UtrechtLawReview

Ahmed Beshtawi, 'The Human Right to Water and the Realisation of Water Rights in the Occupied Palestinian Territory' (2020) 16(2) Utrecht Law Review pp. 137–149. DOI: https://doi.org/10.36633/ulr.564

ARTICLE

The Human Right to Water and the Realisation of Water Rights in the Occupied Palestinian Territory

Ahmed Beshtawi*

This article seeks to assess the role of the human right to water in realising water rights in the scenario of the Occupied Palestinian Territory (OPT). In particular, it seeks to answer the question of the extent to which the human right to water protects Palestinians' water rights in the OPT. In doing so, the article will start by analysing the human right to water and the related obligation it imposes on states in protecting water rights. In addition, the article will examine the applicability of the human right to water to the OPT and to what extent Israel is committed to realise it.

Keywords: human right to water; Occupied Palestinian Territory; Israel; water rights

1. Introduction

The human right to water 'entitles everyone to sufficient safe, acceptable, physically accessible and affordable water for personal and domestic uses.'[1] It is indispensable for having a life with human dignity and considered a prerequisite for the realisation of other human rights.[2] The human right to water is framed as to be implemented through the relationship between a state and its population, whereby the state is responsible for the realisation of certain obligations to the people whom in turn have the right to monitor the performance of the state and participate in decision making. The human right to water emphasises the role of the state or sovereign as responsible for the realisation of the obligations and thus who should have exclusive agency for water provision and control over water resources. However, in a situation of military occupation as exists in the OPT, where Israel acts as a *de facto* sovereign while the Palestinian Authority (PA) does not have control over water resources and merely enjoys administrative powers this begs the question: To what extent does the human right to water protect Palestinians' water rights in the OPT.[3] In answering that question, the article will start by examining the human right to water as an individual right and the related obligation it imposes on states in protecting water rights. Further, the article will examine the applicability of the human right to water to the OPT and to what extent Israel (acting as a *de facto* sovereign) is committed to realising it.

* Assistant professor of international law, Law faculty, An-Najah National Universirty, Nablus, Palestine, e-mail: A.beshtawi@najah.edu. The author wishes to thank An-najah National University for their funding of this paper through project: ANNU-MoHE-1819-So001.

[1] UN Committee on Economic Social and Cultural Rights (CESCR), 'General Comment No. 15: The Right to Water (Arts. 11 and 12 of the Covenant)' (E/C.12/2002/11, 2003). <http://www.refworld.org/docid/4538838d11.html>. Accessed on 28/1/2020.

[2] Ibid.

[3] Iain Scobbie, *'H2O after Oslo II: Legal aspects of water in the Occupied Territories'* in Anis F. Kassim (ed), *The Palestine Yearbook of International Law* (Al-Shaybani Society of International Law and Kluwer Law International, 1995) vol 8; Jullie Trottier, *Hydropolitics in the West Bank and Gaza Strip* (Palestinian Academic Society for the Study of International Affairs (PASSIA) 1999); Gamal Abouali, 'Natural resources under occupation: The status of Palestinian water under International law' (1998) 10(2) *Pace International law review*; Selby, Jan, 'Dressing up domination as 'cooperation': the case of Israeli-Palestinian water relations' (2003) 29(1) *Review of Interatnional Studies* 121; Zayneb al-Shalalfeh Fiona Napier, Eurig Scandrett, 'Water Nakba in Palestine: Sustainable Development Goal 6 versus Israeli hydro-hegemony' (2018) 23(1) *The International Journal of Justice and Sustainability*; Mia Tamarin, "The Human(ised) Right to Water and its limits: the case of Israel-Palestine" (2018) 6(4) *International Journal of Water Governance*, David B. Brooks, Julie Trottier, Giulia Giordano, *Transboundary water issues in Israel, Palestine, and the Jordan River Basin* (Springer Nature 2020).

2. The human right to water

Despite the fact that there is a plethora of explicit and implicit references to the human right to water in many international human rights legal instruments and state practice.[4] Nevertheless, it is not considered a stand-alone human right, but rather a right that is derivative from other rights or, at best, an international customary rule in *statu nascendi*.[5]

The general instruments of human rights, the Universal Declaration of Human Rights, the International Convention of Political and Civil Rights, the International Convention of Economic, Social, and Culture Rights, have not explicitly recognised the human right to water. However, they encompassed a clear acknowledgement of several human rights i.e. the right to housing, the right to food. Consequently, there is a debate between authors as to whether there is a stand-alone human right to water, whether it is just a complemented for other rights (such as the right to adequate standards of living or the right to life) or whether it is, at best, an international customary rule in *statu nascendi*.[6] The birth certificate of the human right to water was finally issued in 2010, when the United Nations General Assembly unanimously adopted the Declaration on the Human Right to Water and Sanitation.[7] This declaration is legally non-binding, however, it represents a landmark in the history of the human right to water as it strongly supports the existence of the right to water as part of international human rights law.[8]

2.1. Normative content and obligations correlative to the right to water

After exploring the legal basis of the right to water, it is necessary to examine the normative content and obligations ensuing from considering the right water as a human right. Given that the ICESCR is the most likely legal source of the human right to water, thus the normative content and obligation correlative to the human right to water can be found in the ICESCR, and General Comment 15. Despite its legal nature as a non-binding document, General Comment 15 serves as an authoritative interpretation of the ICESCR.[9] Further, General Comment 15 cannot create new rights or expand the existing rights, but it can only elucidate the existing rights in the ICESCR.[10]

A) Normative content of the right to water

General Comment 15 illustrates the entitlements of the human right to water as The human right to water entitles everyone to sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic uses. An adequate amount of water is necessary to prevent death from dehydration, to reduce the risk of water-related disease and to provide for consumption, cooking, personal and domestic hygienic requirements.[11]

The latter paragraph provides the key entitlements of the right to water; accessibility, sufficiency, affordability and safety. Moreover, it prioritises water uses giving the most pertinent priority for personal and domestic uses.

Paragraph 12 of General Comment 15 elucidates the entitlements provided in paragraph 2, the availability, quality and accessibility. In regard to availability, each person is entitled to sufficient and continuous

[4] Nóra Jakab; Gábor Melypataki, 'The right to water as a social fundamental right' (2019) 14(26) Journal of Agricultural and Enivromental Law 7.

