions of how international humanitarian law and international environmental law protect the environment during armed conflict and how to reconcile the two branches of international law. She has published articles and book chapters related to her research topic. Britta was rewarded with the prestigious Australian Endeavour Research Scholarship in 2014 to conduct research at the University of New South Wales, Australia. In 2015, she was admitted to the League of European Research Universities (LERU) visiting programme and within this programme she made a research visit at Leiden Law School (May, 2015). She is also a contributor to the international law blog 'Intlawgirrls': <http://ilg2.org/>. |
| Komlan SANGBANA    | Komlan Sangbana (D.E.A. in Public Law, University Lomé (Togo); Ph.D. in Public International Law, University of Geneva (Switzerland)). Dr Sangbana is a Research Fellow at the Platform for International Water Law (University of Geneva Law School) and a Scientific Collaborator at the Institute for Environmental Sciences (University of Geneva). He has been a Visiting Scholar at the Edinburgh University Law School (UK). Dr. Sangbana has served as a Legal consultant for the Secretariat of UNECE Water Convention, WATERLEX as well as a legal expert for Green Cross International. Dr. Sangbana is co-
<table>
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<tr>
<th>Research Fellow at the Platform for International Water Law and Scientific Collaborator at the Institute for Environmental Sciences, University of Geneva</th>
<th>editor of Public Participation and Water Resources Management: Where Do We Stand in International Law? (UNESCO, 2015) and the United Nations Convention on the Law of the Non-Navigational Uses of International Watercourses. A Commentary (Oxford University Press, 2017). He has also written several articles in the field of international environmental law and the law of international watercourses and has presented communications in different conferences and colloquia. His research interests include the analysis of features of the legal regulation of trans-boundary river basins. Mr Sangbana’s particular focus is on the interaction of normative and institutional components of the regulation regime and the implication of non-States actors in the water resource management.</th>
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<tr>
<td>Mara TIGNINO</td>
<td>Mara Tignino is Senior Lecturer at the Faculty of Law of the University of Geneva. She is also the Coordinator of the Platform for International Water Law at the Geneva Water Hub (<a href="http://www.genevawaterhub">www.genevawaterhub</a>) and Director of the Online Course on International Water Law. She holds a PhD in International Law from the Graduate Institute of International and Development Studies and has been a Visiting Scholar at the George Washington University School of Law in Washington D.C and at the Universidad de Barcelona.</td>
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<tr>
<td>Senior Lecturer, Faculty of Law, University of Geneva, Coordinator of the Platform of International Water Law/Geneva Water Hub</td>
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<td>Tobias VON LOSSOW</td>
<td>Tobias von Lossow studied Political Science in Berlin, Cork and Oslo and is working at the German Institute for International and Security Affairs (SWP) in Berlin. In the Research Division Middle East/Africa Tobias von Lossow works on water and security issues, as for example the conflict over the Nile water resources or water conflicts in Africa against the background of climate change. His most recent work focuses on weaponization of water by the Islamic State (IS) in Syria and Iraq. Tobias von Lossow is also lecturer at the Freie University of Berlin.</td>
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<tr>
<td>PhD Fellow, German Institute for International and Security Affairs, Middle East and Africa Division</td>
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<td>Doug WEIR</td>
<td>Doug Weir has researched the toxic legacy of armed conflict and military activities since 2005. He currently manages the Toxic Remnants of War Project, which was established in 2012 to document the humanitarian cost of wartime environmental pollution. Together with its partners, it seeks to monitor active conflicts for environmentally damaging incidents and research methodologies for improving data collection on environmental risks. The project is a founding member of the Toxic Remnants of War Network, a global coalition of NGOs advocating for a greater standard of environmental and humanitarian protection before, during and after conflict. You can follow the</td>
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<td>Manager of the Toxic</td>
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**Annex B : Legal Materials**

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3) Protocol Additional to the Geneva Conventions, relating to the Protection of Victims of International Armed Conflicts (1977).
4) Protocol Additional to the Geneva Conventions, relating to the Protection of Victims of Non-International Armed Conflicts (1977).

