Water sustainability and the Qur’anic principle of universal equilibrium

Dildar Ahmed, PhD
Department of Chemistry, Forman Christian College, Lahore, Pakistan
Author email: dildarahmed@gmail.com

Abstract:
Humanity today is facing unprecedented challenge of preservation of water and other natural resources and environment. Religion can play a great role to deal with the imminent cataclysm. The global hydrologic cycle is a small demonstration of the universal equilibrium that God, according to the Qur’an, has established in the universe. To ensure environmental sustainability, the Qur’an advises humans not to create disturbance in the equilibrium and adopt a balanced lifestyle.

Keywords: Water, Qur’an, Mizan, Universal Equilibrium

Introduction
Sustainable environment is one of the major challenges the global community is confronting today. The problem is so huge that to deal with it successfully every human potential must be engaged. Religion is one of the strongest forces that human beings possess. Dr Bob Edgar has correctly observed:

“I believe there is a handful of world issues that present the possibility for people of faith everywhere to make strong common cause. Certainly the environmental crisis is one.”

Studies show that religion can play very productive role in conservation and preservation of environment. Realization of the importance of religions’ participation can be seen in the presence of numerous global and local forums involving religion for environmental protection, and also in aptly coined terminologies such as “ecotheology”. It is important to explore ideas of various world religions relating to environmental sustainability so that the hazards can be overcome successfully. In the present article an attempt has been made to explore and highlight the Qur’anic principle of universal equilibrium with special reference to water sustainability.

Water is a Great Blessing of God
Water is one of the basic prerequisites of life, without which life could have neither originated nor can it survive. It makes the major component of a living body; human beings, for example, have about 70 percent of their weight/mass consisting of water.
One of the biggest challenges that humanity is confronting today is the shortage of potable water. It has already assumed the shape of crises in some parts of the world. According to Maude Barlow and Tony Clarke, “unless we dramatically change our ways, between one-half and two-thirds of humanity will be living with severe freshwater shortages within the next quarter-century”.

In the Qur’an – the Islamic Holy Scripture – one can see numerous references to water, and its importance to human, animal and plant life on the earth. Rivers, oceans and other sources of water have also been mentioned at a number of places. Rain, which in the Qur’an has been regarded as a source of freshwater and, thus, a great blessing of God, has been referred to at numerous places.

“…and We made out of water every living thing.” (21:30)

“…and We send down water from the skies and let you drink thereof, and it is not you who dispose of its source.” (15:22)

“And We send down water from the skies in accordance with a measure [set by Us], and then We cause it to lodge in the earth: but, behold, We are most certainly able to withdraw this [blessing].” (23:18)

“Are you not aware that it is God who sends down water from the skies, and then causes it to travel through the earth in the shape of springs?...” (39:21)

“And from the wind-driven clouds We send down waters pouring in abundance, and so that We might bring forth thereby grain, and herbs and gardens dense with foliage.” (78:14-16)

**Hydrologic Cycle**

Our planet earth is the only known world that has liquid water which surrounds about 70 percent of the earth’s surface. The global hydrologic cycle connects all kinds of water on the earth. The freshwater and the saltwater are constantly inter-converted but the equilibrium is maintained. The Qur’an has made at a number of places a mention of the existence of two kinds of water on the earth, namely, salty water and sweet water. Their existence side by side on the earth is one of the great blessings of God.

“and He it is who has given freedom of movement to the two great bodies of water – the one sweet and thirst-allaying, and the other salty and bitter – and yet has wrought between them a barrier and a forbidding ban.” (25:53)

“He has given freedom to the two great bodies of water, so that they might meet: [yet] between them is a barrier which they may not transgress.” (55:19)
“Thus, the two great bodies of water [on earth] are not alike – the one sweet, thirst-allaying, pleasant to drink, and the other salty and bitter”. (35:12)

The two kinds of water make a reversible, cyclic system that consists of evaporation, condensation and precipitation. Governed by God-ingrained natural forces and laws, the cycle ensures the provision of fresh water to living organisms on the earth.

“Have you ever considered the water which you drink? Is it you who cause it to come down from the clouds – or are we the cause of its coming down? [it comes down sweet – but] were it our will, we could make it burningly salty and bitter: why, then, do you not give thanks [unto Us]?” (56:68-70)

The hydrologic cycle, however, provides a finite quantity of freshwater. Today, the demand for freshwater, thank to our present lifestyle, is outrunning its supply. The crisis, as mentioned above, will go on escalating with time if appropriate measures are not taken.