[5] Takele Soboka Bulto, 'The emergence of the human right to water in international human rights Law: Invention or discovery?' (2011) 12(2) Melbourne Journal of International Law 290; Gonzalo Aguilar Cavallo, 'The Human Right to Water and Sanitation: From Political Commitments to Customary Rule?' (2012) 3(5) Pace International Law Review Online Companion 136; Inga T. Winkler, The human right to water: significance, legal status and implications for water allocation (Hart Publishing 2012).

[6] Gonzalo Aguilar Cavallo, 'the Human Right to Water and Sanitation: From Political Commitments to Customary Rule?' (2012) 3(5) Pace International Law Review Online Companion 136; Inga T. Winkler, The Human Right to Water: Significance, Legal Status and Implications for Water Allocation (Oxford; Portland, Or. Hart Publishing, 2012); Takele Soboka Bulto, 'The emergence of the Human right to Water in International Human Rights Law: Invention or Discovery?' (2011) 12(2) Melbourne Journal of International Law 290.

[7] General Assembly of the United Nations, 'The Human Right to Water and Sanitation' (Sixty-fourth session Agenda item 48, A/RES/64/292, United Nations 2010).

[8] Ibid.

[9] C. McCaffrey Stephen, Kate J. Neville, 'Small Capacity and Big Responsibilities: Financial and Legal Implications of a Human Right to Water for Developing Countries' (2009) 21(679) The Georgetown international Environmental law review 679; Maria J. Mimoso., Maria R. Anjos, Joana Teixeira, The right to water as a fundamental right. (2018) 8(2) World Journal of Environmental Research 045–052.

[10] Amy Hardberger, 'Life, Liberty, and the Pursuit of Water: Evaluating water as a human right and the duties and obligations it creates' (2005) 4(2) Northwestern University Journal of International Human Rights 331.

[11] General Comment 15, (n 1) [2].

supply of water for personal and domestic uses. Further, the paragraph explained that the quantity of water available for 'each person should correspond to World Health Organization (WHO) guidelines.'[12]

Regarding quality, Paragraph 12 states that the water provided for each person for his personal and domestic use should be safe and free from anything that would constitute a threat to a person health. In addition, the water provided should be of acceptable color, odor, and taste.[13]

Finally, accessibility indicates that 'water and water facilities should be accessible to everyone without discrimination.'[14] General Comment 15 disaggregates the accessibility into four overlapping dimensions:

- Physical accessibility: water, water facilities, and services should be within safe reach for all people and their security should not be threatened while they try to access water facilities or services.[15]
- Economic accessibility: 'water, water facilities and services should be affordable for all.'[16]
- Non-discrimination: No one should be deprived from accessing water, water facilities, and water services, especially, the most vulnerable or marginalised groups.
- Information accessibility: means that everyone should have access, receive, and distribute information related to water issues. This dimension is of high importance since it empowers people to participate in decision-making regarding water issues, and it guarantees public participation and monitoring the performance of the bodies that administrate the water sector.

B) Obligations correlative to the right to water

General Comment 15 enunciates the general and core obligations on state parties with regard to the right to water at national and international levels. The realisation of the human rights depends on the obligations, as these obligations clarify the duties that states must undertake, and the mechanism for measuring state compliance, which will result in the realisation of such rights.[17]

State parties to the ICESCR are obliged to progressively realise the rights enshrined in the ICESCR. However, according to General Comment 15 there are obligations of immediate effect in relation to the right to water and are not subject to progressive realisation,[18] specifically, the guarantee that the right to water 'will be exercised without discrimination of any kind.'[19] Additionally, the states partie are obliged to take steps toward the full realisation of Articles 11 and 12 of the ICESCR, these steps should be 'deliberated, concrete, and targeted towards the full realisation of the right to water.'[20] Further, General Comment 15 has prohibits any retrogressive measures in relation to the right to water. States who deliberately take any retrogressive measures have the burden of proving that these measures have been taken after 'the most careful consideration of all alternatives and that they are duly justified…'[21]

Similar to all human rights, the right to water imposes three types of obligations on states; the obligation to respect, the obligation to protect, and the obligation to fulfil.

Obligation to respect

General Comment 15 clarifies the obligation to respect as 'the obligation to respect requires states refrain from interfering directly or indirectly with the enjoyment of the right to water.'[22] Moreover, it stated that the obligation to respect includes several sub-obligations; that the state parties should refrain from participating in any action that would result in limiting or denying equal access to adequate water; state parties must not arbitrarily interfere with customary or traditional arrangements for water allocation; the illegal diminishing or polluting of water by state-owned facilities or by the usage or testing of weapons; finally,

[12] Ibid [12].

[13] Ibid.

[14] Ibid. Andrea K. Gerlak, Madeline Baer, Paula Lopes, 'Taking stock of the human right to water' (2018) 6(4) International Journal of Water Governance 108.

[15] Ibid.

[16] Ibid.

[17] Amanda Cahill Ripley, *The human right to water and its application in the occupied Palestinian territories* (Abingdon, Oxon, England; New York: Routledge 2011).

[18] Ramin Pejan, 'The Right to Water: The Road to Justiciability' (2004) 36(5) The George Washington International Law Review 1182.

[19] General Comment 15, (n 34) [17].

[20] Ibid.

[21] Ibid [19].

[22] Ibid [21].

not to limit access to water or destroy water services and infrastructure as a punitive measure, particularly during armed conflicts.[23]

Noteworthy is, the aforementioned article stresses the obligations for a right to water under international humanitarian law. Furthermore, it clarifies that in addition to the direct means of infringing on the right to water such as destruction of the water infrastructure and direct attacks upon water resources, indirect means of 'limiting access' through deliberate pollution or lack of physical access due to personal danger from hostilities are prohibited as well.[24]

Obligation to protect

Under this obligation, state parties are required to 'prevent third parties from interfering in any way with the enjoyment of the right to water.'[25] General Comment 15 elucidates that third party includes: individuals, groups, corporations and other entities as well as agents acting under their authority.[26] In order to ensure this obligation states are required to adopt effective legislations, and any other necessary measures, to prevent the third parties from 'denying equal access to adequate water; and polluting and inequitably extracting from water resources, including natural resources, wells and other water distribution systems.'[27]

