

# THE ROLE OF THE UNITED NATIONS IN ESTABLISHING THE RIGHT TO SAFE DRINKING WATER AS A HUMAN RIGHT

## Dr. Athmani Meriem<sup>1</sup>, Dr. Meriem Bouchirbi<sup>2</sup>, Pr. Samira Nasri<sup>3</sup>

<sup>1</sup>Abbas Laghrour University of Khenchela (Algeria).

<sup>2</sup>Abbas Laghrour University of Khenchela (Algeria).

<sup>3</sup>Mohamed Khider University of Biskra (Algeria).

athmani.meriem@univ-khenchela.dz<sup>1</sup> meriembouchirbi09@univ-khenchela.dz<sup>2</sup> samira.nasri@univ-biskra.dz<sup>3</sup>

Corresponding author email: athmani.meriem@univ-khenchela.dz<sup>1</sup>

#### Abstract:

In light of the widening gap between the United Nations' advocacy for the right to safe drinking water through its various bodies and the challenges faced by individuals in accessing safe water, this research explores the United Nations' role in establishing this right as one of the human rights.

Keywords: United Nations, regional waters, UN resolutions, human rights, security.

#### **Introduction:**

Despite their differences in culture, belief and geography, the right to safe drinking water is one of the things that unites people. Today, billions of people still lack access to safe drinking water. They struggle to survive and grow in their households, schools, workplaces, farms and factories, often facing discrimination in their pursuit of the safe water they need. Although this is a basic human right, its violation has been exacerbated by rising pollution levels, making it a priority for the international community's efforts to establish environmental protection measures and achieve sustainable development. Water is one of the natural resources included in Goal 6 of the 2015 Sustainable Development Agenda, which aims to ensure the availability of, and sustainable management of, water for all by 2030. Moreover, providing safe water has a positive impact on the environment and plays a crucial role in eliminating epidemics that affect people, particularly in developing countries. This point was emphasised by former UN Secretary-General Kofi Annan, who stated: 'We will not defeat AIDS, tuberculosis, malaria or any of the infectious diseases that plague the developing world until we win the battle for safe drinking water, sanitation and basic healthcare.' However, given the widening gap between the United Nations' advocacy for the right to safe drinking water through its various bodies, and the challenges individuals face in accessing safe water, this research explores the United Nations' role in establishing this right as a human right. The core question of the study is therefore: What efforts has the United Nations undertaken to establish the right to safe drinking water?

This emphasises the importance of the study by highlighting the need to strike a balance between the difficulties individuals face in accessing safe drinking water and the international texts established by the United Nations. It serves as a strategy to mitigate these challenges, which have become a reality and a widespread concern. This is particularly relevant given the international community's growing environmental concerns and commitment to sustainable development.

The study's objectives include understanding the right to safe drinking water, how to establish it, and the role of United Nations agreements and declarations in achieving this goal. In order to address the problem posed and achieve the outlined objectives, we employed a descriptive methodology to



provide an accurate and impartial description of the right to safe drinking water, its importance, and the obstacles that prevent its realisation. Additionally, we used an analytical approach to examine the texts within the relevant agreements, declarations and international covenants. This analysis aims to identify the discrepancy between the recognition of this right in existing international texts and its actual implementation.

The study is divided into two main sections. The first section discusses the right to safe drinking water as a human right, while the second section focuses on the United Nations' efforts to establish this right.

## Section One: The Right to Safe Drinking Water as a Human Right

The principle of protecting the right to safe drinking water globally stems from the essence of human dignity. Achieving sustainable development goals hinges on prioritising the right to safe drinking water. The Millennium Development Goals relating to hunger, poverty and a sustainable environment cannot be realised without establishing this right. This remains challenging for many individuals, whether due to water being difficult to access because of inadequate infrastructure, or due to water scarcity.

## **Subsection One: The Concept of Safe Drinking Water**

If water is the essence of life and safe drinking water and sanitation services are essential for maintaining life and health, then they are fundamental to preserving everyone's dignity. But what does the term 'safe drinking water' mean?