**Convention (IV) Relative to the Protection of Civilian Persons in Time of War, Geneva, 12 August 1949**

**Article 53 – Prohibited destruction**

Any destruction by the Occupying Power of real or personal property belonging individually or collectively to private persons, or to the State, or to other public authorities, or to social or cooperative organizations, is prohibited, except where such destruction is rendered absolutely necessary by military operations.

**Article 55 – Food and medical supplies for the population**

To the fullest extent of the means available to it, the Occupying Power has the duty of ensuring the food and medical supplies of the population; it should, in particular, bring in the necessary foodstuffs, medical stores and other articles if the resources of the occupied territory are inadequate.

2. The Occupying power may not requisition foodstuffs, articles or medical supplies available in the occupied territory, except for use by the occupation forces and administration personnel, and then only if the requirements of the civilian population have been taken into account.

**Article 56 – Hygiene and public health**

1. To the fullest extent of the means available to it, the Occupying Power has the duty of ensuring and maintaining, with the cooperation of national and local authorities, the medical and hospital establishments and services, public health and hygiene in the occupied territory, with particular reference to the adoption and application of the prophylactic and preventive measures necessary to combat the spread of contagious diseases and epidemics. Medical personnel of all categories shall be allowed to carry out their duties.

Article I
Water which is indispensable for the health and survival of the civilian population should not be poisoned or rendered otherwise unfit for human consumption.

Article II
Water supply installations which are indispensable for the minimum conditions of survival of the civilian population should not be cut off or destroyed.

Article III
The diversion of waters for military purposes should be prohibited when it would cause disproportionate suffering to the civilian population or substantial damage to the ecological balance of the area concerned. A diversion that is carried out in order to damage or destroy the minimum conditions of survival of the civilian population or the basic ecological balance of the area concerned or in order to terrorize the population should be prohibited in any case.

Article IV
The destruction of water installations such as dams and dikes which contain dangerous forces, should be prohibited when such destruction might involve grave dangers to the civilian population or substantial damage to the basic ecological balance.

Article V
The causing of floods as well as any other interference with the hydrologic balance by means not mentioned in articles II to IV should be prohibited when it involves grave dangers to the civilian population or substantial damage to the ecological balance of the area concerned.

Article VI
1. The prohibitions contained in articles I to V above should be applied also in occupied enemy territories.
2. The occupying power should administer enemy property according to the indispensable requirements of the hydrologic balance.
3. In occupied territories, seizure, destruction or intentional damage to water installations should be prohibited when their integral maintenance and effectiveness would be vital to the health and survival of the civilian population.

Article VII
The effect of the outbreak of war on the validity of treaties or of parts thereof concerning the use of water resources should not be termination but only suspension. Such suspension should take place only when the purpose of the war or military necessity imperatively demand the suspension and when the minimum requirements of subsistence for the civil population are safeguarded.

Article VIII

1. It should be prohibited to deprive, by the provisions of a peace treaty or similar instrument, a people of its water resources to such an extent that a threat to the health or to the economic or physical conditions of survival is created.

2. When, as the result of the fixing of a new frontier, the hydraulic system in the territory of one State is dependent on works established in the territory of another State, arrangements should be made for the safeguarding of uninterrupted delivery of water supplies indispensable for the vital needs of the people.

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Protocol Additional to the Geneva Conventions, relating to the Protection of Victims of International Armed Conflicts (1977)

Article 35 – Basic Rules

1. In any armed conflict, the right of the Parties to the conflict to choose methods or means of warfare is not unlimited.

2. It is prohibited to employ weapons, projectiles and material and methods of warfare of a nature to cause superfluous injury or unnecessary suffering.

3. It is prohibited to employ methods or means of warfare which are intended, or may be expected, to cause widespread, long-term and severe damage to the natural environment.

Article 48 – Basic Rule

In order to ensure respect for and protection of the civilian population and civilian objects, the Parties to the conflict shall at all times distinguish between the civilian population and combatants and between civilian objects and military objectives and accordingly shall direct their operations only against military objectives.

Article 52 – General Protection of Civilian Objects

1. Civilian objects shall not be the object of attack or of reprisals. Civilian objects are all objects which are not military objectives as defined in paragraph 2.