Over and above, General Comment 15 emphasises that where third parties operate or control water services (piped water networks, water tankers, access to rivers and wells) state parties must prevent third parties from compromising equal, affordable, and physical access to sufficient, safe and acceptable water.[28] As to prevent third parties' infringements, General Comment 15 calls upon state parties to establish effective regulatory systems in conformity with the covenant (ICESCR) and General Comment 15, which include genuine public participation, independent monitoring, and the imposition of penalties for non-compliance.[29]

However, General Comment 15 provides some provisions in relation to private management of water; on the one hand: it means that the privatisation of water systems and supply does not violate human rights. On the other hand, 'since state parties retain obligations to protect the right to water even under privatisation arrangements, a human right perspective clarifies states responsibilities,'[30] and 'how privatisation might violate human rights and what steps should be taken to mitigate the negative effects of privatisation on human rights.'[31]

Obligation to fulfil

The obligation to fulfil can be divided into three obligations: obligation to facilitate, promote, and provide which can be interpreted as assistance, education and provision.[32,33] Consecutively, the obligation to facilitate imposes on states the obligation to take positive measures to help individuals and communities enjoy the right to water. Whereas the obligation to promote obliges states to raise community awareness toward protecting water resources, the hygienic use of water and mitigate water wastage. The obligation to provide means that states are required to provide the right to water for individuals or groups who are unable, for reasons beyond their control, to attain that right.[34]

However, Paragraph 26 explaines further measures that states should adopt in order to fulfil the right to water. Mainly, it calls upon states to adopt sufficient measures toward the full realisation of the right to water, recognise the right to water within national legislation and political systems, adopt a national water strategy and plan of action to ensure water is affordable to everyone, and facilitate sustainable access to water especially in rural and deprived areas.[35]

---

[23] Ibid para 21; Norbert Brunner et al, 'The human right to water in law and implementation' 4(3) 2015 laws 471.

[24] Ripley, (n 18).

[25] General Comment 15, (n 1) [23].

[26] Ibid [23].

[27] Ibid [23].

[28] Ibid [24].

[29] Ibid [24].

[30] Melina Williams, 'Privatization and the Human Right to Water: Challenges for the New Century' (2007) 28 Michigan Journal of International law 469.

[31] Ibid.

[32] General Comment 15, (n 1) [25].

[33] Ripley, (n 18).

[34] General Comment 15, (n 1) [25].

[35] Ibid [26].

3. The role of human right to water in realising Palestinians' water rights

In examining the role of the human right to water in the OPT, the following sections will discuss the applicability of the rules of human rights law to the OPT, and then will analyse the implementation of the general obligations of the human right to water In the OPT.

3.1. The applicability of international human rights law to the OPT

Despite being party to many international human rights instruments, including the ICCPR and the ICESCR,[36] Israel denies the applicability of the provisions of international human rights law to the OPT.[37] Israel's denial is based on two arguments. First, human rights treaties are not applicable during the times of war and occupation, the only body of law that is applicable in war times and occupation is international humanitarian law. Second, Israel is not the responsible party of the enjoyment of human rights in the OPT, but the Palestinian Authority (PA) is responsible as it is the party who is ruling the OPT.

In its state reports to the Committee on Economic, Social and Culture Rights (CESCR) and the Human Rights Committee (CCPR) in 2001, Israel expressed the previous position regarding the application of the ICESCR and ICCPR and other human rights treaties to the OPT stating that Israel has consistently maintained that the Covenant does not apply to areas that are not subject to its sovereign territory and jurisdiction. This position is based on the well-established distinction between human rights and humanitarian law under international law. Accordingly, in Israel's view, the Committee's mandate cannot relate to events in the West Bank and Gaza Strip, inasmuch as they are part and parcel of the context of armed conflict as distinct from a relationship of human rights … Furthermore, pursuant to the Israeli-Palestinian Interim Agreement of 1995, and the consequent documentation and undertakings of the Palestine Liberation Organization (PLO) …. In light of this changing reality, and the jurisdiction of the Palestinian Council in these areas, Israel cannot be internationally responsible for ensuring the rights under the ICESCR in these areas.[38]

Israel's arguments were widely criticised and rejected by the International Court of Justice, international bodies and legal scholars. The widely accepted opinion is that human rights law is applicable during the times of war and occupation, more specifically, Israel is responsible, as the occupying power, to respect human rights law in the OPT regardless the existence of the PA.[39] The ICJ on two occasions upheld the applicability of human rights law in times of war and occupation. In the Advisory Opinion on *The Legality of the Threat of Use of Nuclear Weapons*, the ICJ asserted that 'The protection of the International Covenant on Civil and Political Rights does not cease in times of war, except by operation of Article 4 of the Covenant whereby certain provisions may be derogated from in a time of national emergency.'[40] Additionally, many legal scholars and international bodies support the view that human rights law applies in times of war and occupation in addition to humanitarian law.[41]

Furthermore, in its Advisory Opinion on the *Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory*, the ICJ asserted that all human rights conventions are applicable during times of war, including those rights encompassed in the ICPCR and ICESCR. The court advised that 'More generally, the Court considers that the protection offered by the human rights conventions does not cease in case of armed conflict, save through the effect of provisions for derogation of the kind to be found in Article 4 of the International Covenant on Civil and Political rights.'[42] Moreover, the court further stressed that Israel is bound

[36] Israel signed the ICCPR in 1990 and ratified it in 1991, and signed the ICESCR in 1966 and ratified it in 1991.

[37] Eyal Benvenisti, 'The applicability of human rights conventions to Israel and to the Occupied Territories' (1992) 26(1) Israel law Review 24,27.

[38] Economic and Social Council, 'Implementation of the international covenant on Economic, Social and Cultural Rights. Additional information submitted by States parties to the Covenant following the consideration of their reports by the Committee on Economic, Social and Cultural Rights. Addendum, Israel' (United Nation E/1989/5/Add.14, 20 April 2001) P.2. paras 2–3. Also Israel sent the same position to the Human Rights Committee regarding the application of the ICCPR. See Human Rights Committee, 'Consideration of reports submitted by States parties under article 40 of the Covenant. Second Periodic Report. Addendum, Israel' (United Nations, CCPR/C/ISR/2001/2 4 December 2001) 5,8.

[39] Linda Bevis, 'The applicability of Human Rights law to occupied territories: The case of the Occupied Palestinian Territories' (Al-Haq 2003).

[40] *Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion, I. C. J. Reports 204, (1996) para.25.