# **Branch One: Definition of Safe Drinking Water**

According to the Dictionary of Meanings, water is defined as a liquid essential for life on Earth. It is transparent, colourless, odourless and tasteless, and it boils at 100 degrees Celsius and freezes at zero degrees. It consists of the union of two hydrogen atoms with one oxygen atom (Mushannaf, 2019).

Water is considered a fundamental natural resource and a necessary substance upon which the majority of human economic activities depend. However, it is also a scarce resource, characterised by irregular availability over time and space, and greatly affected by the negative repercussions of human activities. Water is one of the planet's renewable natural resources and a fundamental element. Its uniqueness as a chemical compound lies in its stability: the amount of water on Earth has remained the same since its creation. It exists on land, in seas and oceans, and in its solid state as ice in the polar regions. A water molecule is formed by the bonding of one oxygen atom and two hydrogen atoms (Mushannaf, 2019).

Although water is not explicitly recognised as a human right in international treaties, international human rights law imposes specific obligations regarding access to safe drinking water. These obligations require states to ensure that every individual has access to an adequate amount of safe drinking water for personal and domestic use, including for drinking, personal hygiene, laundry, food preparation and maintaining sanitary conditions (United Nations Human Rights, World Health Organization). Therefore, the right to safe drinking water encompasses the right to utilise water and the right to a healthy and sustainable ecosystem (Mabrouk & Dergal, 2015).

A significant recent milestone was the United Nations General Assembly's recognition of the human right to sufficient water for personal and domestic use (50–100 litres per person per day), ensuring this water is safe and affordable at a cost no greater than 3% of total household income. Water must also be accessible in terms of both location (no more than 1,000 metres from home) and time (no more than 30 minutes to obtain)

(source: https://www.un.org/ar/sections/issues-depth/water/index.html).

#### Branch Two: The Basis of the Right to Safe Drinking Water

Despite the importance of an economic approach, achieving water sustainability requires a rights-based approach. Water sustainability emphasises the human right to clean water and high-quality services, recognising water as a universal right that can drive change. This approach focuses on the



concept of water justice, which aims to ensure that marginalised individuals have access to safe drinking water regardless of their economic circumstances.

The concept of justice is defined by a range of terms with various meanings, such as fairness, legitimacy and equality. These meanings can vary based on environmental and intellectual contexts. In international law, justice refers to two types: distributive and procedural. The latter aims to make decisions through fair and equitable processes, while the former seeks to ensure fair distribution among people (Mabrouk & Dergal, 2015).

Access to safe drinking water is a fundamental prerequisite for enjoying many human rights, including those to education, housing, health, life, work and protection from cruel or inhumane treatment or punishment. It is also crucial for achieving gender equality and eliminating discrimination, particularly given the severe implications for the right to health that the lack of access to safe drinking water can have. According to the United Nations Development Programme, around 8.1 million children die each year from diseases caused by unsafe water — far more than the number of casualties resulting from violent conflicts.

Collecting water from distant sources can have serious health consequences, particularly for women and children, who are at risk of contracting waterborne diseases such as schistosomiasis. This illustrates the interconnection between the right to safe drinking water and the extent to which other human rights are guaranteed (United Nations Human Rights, World Health Organization).

Subsection Two: The Right to Safe Drinking Water. Importance and Challenges of Realisation International organisations classify water as the third most important resource in the world, after oil and electricity, due to its necessity for societies, particularly safe water. This has a significant impact on various issues that have become a concern for the international community to eliminate. The aim is to establish the rights of certain groups. However, ensuring the right to safe drinking water faces several challenges that hinder its practical realisation.