**The Universal Equilibrium Principle**

The universe is a systematic, meaningful creation based on truth and justice. God has established *Mizan* – balance, measure, order – in the universe. The Qur’anic concept of universal equilibrium can be derived from its numerous *ayaat*, or verses. The most prominent verses, however, are surah Rahman 55:7-9, where the concept is propounded in a very comprehensive way.

“and heaven -- He raised it up, and set the Balance. Transgress not in the Balance, and weigh with justice, and skimp not in the Balance.”(55:7-9)

The Qur’anic word translated here as Balance by J. Arberry is *Mizan*. According to almost all commentators, *Mizan* in 55:7 denotes *Adl* (lit., justice, equity, rectitude). According to its well known definition, *adl* is to place a thing in its place. “It is the mean between excess and falling short”. Antonym of *Adl* is *Zulm*, (lit., to act “wrongfully, unjustly, injuriously, or tyrannically”) which is defined as “the putting a thing in a place not its own; putting it in a wrong place; …and it is by exceeding or by falling short, or by deviating from the proper time and place,…transgressing the proper limit much or little”.

At numerous places the Qur’an requires human beings to act with justice. God sent forth His apostles and revealed books in order that “people may behave with equity”(57:25) “He caused [life] of every kind to grow on the earth in a balanced manner”(15:19) According to Ibn Kathir, the famous Qur’anic exegete, “God created the heavens and the earth with truth and justice in order that all things may exist with truth and justice”.

Referring to a saying of Prophet Muhammad (peace be upon him): “it is with *adl*, or justice, that the heavens and the earth exist”, Pir Karam Shah al-Azhari, the celebrated commentator of
our age, while explaining 55:7-9, writes: “here *Adl* means that God has created the earth and the heavens and all that dwells in them in a form (or state) that is most suitable to them. He has provided them with the means for their survival and progress that they needed”\(^{21}\) “It is with justice that the whole universal order is in its place with all of its beauty”, he observed.

*Mizan* (equilibrium, balance, measure, justice) is, in fact, one of the fundamental Qur’anic concepts. It denotes balance or equilibrium in both the concrete and abstract senses of the word. The equilibrium penetrates the whole universe. It exists in all domains of existence – cosmological, physical, chemical and biological, as well as social.

On our planet the global hydrologic cycle is a small demonstration of the universal equilibrium. In terms of thermodynamics, it is a continuous, spontaneous, dynamic process. God in His absolute wisdom has created in this equilibrium a sort of elasticity. It is sustainable under the natural circumstances. Humans as creative beings can, and actually do, disturb it up to varying degrees. Generally, the disturbances remain within the stress limits, and the system, or process, absorbs the shocks and maintains its equilibrium. However, when the disturbance crosses the limits, the system may experience a severe distortion. This may in the long run appear in the shape of a crisis or a calamity having catastrophic consequences.

“And whatever calamity may befall you will be an outcome of what your own hands have wrought, and He pardons much”. (42:30)

\(\text{“He pardons much”}\) is very meaningful. The disturbances of ordinary magnitude that human activities may create in the natural order of things are constantly cancelled out by the natural factors controlling the equilibrium. But a continued unbalanced lifestyle may have disastrous consequences.

In the following verse of the Qur’an we can read a comprehensive reference to all kinds of pollution and corruption:

“Corruption has appeared on land and in the sea as an outcome of what men’s hands have wrought: and so He will let them taste [the evil of] some of their doings, so that they might return [to the right path].” (30:41)

Commenting on the verse, Muhammad Asad – one of the most celebrated Qur’anic scholars of the modern time, wrote:

“Thus, the growing corruption and destruction of our natural environment, so awesomely – if as yet only partially – demonstrated in our time, is here predicted as “an outcome of what men’s hands have wrought”, i.e., of that self-destructive – because utterly materialistic –
inventiveness and frenzied activity which now threatens mankind with previously unimaginable ecological disasters: an unbridled pollution of land, air and water through industrial and urban waste, a progressive poisoning of plant and marine life, all manner of genetic malformations in men’s own bodies through an ever-widening use of drugs and seemingly “beneficial” chemicals, and the gradual extinction of many animal species essential to human well-being. To all this may be added the rapid deterioration and decomposition of man’s social life, the all-round increase in sexual perversion, crime and violence, with perhaps, nuclear annihilation as the ultimate stage: all of which is, in the last resort, an outcome of man’s oblivion of God; and hence, of all absolute values, and their suppression by the belief that material “progress” is the only thing that matters.”