[41] See generally: The General Assembly, 'Respect for Human Rights in Armed Conflicts, Resolution 2444 (XXII)' (The United Nations, 19 December 1968); International Conference on Human Rights. Tehran, 'Human rights in armed conflicts. Resolution XXIII' (12 May 1968); Jean-Marie Henckaerts, 'Study on customary international humanitarian law: A contribution to the understanding and respect for the rule of law in armed conflict' (2005) 87(857) International review of the Red Cross; Peter Rowe, *The impact of human rights law on armed forces* (Cambridge University Press, 2006); Jean-Marie Henckaerts; Louise Doswald-Beck, *Customary International Humanitarian Law* (Cambridge University Press 2005).

[42] *Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory*, Advisory Opinion, I. C. J. Reports 2004, [106].

by the provisions of ICESCR in the exercise of its power as occupying power. At the same time the court acknowledged the responsibility of the PA in the implementation of human rights where it has capacity to do so, while Israel has the responsiblility not to raise any obstacles that would compromise the PA's competence in implementing human rights. The court pointed out It would also observe that the territories occupied by Israel have for over 37 years been subject to its territorial jurisdiction as the occupying power. In the exercise of the powers available to it on this basis, Israel is bound by the provisions of the International Covenant on Economic, Social and Cultural Rights. Furthermore, it is under an obligation not to raise any obstacle to the exercise of such rights in those fields where competence has been transferred to Palestinian authorities.[43]

In the same line, the CCPR and the CESCR have both rejected Israel's position and asserted the applicability of human rights treaties to the OPT. In reply to Israel's position, the CCPR stated The Committee has noted the State party's position that the Covenant does not apply beyond its own territory, notably in the West Bank and in Gaza, especially as long as there is a situation of armed conflict in these areas …. The Committee therefore reiterates that, in the current circumstances, the provisions of the Covenant apply to the benefit of the population of the Occupied Territories, for all conduct by the State party's authorities or agents in those territories that affect the enjoyment of rights enshrined in the Covenant and fall within the ambit of State responsibility of Israel under the principles of public international law.[44]

Therefore, as the PA has some competence in some Areas of the West Bank (Area A) and thus it has obligations to respect human rights in regards to civil and political rights.[45] Israel is the occupying power which effectively has control over the OPT and its borders, and specifically water resources and water networks, which essentially affects the ability of the PA to fulfil the economic and social rights.[46] Additionally, Area C which represents more than 60% of the West Bank, where most of the water resources and water network exist as well as many Palestinian communities live, is under full Israeli control. Israel has, in Area C, the sole power over access to water, construction of new wells and cisterns, water networks as well as the responsibility to repair and upgrade the existing ones. Also, Israel continues to be responsible to respect and realise its conventional and customary human rights obligations as long as it effectively controls and exercises jurisdiction in the OPT.[47] As such, Israel has an obligation to respect, fulfil and protect the right to water as a component of the customary right of adequate standard of living in the OPT.

3.2. Israel's violations of the rules of international human rights law

One of Israel's first steps in controlling the water resources in the OPT started soon after the occupation of the OPT in 1967 when the Israeli military administration issued a series of military orders.[48] These orders enabled Israel to effectively institutionalise its control over water resources in the OPT, dictate the allocations of water and appropriate vast amounts of water and transfer it to Israel and the illegal settelments inside the OPT. The water regime Israel introduced in the OPT has fundamentally restricted the Palestinian access to water resources. These restrictions take several forms; by declaring areas that are rich with water as military zones, the complicated bureaucratic system of permits and the discriminatory allocation of water between Palestinian and Israelis (including Jewish-settelers in settelments in the OPT). Further, this water regime that Israel imposed on the OPT has been benefiting the Israeli population (in Israel and in the Israeli settelments in the OPT) at the expense of the water rights and needs of the Palestinian people.[49]

---

[43] Ibid [112].

[44] Human Rights Committee, 'Consideration of reports submitted by states parties under Article 40 of the Covenant. Concluding observations of the Human Rights Committee. Israel' (United Nations CCPR/CO/78/ISR 21 August 2003) 2–3, [11].

[45] By virtue of the Oslo accords the West Bank was divided into three jurisdictional areas; Area A constitutes 18% of the total area of the West Bank, and it includes parts of the major Palestinian cities in the West Bank which, according to the Interim Agreement, in Area A of the West Bank the Palestinian Authority assumes powers and responsibilities for internal security and public order as well as responsibilities for civil affairs such as health, education, municipal services and policing. Area B constitutes 22% of the West Bank, in this area the PA has full civil control and a joint security control with the Israelis, and many Palestinian town and villages are located in Area B. Area C constitutes 60% of the West Bank, those parts are under full Israeli civil and security control, and most of the Palestinian agriculture lands and water resources are concentrated in it.

[46] Program on humanitarian polciy and coflict resreach, 'From Legal Theory to Policy Tools: International Humanitarian Law and International Human Rights Law in the Occupied Palestinian Territoy' (Harvard University May 2007) 7.

[47] Bevis, (n 39) 93.

[48] For more information on Israeli's military orders pertaining to water see Gamal Abouali, 'Natural resources under occupation: The status of Palestinian water under International law' (1998) 10(2) Peace International law review.

[49] Nina Marie Nichols, 'Testing the limits of water as a human right: A comparison of First Nations in Canada and Palestinian Communities' (2020) <https://summit.sfu.ca/item/20401>. accessed 18 August 2020.

3.2.1. Violations of the obligations of the human right to water

The ICESCR provides for the progressive realisation of the full enjoyment of the human right to water due to the limits of available resources, however, there are core obligations which are of immediate effect and non-derogable. States are obliged to guarantee that the right to water will be exercised with no discrimination of any kind, and take deliberate and concrete steps towards the full realisation of the right.

Israel, as the occupying power of the OPT, is obliged to respect, protect and fulfil the right of the Palestinian people to water. The water policies and military orders Israel imposes on the OPT must be consistent with its obligations under the ICESCR in relation to the human right to water. Specifically, the core obligations of the human right to water should be respected and immediately realised, such as to ensure minimum access to water, to ensure the right of access to water on a non-discriminatory basis and to take measures to prevent, treat and control diseases linked to water (water quality).