## Branch One: The Importance of the Right to Safe Drinking Water

We can only appreciate the value of something once it is lost. Similarly, an individual cannot fully grasp the importance of safe water when it is readily available. Therefore, the importance of having access to safe drinking water becomes apparent when it is unavailable, resulting in negative consequences. This is reflected in the role of safe water in influencing the following variables: Eradicating extreme poverty and hunger: securing livelihoods for families depends on the health of their members. Sick adults or those caring for ill children are less productive. The health costs associated with diseases caused by unsafe drinking water and inadequate sanitation facilities substantially impact the incomes of the poor. Healthy individuals absorb nutrients from food more effectively than those suffering from water-related illnesses, particularly parasitic infections that consume the calories entering their bodies. The time spent collecting water from distant sources, combined with poor health, contributes to a cycle of poverty and decreased food security.

\* Promoting gender equality and empowering women: Reducing the time spent on health-related tasks and caregiving due to improved water services gives women more time for productive activities, adult education and leisure.

Reducing child mortality rates: improving drinking water sources leads to lower rates of disease and mortality among children. Globally, contaminated water still accounts for around 7% of all deaths and illnesses, including among children. It is estimated that 3–4 million people die from waterborne diseases each year (Commission on Sustainable Development, Economic and Social Council of the United Nations, 2004).

Every year, one billion people have no choice but to rely on potentially harmful water sources. This leads to a silent, ongoing humanitarian crisis that claims the lives of 3,900 children every day and undermines progress towards achieving the Millennium Development Goals. Failure to address this issue collectively diminishes the prospects of billions of people who find themselves trapped in a cycle of poverty and illness (World Health Organization, 2005).



Improving maternal health: The availability of water sources reduces the burden of childbirth and health problems related to fetching water, thereby decreasing the risk of maternal mortality. Safe drinking water and basic sanitation must be available in healthcare facilities to ensure adherence to essential health practices after childbirth.

## **Ensuring environmental sustainability**

Sustainability is a fundamental principle of human rights and is necessary for realising the human right to water. Services should be available to both present and future generations, without compromising the latter's ability to exercise their rights (Albuquerque). The proper treatment and disposal of wastewater helps to preserve ecosystems and reduce pressure on scarce freshwater resources. Careful use of water resources prevents groundwater contamination and minimises the cost of water treatment (World Health Organization, 2005).

Reducing natural disasters: The last decade of the twentieth century saw natural disasters affecting nearly two billion people, or one-third of humanity. Floods and droughts caused 86% of these disasters, with floods ranking second only to storms as a cause of natural calamities. Floods impact more areas and people than any other phenomenon. Drowning, which is closely associated with floods, significantly increases the burden of disease, leading to an escalating health risk due to inadequate drinking water and sanitation networks. Water supplies can become contaminated by industrial waste and landfill sites. Droughts lead to the highest rates of morbidity and mortality as they cause malnutrition and famine, exacerbating these issues and depriving people of an adequate water supply (World Health Organization, 2005).

## Branch Two: Challenges in Realising the Right to Safe Drinking Water

The realisation of the right to safe drinking water faces several natural, environmental, economic, financial and human challenges. These are as follows:

Natural challenges: The natural scarcity of water and its limited availability are the main obstacles in many countries due to climatic conditions, including rising temperatures, high evaporation rates, significant variations in annual rainfall and recurring droughts, which have harmful effects. These can lead to desertification, reduced precipitation, water scarcity, environmental degradation, decreased production and the displacement of populations from affected areas to more humid regions. This contributes to the spread of diseases and epidemics. The natural challenges can be summarised as follows:

- Geographic location and limited water resources.
- Drought and climate change.

Desertification (Rachid, Farah and Farhi, 2015).

Environmental challenges: The deterioration of water quality has become a serious issue in most countries. Water pollution poses a major barrier to those working to ensure the right to safe drinking water for all, for the following reasons:

Increased demand for water: the gap between water availability and demand is widening rapidly, especially in urban areas. Improvements in living standards and changes in consumption patterns contribute to heightened water demand. Conversely, water availability is decreasing due to competing demands from agriculture, mining and industry (United Nations, 2018).