The Holy Qur’an wants that human behaviour must be in complete conformity with the universal equilibrium. We must uphold mizan/justice in all of our activities and pursuits. We must always keep in our mind the Qur’anic message: “Transgress not in the Balance, and weigh with justice, and skimp not in the Balance”. The Qur’an has denounced in the strongest words both israf and tabzir. According to experts, tabzir “means the “exceeding in respect of the right objects of expenditure”, which is ignorance of the [right] manner, and of things that should prevent it”; and israf means “the exceeding with respect to quantity [in expenditure], and is ignorance of the values of the right objects”.

“O you who have attained to faith! Do not deprive yourselves of the good things of life which God has made lawful to you, but do not transgress the bounds of what is right: verily, God does not love those who transgress the bounds of what is right” (5:87)

“O children of Adam!...eat and drink, but do not waste: verily, He does not love the wasteful!” (7:31)

“Say: what do you think? If all of a sudden your water were to vanish underground, who could provide you with water from [new] unsullied springs?” (67:30)

Commenting on 55:7-9, the noted scholar Abdullah Yusuf Ali observes: “that men may act justly to each other and observe due balance in all their actions, following the golden mean and not transgressing due bounds in anything.”

The Qur’anic universal equilibrium is a broad concept that encompasses all spheres of life and existences. It is the principle of justice, symmetry, proportion and equitability. It demands that we human must show wisdom and sanity towards earth resources and biodiversity, and adopt a balanced and responsible way of life. The Le Chatelier Principle that deals with Chemical Equilibrium is a small aspect of the universal equilibrium that we can derive from the Qur’an.
Conclusion
God has established *Mizan*, or equilibrium, in the universe. The Quran advises humans not to create disturbance in the equilibrium and adopt in all of their dealings a balanced attitude. The principle of preservation and conservation of natural resources is one of the fundamental laws of the Qur’anic value system. We must change our present lifestyle to avoid the predicted water crises.

Notes and References

1. Faith and Environment address as prepared for delivery to the religion communicators council by Dr Bob Edgar, Indianapolis, Indiana, April 24, 2003.
3. Izzi Dien M. *Shari'a and environment*. Lampeter, UK, St. David's University College, University of Wales, 1993. Focus
13. Translations of the Qur’anic verses in this article have been adopted from Muhammad Asad, *The message of the Qur’an*, except a few changes in one or two cases to highlight the emphasis.
14. See, for example, 38:27 where God says: “We have not created heaven and earth and all that is between them without meaning and purpose, as is the surmise of those who are bent on denying the truth”.
15. This is J. Arberry’s translation. Marmaduke Pictal rendered 55:7-9 as follows: “And the sky He hath uplifted; and He hath set the measure, That ye exceed not the measure, But observe the measure strictly, nor fall short thereof”; Abdullah Yusuf Ali’s translation is this: “And the Firmament has He raised high, and He has set up the balance (of Justice). In order that ye may not transgress (due) balance. So establish weight with justice and fall not short in the balance”; Muhammad Asad rendered the verses as follows: “And the skies has He raised high, and has devised [for all things] a measure, so that you [too, O men.] might never transgress the measure [of what is right]: “Weigh, therefore, [your deeds] with equity, and cut not the measure short!” (55:7-9)

16. See, for example, Mahmud Alusi, Ruh al-Muaani, Vol 27, al-Maktabah al-Rashidiyyah, Sirki Road, Quetta, Pakistan, p.144
19. Ibid.
23. Lane, p.1351.
3 Scientific Principles of Sustainability

- Reliance on solar energy: Sun warms the planet and supports photosynthesis, a complex chemical process used by plants to provide the nutrients, or chemicals that most organisms need to stay alive and to reproduce.

- Nutrient Recycling: Circulation of chemicals from environment through organisms and back to the environment.

- Biodiversity: The outstanding variety of organisms, the natural system in which they exist and interact and the natural services they provide.

I. Solar Energy

A. Thermal Energy Transfers
   1. Solar Capital
   2. Law of Conservation