The following sections will discuss these obligations and to what extent Israel is committed to the realisation of the obligations in the OPT and the level of protection these obligations offer to the Palestinians in the OPT.

A. Availability of water

Availability of water is one of the core obligations of the human right to water; General Comment 15 provides that state parties are obliged 'To ensure access to the minimum essential amount of water, that is sufficient and safe for personal and domestic uses to prevent disease.'[50] It also considered important components of the normative content of the right to water; the Comment determined that 'water supply for each person should be sufficient and continuous for personal and domestic uses,'[51] while the quantity available for each person should be in accordance with the World Health Organization (WHO) guideline, which is 100 liters per day per person.

Since 1967 Israel has had exclusive control over the Jordan River, denying the Palestinians from physically accessing the river and considers it a closed military area. In addition, Israel has diverted the flow of the Jordan River to Lake Tiberias which supplies 700 MCM/Y to Israel.[52] This has resulted in reducing the flow of the Jordan River to the West Bank, which was estimated in 1953 some 1.250 MCM, and rendered the River a contaminated stream unfit for human consumption.[53] Before the Israeli occupation in 1967, Palestinians had access and use of the Jordan River with 140 pumping units which were confiscated or destroyed by the Israeli army after the occupation, the irrigated lands on the banks of the River were closed as a military zone and later given to the Jewish-settelers.[54] The diversion of the Jordan River by Israel has had also a disastrous impact on environment; it has affected the level of the water of the Dead Sea which is dropping one meter per year.[55]

Furthermore, Palestinians have limited access to the Mountain aquifer, which represents the only available source of water for the Palestinians in the West Bank. According to a report by the World Bank; Palestinians have access to one–fifth of the resources of the Mountain Aquifer and abstract only about 20% of the estimated potential of the aquifer. Israel, on the other hand, abstracts 80% of the estimated potential of the aquifer and overdraws, without approval from the Joint Water Committee JWC,[56] by more than 50%, up to 1.8 times of its share under the Oslo Agreement to provide water for its citizens and the Jewish-settelers in the OPT.[57] The over-extraction by Israel of the waters of the Mountain Aquifer via deep wells has threatened the aquifer's sustainability; it has also affected the ability of shallow Palestinian wells to draw water from the aquifer.[58]

Figures show that the Palestinian extraction from the Mountain Aquifer has dramatically declined over years. In 1999, the Palestinian overall extraction was 138.2 MCM and in 2007 it dropped to 113.5 MCM.

[50] General Comment 15, (n 1) [37 A].

[51] General Comment 15, (n 1) [12 A].

[52] Amnesty-International, 'Troubled waters- Palestinian denied fair access to water' (Amnesty International2009) 9.

[53] Ibid.

[54] 'Water: The blue gold of the Middle East' (PASSIA, 2002) 2.

[55] Human-Rights-Watch, 'Separate and Unequal: Israel's discriminatory treatment of Palestinians in the Occupied Palestinian Territories' (2010) 17.

[56] The Joint Water Committee was created by virtue of Oslo Accords to monitor the implementation of Israel and Palestinian obligations in regards to water and waste water management in the West Bank.

[57] The World-Bank, 'West Bank and Gaza: Assessment of restrictions on Palestinian water sector development' (The International Bank for recounstruction and Development/The World Bank. 2009). V.

[58] Ibid V.

According to the Palestinian Water Authority, in 2008 the extraction reached only 84 MCM due to the drop of water table of the aquifer and operational problems of some wells as well as low annual rainfall.[59] However, as the Palestinian population has doubled since the signing of Oslo Agreements which set the water quota, this quota is not sufficient to provide the needed water for the Palestinians. Palestinians have to buy water from Israel to bridge the gap between the insufficient supplies and the needs, up to 2009 Palestinians purchased some 50 MCM of water from Israel – 'water that Israel extracts from the Mountain Aquifer and which the Palestinians should be able to extract for themselves if Israel were to allow them a more equitable share of the aquifer.'[60] Furthermore, the Palestinian per capita consumption of water for domestic use in the OPT is 70 liters.[61]

In Gaza Strip the Coastal Aquifer is the only available source of water for some 1.6 million Palestinians living there. Palestinian abstraction from the Coastal Aquifer, dating from 2007, is some 160 MCM/Y which is double the sustainable yield of the aquifer which is 50–60 MCM;[62] this has resulted in enormous deterioration of the quality and quantity level of water in the aquifer. As reported by the United Nations, 90 per cent of the Coastal Aquifer water beneath Gaza is unfit for human consumption. The average consumption of water in Gaza is 70–90 litres per person per day, which is below the recommended global standard of 100 litres per person per day set by the WHO.[63] The excessive abstraction from the Coastal Aquifer beneath Gaza is mainly due to the fact that the aquifer itself is not sufficient to satisfy the needs of the population in Gaza. This problem has compounded by the restrictions that Israel imposes on Gaza strip. Given that Israel is upstream from Gaza, Israel's extractions from the aquifer in the area east to Gaza affects the available water in the aquifer beneath Gaza.[64] The series of dams which Israel built stopped the flow of the Wadi Gaza water which used to partially recharge the aquifer.[65] Additionally, as the Special Rapporteur of Human rights in the OPT reported, the Israeli blockade on Gaza has exacerbated water scarcity, the delays and restrictions on the entry of the materials necessary to rebuild the damaged infrastructure have stalled a number of water and sanitation projects.[66] Meanwhile, Israel does not allow the transfer of water from the West Bank to Gaza.

B. Quality of water

Ensuring the quality of the water provided for domestic and personal uses constitutes an important dimension of the normative content of the right to water. General Comment 15 provides that 'The water required for each personal or domestic use must be safe, therefore free from micro-organisms, chemical substances and radiological hazards that constitute a threat to a person's health. Furthermore, water should be of an acceptable colour, odour and taste for each personal or domestic use.'[67] Of the core obligations of the human right to water is that state parties should provide sufficient and safe water for personal and domestic uses to prevent diseases. Further, states are obliged to take measures to prevent, control and treat water-borne diseases and ensure access to adequate sanitation. The WHO has set guidelines for drinking water quality which include standards for the quality of water that are suitable for consumption. The guidelines represent the recommendation of the WHO for managing the risks that might compromise the safety of drinking-water.[68] Water available for domestic consumption should meet these standards in order to avoid any water-borne diseases and health hazards.