Water pollution: The indiscriminate use of chemical fertilisers and industrial waste is one of the most dangerous sources of water pollution and significantly affects water availability. It also impacts public health by facilitating the spread of water-related diseases (Rachid, Farah & Farhi, 2015).

Population growth: The water crisis is being made worse by the growing global population. The anticipated population growth, alongside the accompanying economic and social changes, will lead to heightened demand for water. By 2025, per capita water availability is expected to drop to 500 cubic metres, resulting in economic challenges, a deterioration in water quality and associated health and environmental issues (Yassin, 2013).



Economic challenges are characterised by extravagance and neglect in economic management. Drinking water is wasted and squandered in distribution networks, leading to excessive water loss. This is estimated to be 40–60%, due to the poor quality of pipes used, as well as the lack of maintenance and adoption of modern technologies by administrative bodies and relevant institutions to identify and address leaks. Around 50% of water is lost due to illegal connections to the network, leaks, and other technical losses in most areas of the country. According to a recent study, the actual volume of leakage is estimated at 76 billion litres per year, which is sufficient to meet the needs of 6.2 million people (more than one-third of the population). Additionally, leaks affect water pressure and quality, reducing the amount available for official supplies and increasing its cost (Albuquerque). This exacerbates water scarcity by depleting groundwater reserves and overusing them in agriculture.

### Financial and human challenges:

The lack of financial resources to fund sector investments, whether from national budgets, grants, or aid from funding institutions or the international community, is one of the key problems and obstacles to providing the right to safe drinking water. Additionally, another barrier stems from the shortage of skilled labour and trained technical and professional staff in the water sector. In other words, there is a shortage of trained personnel and competencies to meet the demands of water management, exacerbated by the emigration of these skilled individuals to other countries, particularly in developing countries (Rachid, Farah & Farhi, 2015).

### Financial and human challenges

The lack of financial resources to fund sector investments, whether from national budgets, grants, or aid from funding institutions or the international community, is one of the key problems and obstacles to providing the right to safe drinking water. Additionally, another barrier stems from the shortage of skilled labour and trained technical and professional staff in the water sector. In other words, the demands of water management are not being met due to a lack of trained human resources and competencies, compounded by the emigration of these skilled individuals to other countries, particularly in developing countries (Rachid, Farah, and Farhi, 2015).

Section Two: The United Nations' Efforts to Establish the Right to Safe Drinking Water

The United Nations is a permanent international organisation comprising a number of sovereign states, whose aim is to protect the common interests of its members (Al-Fatlawi), including the right of individuals to safe drinking water. What efforts has this body made to reinforce this right? These efforts are reflected in the agreements and treaties that the organisation has pursued to enshrine this right, with 2015 marking a turning point in its efforts.

### Subsection One: Establishing the Right to Safe Drinking Water Before 2015

Access to safe drinking water in sufficient quantity and quality is essential for all life and for achieving sustainable development. This has led the international community to recognise the human right to safe drinking water, embedding this acknowledgement in a series of agreements, declarations and covenants that collectively ensure access to safe water for individuals and certain groups.

# The First Protocol of the Geneva Conventions (1977) on the Protection of Victims of International Armed Conflicts

This protocol encompasses all actions involving the attack, destruction, or transfer of objects and resources essential for the survival of civilian populations, including water facilities, networks, and irrigation structures. Article 48 emphasises the need for parties to the conflict to distinguish between civilians and combatants, as well as between civilian objects and military targets. Article 5 addresses the general protection of civilian objects and Article 55 discusses the protection of the natural environment, including water (Mushannaf, 2019).