2. Attacks shall be limited strictly to military objectives. In so far as objects are concerned, military objectives are limited to those objects which by their nature, location, purpose or use make an effective contribution to military action and whose total or partial destruction, capture or neutralization, in the circumstances ruling at the time, offers a definite military advantage.
3. In case of doubt whether an object which is normally dedicated to civilian purposes, such as a place of worship, a house or other dwelling or a school, is being used to make an effective contribution to military action, it shall be presumed not to be so used.

**Article 54 - Protection of objects indispensable to the survival of the civilian population**

1. Starvation of civilians as a method of warfare is prohibited.
2. It is prohibited to attack, destroy, remove or render useless objects indispensable to the survival of the civilian population, such as foodstuffs, agricultural areas for the production of foodstuffs, crops, livestock, drinking water installations and supplies and irrigation works, for the specific purpose of denying them for their sustenance value to the civilian population or to the adverse Party, whatever the motive, whether in order to starve out civilians, to cause them to move away, or for any other motive.
3. The prohibitions in paragraph 2 shall not apply to such of the objects covered by it as are used by an adverse Party:
   a. as sustenance solely for the members of its armed forces; or
   b. if not as sustenance, then in direct support of military action, provided, however, that in no event shall actions against these objects be taken which may be expected to leave the civilian population with such inadequate food or water as to cause its starvation or force its movement.
4. These objects shall not be made the object of reprisals.
5. In recognition of the vital requirements of any Party to the conflict in the defence of its national territory against invasion, derogation from the prohibitions contained in paragraph 2 may be made by a Party to the conflict within such territory under its own control where required by imperative military necessity.

**Article 55 - Protection of the natural environment**

1. Care shall be taken in warfare to protect the natural environment against widespread, long-term and severe damage. This protection includes a prohibition of the use of methods or means of warfare which are intended or may be expected to cause such damage to the natural environment and thereby to prejudice the health or survival of the population.
2. Attacks against the natural environment by way of reprisals are prohibited.

**Article 56 - Protection of works and installations containing dangerous forces**

1. Works or installations containing dangerous forces, namely dams, dykes and nuclear electrical generating stations, shall not be made the object of attack, even where these objects are military objectives, if such attack may cause the release of dangerous forces and consequent severe losses among the civilian population. Other military objectives located at or in the vicinity of these works or installations shall not be made the object of attack if such attack may cause the release of dangerous forces from the works or installations and consequent severe losses among the civilian population.
2. The special protection against attack provided by paragraph 1 shall cease:
a. for a dam or a dyke only if it is used for other than its normal function and in regular, significant and direct support of military operations and if such attack is the only feasible way to terminate such support;

b. for a nuclear electrical generating station only if it provides electric power in regular, significant and direct support of military operations and if such attack is the only feasible way to terminate such support;

c. for other military objectives located at or in the vicinity of these works or installations only if they are used in regular, significant and direct support of military operations and if such attack is the only feasible way to terminate such support.

3. In all cases, the civilian population and individual civilians shall remain entitled to all the protection accorded them by international law, including the protection of the precautionary measures provided for in Article 57. If the protection ceases and any of the works, installations or military objectives mentioned in paragraph 1 is attacked, all practical precautions shall be taken to avoid the release of the dangerous forces.

4. It is prohibited to make any of the works, installations or military objectives mentioned in paragraph 1 the object of reprisals.

5. The Parties to the conflict shall endeavour to avoid locating any military objectives in the vicinity of the works or installations mentioned in paragraph 1. Nevertheless, installations erected for the sole purpose of defending the protected works or installations from attack are permissible and shall not themselves be made the object of attack, provided that they are not used in hostilities except for defensive actions necessary to respond to attacks against the protected works or installations and that their armament is limited to weapons capable only of repelling hostile action against the protected works or installations.

6. The High Contracting Parties and the Parties to the conflict are urged to conclude further agreements among themselves to provide additional protection for objects containing dangerous forces.

7. In order to facilitate the identification of the objects protected by this article, the Parties to the conflict may mark them with a special sign consisting of a group of three bright orange circles placed on the same axis, as specified in Article 16 of Annex I to this Protocol [Article 17 of Amended Annex]. The absence of such marking in no way relieves any Party to the conflict of its obligations under this Article.