The status of water quality in the OPT, in particular in Gaza, is critical. Water for domestic use is characterised by poor quality often unfit for human consumption, the poor quality of water significantly compromises the standard of living of people and exposes them to severe health threats. The main reasons for the crisis in water quality are the deterioration of the Coastal Aquifer of Gaza, and the lack of wastewater

[59] Ibid 12.

[60] Amnesty-International, (n 52) 10.

[61] Ibid 3.

[62] United Nations Country Team in the Occupied Palestinian Territory UNCT, 'Gaza in 2020: A liveable pleace?' (United Nations 2012) 11.

[63] Ibid 11.

[64] Amnesty-International, (n 52) 11.

[65] Center for Economic and Social Rights (CESR), 'Thirsting for justice: Israeli violation of the Human Right to Water in the Occupied Palestinian Territories' (Center for Economic and Social Rights 2003) 11.

[66] 'Report of the Speical Rapportuer on the situation of human rights in the Palestinian territories occupied since 1967' (General Assembly – United Nations (A/68/376) 2013) 21.

[67] General Comment 15, (n 1) [12 B].

[68] World Health Organization, 'Guidelines for drinking-water quality' (WHO 2011); United Nations Coordination Office in the Occupied Palestinian Territory, Gaza Strip: Snapshot June 2020. <https://www.ochaopt.org/sites/default/files/gaza_key_trends_and_indicators_june_2020_0.pdf> accessed on 15 July 2020.

treatment facilities. These reasons are compounded by the restrictions imposed by Israel on the water quantities available in the OPT, and the over extraction of groundwater of the Coastal Aquifer.[69]

The quality of water in Gaza strip is at very high risk, it falls far short of General Comment 15 quality standards; free from chemical substances, micro-organisms and radiological hazards that impose threats on human health. Currently it is estimated that 95–97% of the water in Gaza is unfit for human use.[70] The Coastal Aquifer, which is Gaza's almost sole source of water, has been under significant pressure due to over-extraction and high contamination from the infiltration of seawater, sewage, and irrigation water.[71] The extraction of the aquifer is estimated at 160 MCM/Y, to meet the domestic demands, which is exceeding the recharge capacity of the aquifer. This has resulted in a dramatic drop of the water level in the aquifer which in turn allows the infiltration of the Mediterranean Sea water into the aquifer causing high levels of salinity.[72] Further, contamination from sewage seepage, the lack of monitoring over the excessive use of the fertilisers in agriculture has led to a significant increase of nitrate in Gaza's water. At present, it is estimated that 90–95% of the Coastal Aquifer's water does not meet the standards of the WHO for drinking water.[73]

Data shows that several parameters are well over the limits recommended by the WHO. For instance, the maximum limit of chloride levels in drinking-water as recommended by the WHO is of 250 mg/I, the average levels of chloride in Gaza wells vary from 50 mg/I to 11476 mg/I. Likewise, while the WHO recommended maximum levels of nitrate of 50 mg/l in drinking-water, it was observed that the level of nitrate in Gaza wells ranges from 8 mg/I to 528 mg/l.[74] Gaza's water quality problems are worsened by the Israeli military campaigns and incursions as well as the Israeli blockade imposed on Gaza. The Israeli military campaigns against Gaza have inflicted devastating damage to the water sector, some thousands of wells, desalination facilities, water networks and wastewater treatment facilities were totally or partly destructed. This destruction has inflicted massive damage to Gaza's main sewage treatment plant which in turn imposes threats of spread of diseases due to poor sanitation in addition to environmental hazards.[75] Respectively, as indicated by a recent report by the United Nations 'The entire sewerage and sewage system are on the verge of collapse, posing a severe threat to Gaza's groundwater resources.'[76]

Furthermore, the on-going blockade on Gaza since 2007 has significantly contributed to the deterioration of water quality. The Israeli restrictions imposed on the import of basic materials and equipment to Gaza have prevented or delayed the repair, upgrade and construction of water infrastructure to address the population growth needs and the deficits caused by recurrent military attacks.[77] This has adversely affected the quality of water and sanitation services in Gaza, which also in turn, forced people to increasingly rely on private suppliers to meet their needs for water. The quality of water provided through private suppliers is not monitored and often considered of low quality.

In the West Bank, the status of water quality and environmental contamination are alarming. Water related diseases constitute a substantial problem for Palestinians causing massive costs and losses, with a high number of water-borne diseases cases reported. Biological contamination and high rates of Biochemical Oxygen Demand pollution were reported in the alternative sources (i.e. springs, rainwater and water tankers) on which many communities, unconnected to water networks, rely.[78] Some 44% of Palestinian children living in communities of Area C suffer from diarrhea, the biggest killer of children under five years old in the world, which is associated with poor water quality and hygiene.[79]

---

[69] Claude de ville de Goyet; Ambrogio Manenti; Kenneth Carswell; Mark van Ommeren, 'Report of a field assessment of health conditions in the Occupied Palestinian Territory (oPt) 22 March to 1 April 2015' (World Health Organization 2015).

[70] Ibid [13].

[71] United Nations Environment Programme, 'Environmental Assessment of the Gaza Strip following the escalation of hostilities in December 2008-January 2009' (United Nations Environment Programme 2009) 56.

[72] UNCT, (n 62) [13].

[73] Palestinian enviromental NGOs network – FoE Palestine, '2014 War on Gaza Strip: Participatory environmental impact assessment' (MA'AN development Center 2015) 44.

[74] Norwgian Institute of Public Health; Palestinian Institute of Public Health; The World Health Organization, 'A systematic literature review and recommendations on water usage in the Gaza Strip' (2014) 9.

[75] Economic and Soical Council – General Assembly, 'Economic and social repercussions of the Israeli occupation on the living conditions of the Palestinian people in the Occupied Palestinian Territory, including East Jerusalem, and the Arab population in the occupied Syrian Golan' (United Nations A/70/82 E/2015/13, 2015) [71].

[76] Ibid [73].

[77] United Nations Office for the Coordination of Humanitarian Affairs Occupied Palestinian Territory OCHAOPT, 'The Gaza Strip: The humanitarian impact of the blockade' (United Nations 2015).

[78] World-Bank, (n 57) 23.

[79] Emergency water sanitation and hygiene in the occupied Palestinian territory EWASH, 'Down the drain Israeli restriction on the WASH sector in the occupied Palestinian territory and their impact on vulnerable communities' (2012).