### The United Nations Framework Convention on Climate Change

This convention states that the global nature of climate change requires the utmost cooperation and participation from all countries in an effective and appropriate international response, in accordance



with their common responsibilities. It reaffirms the sovereign right of states to exploit their own resources according to their environmental and developmental policies. This is based on the provisions of General Assembly Resolution 44/206, dated 22 December 1989, regarding the harmful effects that rising sea levels may have on islands and coastal areas; relevant provisions from General Assembly Resolution 44/172, dated 19 December 1989, concerning the implementation of the action plan to combat desertification; and the provisions of the Vienna Convention for the Protection of the Ozone Layer (1985) and the Montreal Protocol on Substances that Deplete the Ozone Layer (1987). The convention acknowledges that the necessary steps to understand and address climate change will be most effective environmentally, socially and economically if they are based on relevant scientific, technical and economic considerations and are continuously reassessed (Al-Fail, 2011).

The Protocol on Water and Health of the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes: This protocol requires the contracting states to take appropriate measures to ensure access to safe drinking water and sanitation, and to protect water resources used for drinking water from pollution (United Nations Human Rights, World Health Organization).

Convention on the Rights of the Child: Safe drinking water and sanitation services are essential for children's health. In countries with high child mortality rates, deaths among children under five due to diarrhoea exceed those from any other cause, surpassing the combined fatalities from acute respiratory infections, malaria and HIV/AIDS. Over 90% of child deaths are linked to contaminated water and inadequate sanitation (UNICEF, 2006). This is affirmed by Article 24 of the Convention on the Rights of the Child, which states:

- 1. The States Parties recognise the right of the child to the highest attainable standard of health [...]'.
- 2. The States Parties shall pursue the full implementation of this right, taking appropriate measures to:
- (c) combat disease and malnutrition, including by providing adequate, nutritious food and clean drinking water.(Article 24 of the Convention on the Rights of the Child)

### International Covenant on Economic, Social and Cultural Rights

This Covenant reaffirms in Article 2 that States Parties undertake to guarantee the exercise of the rights enshrined in this Covenant free from any discrimination based on race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status.

General Comment No. 15 clarifies that there is an immediate obligation to take specific and deliberate steps to realise the right to water. When taking any retrograde measures, states must demonstrate that they have carefully balanced all options and considered the overall impact on all human rights, utilising all available resources fully. As the most effective means of realising the right to water will vary from country to country, General Comment No. 15 does not provide specific prescriptions. Instead, the Covenant indicates that the full realisation of the rights contained within it must be achieved through 'all appropriate means, particularly the adoption of legislative measures' (United Nations Human Rights, World Health Organization). The Committee has previously stated that access to water is a human right referenced in paragraph 1 of Article 11 of the International Covenant on Economic, Social and Cultural Rights, and this is further emphasised by the Committee. Convention on the Elimination of All Forms of Discrimination Against Women:

This convention advocates various women's rights, including access to safe drinking water. Article 14 stipulates that states that are parties to the treaty must ensure that women have the right to adequate living conditions, particularly with regard to water supply (Mushannaf, 2019).

### Millennium Declaration on Water and Sanitation (September 2000):

World leaders made extensive commitments in the Millennium Declaration. These included peace and security, human rights and the environment, and a number of time-bound development goals were established. These goals later took the form of eight Millennium Development Goals. The



seventh goal aimed to halve the proportion of people unable to access safe drinking water and basic sanitation services by 2015 (United Nations Human Rights, World Health Organization).

#### **Convention on the Rights of Persons with Disabilities:**

The Convention on the Rights of Persons with Disabilities explicitly recognises the right of persons with disabilities to access water in the context of the right to an adequate standard of living and social protection. Article 28, paragraph 2, ensures equality for persons with disabilities in terms of their opportunities to access clean water, and guarantees their access to appropriate, affordable services and devices, as well as other assistance to meet their disability-related needs (Article 28 of the Convention on the Rights of Persons with Disabilities).

## Section Two: Establishing the Right to Safe Drinking Water After 2015

Access to safe drinking water is now recognised as a 'fundamental human right' and has taken a higher place on international agendas. Following the General Assembly's declaration of the period 2005–2015 as the International Decade for Action: Water for Life, the twelfth session of the Commission on Sustainable Development provided an important opportunity for the international community to understand the lessons learned and give renewed impetus to implementation activities (Commission on Sustainable Development, Economic and Social Council of the United Nations, 2004).

