



An Islamic Ecological Perspective of Water Resources Management

Muhammad Junaid Anwar

Ph.D. Scholar,

Institute of Islamic Studies, University of the Punjab, Lahore, Pakistan

Aqsa Tasgheer (*corresponding author*)

Ph.D. Scholar,

Institute of Islamic Studies, University of the Punjab, Lahore, Pakistan

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ABSTRACT

Islam provides its adherents comprehensive instructions on all areas of life. In Muslim World, Islamic teachings on concerns such as family life and inheritance are widely practiced. Contrarywise this, Islam's environmental dynamics lack concentration and development. Islamic principles and practices give an extensive and effective solution to the world's existing ecological issues, which need to be addressed. A rich convention of natural resources management and environment protection exists in Islam highlighting the fact that Islam promotes the sustainable development of all-natural resources such as water, woods, and land, etc. across the globe. By applying the qualitative method, this research paper explores water resources conservation and management strategies based on Islamic principles. It demonstrates that the Quran and hadith contain relatively integrated water conservation and pollution mitigation measures. This study highlights the significance of water management and water conservation paradigms in the Islamic ecological perspective. Recommendations are given to help design extensive water management strategies based on revealed directions of Islam to solve the current global water crisis.

Introduction

Water is the most essential life source for mankind as well as other species. It ensures the existence of living things and sustains development on earth. Even individuals who live in regions where there is a shortage of water resources rely on water to survive. Humans must be more careful of how they use water since they have unwittingly, become the leading source of clean water contamination. In modern world, countries are facing a dire and rapid need of developmental and constructional work because of population explosion, public needs and economic growth, etc. As a result, natural resources (such as water) are getting affected and most of the time, destroyed.¹ In today's world, Water conservation has become a threatening issue.² So, the world needs a comprehensive water management system that can help humanity to cope with the water scarcity challenges. Islam, as a revealed religion, gives humanity the principles of an extensive water management system. The need to develop a systematic and proactive water management strategy is imperative because consumption of water continues to rise as a result of the growing use of water in industry and agriculture for economic growth, as well as rapid urbanization, but the water supply is limited. Water management is the country's main concern in the twenty-first century.³

Literature Review

Islam gives great importance to water conservation and water management. It provides diverse methods to purify water and jurists (Fuqaha) have discussed them in detail showing that Islam allows many water-saving strategies such as cases in which used water can purify to be reused.⁴ A considerable number of studies and fatwas have appeared regarding the position of used water treatment and their use for purification purposes.⁵ There held a workshop in Jordan in 1997 on Water Resources Management in the Islamic world by the International Development Research Centre (IDRC), with support from the International Water Resources Association (IWRA), and the Inter-Islamic Network on Water Resources Demand and Management (INWRDAM). The papers presented in the workshop were later compiled and published as a book titled "Water Management in Islam".⁶ This research paper will highlight the significance of water resources in Islam incorporating Islamic commands on water resources management and conservation with modern strategies. Research on water management systems based on revealed injunctions of Islam can bring forth a better solution to these contemporary water-related problems.

Methodology

By applying the Qualitative research method, diverse facets of water resources management are analyzed from the perspective of Islamic teachings. Significance and tactics of water resources management in the Quran and Hadith are discussed. At the end of this research paper, recommendations are given to manage water resources through incorporating Islamic injunctions with modern strategies.

Water Resource Management

The process of developing, implementing, disseminating, and monitoring the most sustainable use of water resources is known as water resource management. It's a part of the water cycle that needs to be managed. Water conservation is the

main objective of water resources management (WRM).⁷ Water management is not a modern notion. It can be traced back to antique times. In ancient Greek, there was a systemized arrangement of water resources management.⁸ Studies show that water has been a reliable and constant determinant of development throughout human history. The balance of undetermined factors has influenced the evolution of the ecosystem for billions of years. In modern times the scope of water resources management is much broader than in ancient times.⁹

Significance of Water in Islam

Allah Almighty has bestowed his creatures with countless blessings. Many of these blessings are such that the survival of all living beings, including birds, strong and weak, depends on them. Without these blessings, human life would also have been extinct. One of these eminent blessings is water, without which the survival of life cannot be imagined. It is the pleasing grace of Allah Almighty that he has made such much-needed blessings common, public, and accessible. For Muslims, water not only has ecological importance but also has spiritual significance being a symbol of purity and cleanliness (Taha'ra) that is the essence of Islam.¹⁰ Water is a significant natural and environmental element that the Quran mentions numerous times. According to the Quran water is the source of life on earth:

أَوَلَمْ يَرِ الَّذِينَ كَفَرُوا أَنَّ السَّمَوَاتِ وَالْأَرْضَ كَانَتَا رَتْقًا فَفَتَقْنَاهُمَا، وَجَعَلْنَا مِنَ الْمَاءِ كُلَّ شَيْءٍ حَيٍّ أَفَلَا يُؤْمِنُونَ

Did the disbelievers not observe that the heavens and the earth were closed, then We opened them? And We created from water every living thing. Would they still not believe?¹¹

Water is a great blessing and gift from Allah that contributes to the wellbeing and well-doings of humans in this world as well as the afterlife, and therefore It must be effectively managed and carefully used because it will be questioned by Allah subsequently in the hereafter.

Water resources mentioned in Quran

Water is the most essential element for human life. As Allah Almighty has made man reliant on water for his very existence, man cannot survive long without it. There are three types of freshwater resources: atmospheric water, surface water, and underground water.¹² Quranic mentions all the three types of water resources:

1) Atmospheric Water resources

Atmospheric Water is the water that falls from the sky in form of rain, hail, and snow, etc. The purity level of this water resource is higher as it is distilled in the water cycle process, but sometimes it is affected by pollutants, too.