Another major contributor to the deterioration of water quality in the West Bank is the inadequate wastewater treatment system. Since 1995 the Palestinian Authority has submitted 30 projects proposals for constructing waste water treatment plants in the OPT to the JWC, only four proposals were approved.[80] However, the implementation of the approved projects have been constantly delayed and obstructed. Currently, only one waste water treatment plant is functioning in the West Bank serving less than a third of the Palestinian households which are actually connected to the sewage network. Moreover, less than five per cent of the generated wastewater is treated in the wastewater treatment plant, while 20 per cent is treated in Israel.[81] In the communities that are not connected to the sewage network, sewage often flows in open areas exposing people and environment to significant hazards. Moreover, the illegal Israeli settlements constitute a major source of pollution in the West Bank.[82] These settlements are the largest per capita producer of wastewater in the West Bank, which is often discharged untreated directly into the surrounding areas causing significant contamination to land and water sources.[83]

C. Accessibility to water

In terms of accessibility to water, General Comment 15 set forth several core obligations which underscore the importance of securing the accessibility to water for everyone. States are obliged 'To ensure the right of access to water and water facilities and services on a non-discriminatory basis, especially for disadvantaged or marginalized groups.'[84] Also, it is incumbent on state parties to ensure the physical accessibility for people to water facilities or services of sufficient quality and appropriate quantity, which located at a reasonable distance from the households,[85] state parties are obliged to ensure the personal security of people when they have to access water.[86]

In the West Bank, there is a stark disparity between the quantities of water provided for Israelis and Palestinians. The discrimination in water allocation is further manifested when comparing the available quantities of water that is provided to the Jewish-settelers who are living in the illegal settlements in the OPT and those quantities provided for the Palestinian people in the West Bank. The main actor responsible for most of the water distribution in Israel (including settlements in the OPT) and the OPT is the Israeli national company Mekorot.

Founded in 1937, Mekorot was established as a joint venture between the Jewish Agency, the Jewish National Fund and the *Histadrut* (The General Federation of Workers in Eretz Israel) for the purpose of providing water for the Israeli settlements.[87] Mekorot is a wholly owned government company working under the supervision of the Israeli Ministry of Energy and Water and the Ministry of Finance.[88] The company is responsible for construction, maintenance and management of water systems and desalination facilities; it supplies approximately 80% of Israel's drinking water.[89] After the 1967 Israeli occupation, water resources in the OPT were managed by the Israeli military administration and in 1982 were placed under the control of Mekorot which integrated the water system of the OPT into Israel's metropolitan water network.[90]

Currently, Mekorot is responsible for the management of most of the water supplies in both Israel and the OPT.[91] It operates some 42 wells in the OPT which, mostly, provide water to the illegal Israeli settelments.[92] It was estimated that the quantities provided by Mekorot to the Jewish-settelments in the OPT is some 75 MCM, about 44 MCM of that quantity is being withdrawn from the wells of the West Bank.[93] Mekorot was responsible for building the national water Carrier in the 1950s, a project which dramatically changed the

[80] United Nations Office for the Coordination of Humanitarian Affairs Occupied Palestinian Territory OCHAOPT, 'Fragmented lives: Humanitarian overview' (United Nations 2014) 92.

[81] Ibid.

[82] EWASH, (n 79) 8.

[83] OCHAOPT, (n 80).

[84] General Comment 15, (n 1) [37 B].

[85] Ibid [37 C].

[86] General Comment, (n 1) [37 D].

[87] Uri Davis; Antonia E. L. Maks; John Richardson, 'Israel's water policies' (1980) 9(2) Journal of Palestine Studies 13–14.

[88] Israel National Water Company Mekorot. <http://www.mekorot.co.il/Eng/newsite/AboutUs/Pages/GeneralInformation.aspx> accessed on 3 October 2019.

[89] Ibid.

[90] Iain Scobbie, *Natural resources and Belligerent occupation: Mutation through permanent sovereignty* Human rights, self-determination on political change in the Occupied Palestinian Territories (M. Nijhoff Publishers 1997) 16, 265.

[91] Amnesty-International, (n 52) 19.

[92] Ibid 12.

[93] World-Bank, (n 57) IV.

quantity of water in the Jordan River by diverting it before reaching the OPT to be used in Israel proper and in the Israeli settelments in the OPT. This has resulted in depriving the Palestinian population their share of the River and in disastrous environmental consequences in the OPT.

The Israeli policies and practises with regard to water resources control and water allocation have resulted in a stark inequality with regards to water allocation and distribution between Palestinians and Israelis. The total available amount of water for some 2.5 million Palestinians in the West Bank is 105.9 MCM for all different needs: domestic, agricultural and industrial, whereas the available amount of water for some 7.1 million Israelis for the same needs is about 2135.6 MCM.[94] Furthermore, while the Israeli consumption of water for domestic use is 300 litres per capita per day (LPCD), Palestinian consumption of water for domestic use in the OPT is only 70 LPCD.[95]

The comparison becomes more critical when comparing the amount of water available for Jewish-settelers and Palestinians, the Jewish-settelers residing in the illegal settelments in the West Bank consume an average of 369 LPCD for domestic use.[96] Hence, the consumption of water for Israelis living in Israel proper is four times more than what Palestinians consume in the OPT. The consumption of some 500,000 Jewish-settelers residing in settelments in the West Bank is four to five times higher than the consumption of some 2.5 million Palestinian inhabitants of the West Bank.[97] Agricultural Jewish-settelments are concentrated in the Jordan Valley area of the West Bank, it was reported that some 9,000 settlers in these settelments 'use one-quarter the total amount of water consumed by the entire Palestinian population of the West Bank, some 2.5 million people.'[98]

According to a report by the United Nations, some 300,000 Palestinians living in rural communities of the West Bank are at risk of water scarcity.[99] Some 14,000 Palestinians living in 100 communities in Area C of the West Bank (under sole Israeli control, and Mekorot water distribution responsibility) are not connected to a water network and are without any water infrastructure, their access to water is less than 30 LPCD and considered at high sacristy risk.[100] In order to secure their water needs, these communities depend on water delivered by private tankers which cost up to five times more than the piped water and has highly questionable quality which is not monitored by any official body.[101] Building water collection structures in such areas requires special permits from the Israeli occupation authorities, which are almost impossible to acquire, and without these permits water structures will be destroyed. In 2011 more than 70 water structures in these rural communities were destroyed for not having building permits.[102] According to the Israeli human rights NGO B'Tselem, the main reason of the lack of water infrastructure in these communities is Israel's policy, since the beginning of the occupation, of not investing in public infrastructure in the OPT.[103]