This momentum was further propelled by the 2030 Agenda, when all 193 UN General Assembly member states unanimously agreed to transform our world through the Sustainable Development Goals (SDGs) in September 2015. The 2030 Agenda is a plan of action for people, the planet and prosperity. Member states committed to 'ending poverty in all its forms' and taking bold steps towards the transformations necessary to steer the world towards sustainability and resilience, ensuring that no one is left behind.

The 2030 Agenda established 17 SDGs and 169 targets relating to development outcomes and implementation methods for the period 2015–2030. These goals and targets are designed to be integrated and indivisible, balancing the social, economic and environmental dimensions of sustainable development. The 2030 Agenda also aims to realise the human rights to which everyone is entitled.

Goal 6 of the Sustainable Development Goals reflects the commitment to ensuring availability and sustainable management of water and sanitation for all, highlighting the increasing attention to water and sanitation issues on the global political agenda. The 2030 Agenda identifies among the greatest challenges of our time the rising inequalities, depletion of natural resources, environmental degradation, and climate change. It recognizes that social development and economic prosperity depend on the sustainable management of freshwater resources and ecosystems, emphasizing the integration of the Sustainable Development Goals (United Nations, 2018).

Goal 6 of the Sustainable Development Goals aims to improve water quality by reducing pollution, stopping the discharge of waste and hazardous chemicals, minimizing their deposition, halving the proportion of untreated wastewater, and significantly increasing recycling and safe reuse globally by 2030 (United Nations, 2018). Therefore, achieving universal access to safe and affordable drinking water by 2030 presents a tremendous challenge for all countries, not just those with low incomes. The proportion of the global population using at least one basic service for drinking water increased from 81% in 2000 to 89% in 2015. However, only one in five countries with coverage rates below 95% is on track to achieve the goal of providing basic water services for all by 2030.

Achieving Target 6.1 means addressing the unfinished business of providing services to the 844 million people who still lack access to basic water services, while also progressively improving the quality of services for the 1.2 billion people who currently experience shortages, contamination or other issues with their water supply (United Nations, 2018).

The transformative vision and ambition of Member States to eliminate poverty and hunger everywhere, combat inequalities within and between countries, and build peaceful, just societies for



all are at the heart of the 2030 Agenda. Water is central to achieving this vision and ambition. It is essential for community health and well-being, eradicating poverty, achieving food security and improving nutrition (United Nations, 2018).

At its 41st session, the Food and Agriculture Organization of the United Nations (FAO) conference, held in Rome on 22 June 2019, assessed the progress made in achieving the Sustainable Development Goals (SDGs) by 2030. It was indicated that, although progress is being made in some key areas, the overall level of implementation and its pace are insufficient to achieve the 2030 Agenda. Accelerating the pace of work is essential to meeting the food needs of the growing global population, safeguarding biodiversity, and protecting the natural resources that underpin sustainable and resilient food and agricultural systems.

Over the past two years, the organisation has finalised the methodology for nine SDG indicators. As of March 2019, international methodologies had been established for all 21 indicators under the organisation's purview (Food and Agriculture Organization of the United Nations, 2019). Within this framework, the Secretary-General identified four areas in which capacity needs to be strengthened for the United Nations to provide the necessary support to countries in implementing the SDGs: improving data collection and analysis, supporting integrated policies, enhancing the capacity to support and sustain partnerships for providing means of implementation, and improving the ability to mobilise significant funding and investments to stimulate transformative change (United Nations).

#### **Conclusion:**

After studying the role of the United Nations in establishing the right to safe drinking water as a human right, it can be said that, despite the organisation's efforts through all its structures to formulate agreements and declarations that generally include guiding texts aimed at implementing a comprehensive plan expected to be finalised by 2030, the reduction of the number of people unable to access safe water is hindered by the non-binding nature of these texts. Additionally, obtaining accurate figures on the number of individuals lacking the right to safe drinking water in certain countries is challenging.