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Protocol Additional to the Geneva Conventions, relating to the Protection of Victims of Non-International Armed Conflicts (1977)

Article 14 - Protection of objects indispensable to the survival of the civilian population

Starvation of civilians as a method of combat is prohibited. It is therefore prohibited to attack, destroy, remove or render useless, for that purpose, objects indispensable to the survival of the civilian population, such as foodstuffs, agricultural areas for the production of foodstuffs, crops, livestock, drinking water installations and supplies and irrigation works.

Article 15 - Protection of works and installations containing dangerous forces
Works or installations containing dangerous forces, namely dams, dykes and nuclear electrical generating stations, shall not be made the object of attack, even where these objects are military objectives, if such attack may cause the release of dangerous forces and consequent severe losses among the civilian population.

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Article 17 - International special sign

1. The international special sign for works and installations containing dangerous forces, as provided for in Article 56, paragraph 7, of the Protocol, shall be a group of three bright orange circles of equal size, placed on the same axis, the distance between each circle being one radius, in accordance with Figure 5 illustrated below.

2. The sign shall be as large as appropriate under the circumstances. When displayed over an extended surface it may be repeated as often as appropriate under the circumstances. It shall, whenever possible, be displayed on flat surfaces or on flags so as to be visible from as many directions and from as far away as possible.

3. On a flag, the distance between the outer limits of the sign and the adjacent sides of the flag shall be one radius of a circle. The flag shall be rectangular and shall have a white ground.

4. At night or when visibility is reduced, the sign may be lighted or illuminated. It may also be made of materials rendering it recognizable by technical means of detection.

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

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

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Article 8 – War crimes

2. For the purpose of this Statute, ‘war crimes’ means:
(a) Grave breaches of the Geneva Conventions of 12 August 1949, namely, any of the following acts against persons or property protected under the provisions of the relevant Geneva Convention:
(iv) Extensive destruction and appropriation of property, not justified by military necessity and carried out unlawfully and wantonly;
(b) Other serious violations of the laws and customs applicable in international armed conflict, within the established framework of international law, namely, any of the following acts:
(ii) Intentionally directing attacks against civilian objects, that is, objects which are not military objectives;
(iv) Intentionally launching an attack in the knowledge that such attack will cause incidental loss of life or injury to civilians or damage to civilian objects or widespread, long-term and severe damage to the natural environment which would be clearly excessive in relation to the concrete and direct overall military advantage anticipated;
(xv) Intentionally using starvation of civilians as a method of warfare by depriving them of objects indispensable to their survival, including wilfully impeding relief supplies as provided for under the Geneva Conventions;
[...]
(e) Other serious violations of the laws and customs applicable in armed conflicts not of an international character, within the established framework of international law, namely, any of the following acts:
(xii) Destroying or seizing the property of an adversary unless such destruction or seizure be imperatively demanded by the necessities of the conflict.

General Comment No. 15 (Arts. 11 and 12 of the Covenant on Economic, Social and Cultural Rights) (2002)

22 The Committee notes during armed conflicts, emergency situations and natural disasters, the right to water embraces those obligations by which States parties are bound under international humanitarian law. This includes protection of objects indispensable for survival of the civilian population, including drinking water installations and supplies and irrigation works, protection of the natural environment against widespread, long-term and severe damage and ensuring that civilians, internees and prisoners have access to adequate water.

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Article 52 – Ecological targets

Combatants shall not, for military purposes or as reprisals, destroy or divert waters, or destroy water installations, when such acts would cause widespread, long-term, and severe ecological damage prejudicial to the health or survival of the population or if such acts would fundamentally impair the ecological integrity of waters.

Article 54 – Occupied territories
1. An occupying State shall administer water resources in an occupied territory in a way that ensures the sustainable use of the water resources and that minimizes environmental harm.

2. An occupying State shall protect water installations and ensure an adequate water supply to the population of an occupied territory.

Article 55 - Effect of War or Armed Conflict on Water Treaties

1. Treaties creating legal regimes for an international watercourse or part thereof are not terminated by war or armed conflict between the parties to the treaty.

2. Such Treaties or parts thereof shall be suspended only where military necessity requires suspension and where suspension does not violate any provision of this Chapter.