With striking contrast, all Jewish-settelments in the OPT, including many outposts which are not authorised by the Israeli government, are connected to the water network and served by Mekorot from wells that located in the OPT.[104] These settelments use significant amounts of water for agricultural goods for the purpose of exporting and selling abroad, enjoying subsidises from the Israeli government to offset the prices of water and other utilities.[105]

The discrimination in accessing water between Jewish-settelers and Palestinians is even more blatant in the so called 'rotation plans' that Mekorot implements in the OPT. The rotation plans are implemented

[94] Jad Isaac; Jane Hilal, 'Palestinian landscape and the Israeli-Palestinian conflict' (2011) 68(4) International Journal of environmental studies 413, 422.

[95] Amnesty-International, (n 52).

[96] Hilal, (n 94) 423.

[97] Emergency Water Sanitation and Hygiene group (EWASH) and Al-Haq, 'Israel's violations of the International Covenant on Economic, Social and Cultural Rights with regard to the human rights to water and sanitation in the Occupied Palestinian Territory' (A Joint Parallel Report submitted to the Committee on Economic, Social and Cultural Rights on the occasion of the consideration of the Third Periodic Report of Israel 2011). Paragraph 27. <http://www2.ohchr.org/english/bodies/cescr/docs/ngos/EWASH-Al-Haq_Israel_CESCR47.pdf>. accessed on 8 November 2019.

[98] Human-Rights-Watch, (n 55) 18.

[99] United Nations office for the coordination of humanitarian affairs Occupied Palestinian Territory OCHAOPT, 'How dispossession happens The humanitarian impact of the takeover of Palestinian water springs by Israeli settlers' (United Nations 2012) 14.

[100] Ibid 14.

[101] Human-Rights-Watch, (n 55).

[102] OCHAOPT, (n 99).

[103] The Israeli information center for human rights in the occupied territories B'Tselem, 'Thirsty for a solution The water crisis in the Occupied Territories and its resolution in the final-status agreement' (2000) 42.

[104] OCHAOPT, (n 99) 14.

[105] Human-Rights-Watch, (n 55) 17.

particularly during summer when demand for water increases, where residents in particular areas in a city receive water only for limited hours, then water flow shuts off and is directed to serve other areas. While demand for water increases from both Palestinians and Jewish-settelers in the OPT, Mekorot response with discriminatory measures. Mekorot increases the water supply to Jewish-settelments to meet their higher demands but does not take the same measures for Palestinian communities and cities.[106] In practise, the water supply for Palestinian cities and villages have been reduced when consumption increases by turning off the main valves which provide Palestinians with water. Where the same pipes serve both Palestinians and Jewish-settelers, Mekorot installed devices within the pipes that decreases the diameter of the pipes to control the flow.[107] According to a senior Israeli official who worked in the Water Commissioner Office, Mekorot does not have a policy to desiccate the Palestinian population. However, Mekorot's obligation is, first of all, to the Jewish settlement and Israeli citizens. The water shortage among Palestinians led [Yitzhak] Rabin at the time to direct us to separate the water-supply network of the settlements from those of the Palestinians.[108] Unfortunately, it was hardly done.[109]

The disparity in the consumption of and access to water between Palestinian and Israeli Jewish-settelers indicates that water is available, however, due to the Israeli political will Palestinians are deprived from accessing water. Moreover, the creation of special water infrastructures to serve the Jewish-settelments and the unequal provision of water to Palestinians cities and Israeli settelmenets, which are illegal under international law, by Mekorot represents a discriminatory policy. These polices constitute serious violations of the rules of international humanitarian law and cannot be justified as military necessity.[110]

In sum, the core obligations of the human right to water are not met by Israel. The available water for the Palestinian people is not sufficient as required by General Comment 15 that meets the minimum recommendation of the WHO and quality of the water. The quality of water available in the OPT is far below the recommendation of the WHO, particularly in Gaza. In terms of accessing, there is severe discrimination between Palestinians and Israeli on one hand and between Palestinians and settlers on the other hand.

4. Conclusion

Although it is imperative for the realisation of most basic human rights, the existence of a human right to water has been the most controversial among all socio-economic rights catalogue. As shown earlier, there is no explicit reference to the human right to water in the human rights bill and thus not considered a stand alone human right. However, the human right to water is considered to be derivative from other rights, i.e the right to standard of living, or a customary rule in *statu nascendi*. The core obligations of the human right to water can be found in General Comment 15 which serves as an authoritative interpretation of the ICESCR. The human right to water imposes certain obligations on states that should be respected and immediately realised.

In essence, the human right to water obligates states to ensure minimum access to essential amounts of water for personal and domestic use, of acceptable quality, and in a non-discriminatory manner. Israel is the occupaying power which has effective control over the OPT and acts as a *de facto* sovereign and thus is obligated to respect, fulfill and protect the human right to water of the Palestinian people in the OPT. However, as shown in the discussion, the core obligations of the human right to water are not met by Israel. In particular, the available water for the Palestinian people are not sufficient as required by General Comment 15 and the quality of water available in the OPT is below the recommendation of the WHO. Furthermore, there is severe discrimination in terms of accessing water between Palestinians and Israelis and in particular between Palestinians and Jewish-settlers who live in the illegal settlements in the OPT.

Competing Interests

The author has no competing interests to declare.

[106] B'Tselem, (n 103) 43.

[107] Ibid 44.

[108] Then Israel Prime Minister.

[109] B'Tselem, (n 103) 44.

[110] Human-Rights-Watch, (n 55) 19.

How to cite this article: Ahmed Beshtawi, 'The Human Right to Water and the Realisation of Water Rights in the Occupied Palestinian Territory' (2020) 16(2) Utrecht Law Review pp. 137–149. DOI: https://doi.org/10.36633/ulr.564

Published: 30 October 2020

Copyright: © 2020 The Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC-BY 4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited. See http://creativecommons.org/licenses/by/4.0/.

Utrecht Law Review is a peer-reviewed open access journal published by Utrecht University School of Law.

OPEN ACCESS