Therefore, it can be concluded that the crisis of accessing safe drinking water does not lie in the abundance of declarations issued by the United Nations or in the annual evaluation reports that monitor the implementation process. Rather, the crisis fundamentally stems from unclear and overlapping responsibilities, centralised decision-making, a lack of public awareness, deficiencies in laws and their enforcement, and institutional problems reflecting a lack of the capacity, funding and political will necessary for managing water resources and providing water services.

Furthermore, the knowledge, skills and technologies required to manage water resources and provide services for all in support of sustainable development currently exist. Therefore, effective coordination should be enhanced among the various international and governmental bodies working on water-related issues, both within the United Nations system and between the United Nations and international financial institutions.

#### **Sources:**

#### I. Sources:

#### A. Laws:

- Article 2 of the International Covenant on Economic, Social and Cultural Rights;
- Article 24 of the Convention on the Rights of the Child.
- Article 28 of the Convention on the Rights of Persons with Disabilities.
- The International Decade for Action 2005–2015, 'Water for Life', World Water Day, 22 March 2005, and the Advocacy Guide issued by the World Health Organization in 2005.

#### **II. References:**

#### A. Books:

- Al-Fatlawi, S. H., United Nations: United Nations Goals and Principles, Vol. 1, Dar Al-Hamed.



- Al-Fail, A. A., International Legislation for Environmental Protection, Dar Al-Hamed, Jordan, 2011.

#### **B.** Journal articles:

- Mushannaf, A. (2019). 'Legal Protection of Water Resources in Algerian Legislation.' Journal of Legal Research Studies, Lebanon, March 2019, 32.
- United Nations Human Rights. 'The Right to Water: Towards a Better Urban Future', Fact Sheet No. 35, World Health Organization.
- Mabrouk, G. and Dergal, S., December 2015. 'Theoretical Tensions in Achieving Water Sustainability'. Journal of Political Studies and International Relations, 4.
- Yassin, H. A. (2013). 'The Water Crisis in the Arab World: Its Reality, Uses, and Future Vision for Addressing the Crisis'. Kirkuk University Journal for Administrative and Economic Sciences, Iraq, 1(3).

#### C. Conference and Seminar Articles:

- United Nations Human Rights. 'The Right to Water: Towards a Better Urban Future', Fact Sheet No. 35, World Health Organization.
- Global Water Resources Assessment Programme, 2017. United Nations Global Report on Water Resources Development, 2017: Wastewater: An Underutilised Resource', Paris: UNESCO, 2018.
- United Nations Global Report on Water Resource Development (2018): Wastewater: An Underutilised Resource, Executive Summary, UNESCO, Paris, 2018.
- Secretary-General's Report on 'Freshwater Management', issued by the Commission on Sustainable Development, Economic and Social Council of the United Nations, 12th session, April 2004.
- 'Composite Report 2018 on Water and Sanitation: Goal 6 of the Sustainable Development Goals, Executive Summary, United Nations, 2018.
- UNICEF (2006). 'Children, Water, and Sanitation: Evidence', Research Brief for the Human Development Report 2006.

Bouksani, R., Farah, R. and Farhi, K. (2015). 'Integrated Water Resources Management and the Challenges it Faces in the Arab Region'. International Scientific Forum on Water Management and Desertification, Euro-Arab Federation for Geomatics, 1–5 April, Hammamet, Tunisia.

#### **D.** Online articles:

- United Nations. Retrieved from https://www.un.org/ar/sections/issues-depth/water/index.html.
- United Nations: 'Reorganising the United Nations Development System to Implement the 2030 Agenda for Sustainable Development'. Retrieved from http://undocs.org/ar/A/72/684.
- Food and Agriculture Organization of the United Nations, 41st session, Rome, 22 June 2019, regarding the assessment of progress made in achieving the Sustainable Development Goals for 2030. Retrieved from www.fao.org.