Rainfall

Rainfall is a key source of water and agriculture production for most of the world. Whether it is the need for water for drinking or irrigation, rain is the largest, most important, useful, and cheapest way to meet both needs. Quran itself explains rainfall as a major source of agriculture

الَّذِي جَعَلَ لَكُمُ الْأَرْضَ فِرَاشًا وَالسَّمَاءَ بِنَاءً . وَأَنْزَلَ مِنَ السَّمَاءِ مَاءً فَأَخْرَجَ بِهِ مِنَ الثَّمَرَاتِ رِزْقًا لَكُمْ

He is the One who made the earth a bed for you, and the sky a roof, and sent down water from the sky, then brought forth with it fruits, as a provision for you¹³.

Rainwater helps to make the soil effective for cultivation and agriculture, as it seeps into the ground and sustains plants and trees.

فَلْيَنْظُرِ الْإِنْسَانُ إِلَى طَعَامِهِ . إِنَّا صَبَبْنَا الْمَاءَ صَبًّا . ثُمَّ شَقَقْنَا الْأَرْضَ شَقًّا . فَأَنْبَتْنَا فِيهَا حَبًّا . وَعَيْنًا وَقَضْبًا . وَزَيْتُونًا وَنَخْلًا . وَحَدَائِقَ غَلْبًا . وَفَاكِهَةً وَأَبًّا . مَتَاعًا لَكُمْ وَلِأَنْعَامِكُمْ

So, the man should consider his food, how well We poured water, then how nicely We split the earth, then We grew in its grain, and grapes and greens, and olive and date-palms, and gardens, full of thick trees, and fruits and fodder, as a benefit for you and your cattle¹⁴.

Quran carries individual's attention towards rain falling from the sky and its charisma which gives various benefits and profits.

أَلَمْ تَرَ أَنَّ اللَّهَ يُرْجِي سَحَابًا ثُمَّ يُؤَلِّفُ بَيْنَهُ ثُمَّ يَجْعَلُهُ رُكَامًا فَتَرَى الْوَدْقَ يَخْرُجُ مِنْ خَلِيلِهِ : وَيُنَزِّلُ مِنَ السَّمَاءِ مِنْ جِبَالٍ فِيهَا مِنْ بَرَدٍ فَيُصِيبُ بِهِ مَنْ يَشَاءُ وَيَصْرِفُهُ عَنِ مَنْ يَشَاءُ . يَكَادُ سَنَا بَرْقِهِ يَذْهَبُ بِالْأَبْصَارِ

Do you not realize that Allah drives the clouds, then joins them together, then turns them into a heap? Then you see the rain coming out from their midst. He sends down from the sky mountains (of clouds) having hail in them, then He afflicts with it whomsoever He wills and turns it away from whomsoever He wills. The flash of its lightning seems to snatch away the eyes.

There are great manifestations of Allah's greatness and infinite mercy in it. Man is in such dire need of Allah in connection with his provision that if Allah Almighty stops rainfall, for a while, then the life span of man and all living beings on earth besides him will be shortened.

أَفَرَأَيْتُمُ الْمَاءَ الَّذِي تَشْرَبُونَ . ءَأَنْتُمْ أَنْزَلْتُمُوهُ مِنَ الْمُزْنِ أَمْ نَحْنُ الْمُنزِلُونَ . لَوْ نَشَاءُ جَعَلْنَاهُ أُجَاجًا فَلَوْلَا تَشْكُرُونَ .

Again, tell Me about the water you drink. Is it you who have brought it down from the clouds, or are We the One who sends (it) down? If We so will, we can make it bitter. So why do you not offer gratitude?¹⁵

Allah has frequently asked in Quran "Don't you see?" while stating rainfall as his blessing ultimately causing other blessings like the cultivation of fruits and vegetables. As stated in Surah Fatir,

أَلَمْ تَرَ أَنَّ اللَّهَ أَنْزَلَ مِنَ السَّمَاءِ مَاءً فَأَخْرَجْنَا بِهِ ثَمَرَاتٍ مُخْتَلِفًا أَلْوَانُهَا

Did you not see that Allah has sent down water from the sky? Then We brought forth with it fruits having different colors.¹⁶

The development of terrestrial life is associated with rainfall. Rain is mentioned in many places in the Qur'an¹⁷ which shows the significance of rainfall as a great water resource and immense blessing of Allah.

2) Surface water resources

Water flowing on the surface of the earth is considered a surface-water resource such as rivers, oceans, and canals, etc.

a) Ocean

Ocean is the largest reservoir water which covers 71% of the earth's surface.¹⁸ In Quran, Allah describes the importance and benefits of oceans. As Allah says,

إِنَّ فِي خَلْقِ السَّمَوَاتِ وَالْأَرْضِ وَاخْتِلَافِ اللَّيْلِ وَالنَّهَارِ وَالْفُلْكِ الَّتِي تَجْرِي فِي الْبَحْرِ بِمَا يَنْفَع النَّاسَ وَمَا أَنْزَلَ اللَّهُ مِنَ السَّمَاءِ مِنْ مَّاءٍ فَأَحْيَا بِهِ الْأَرْضَ بَعْدَ مَوْتِهَا وَبَثَّ فِيهَا مِنْ كُلِّ دَابَّةٍ. وَتَصْرِيفِ الرِّيحِ وَالسَّحَابِ الْمُسَخَّرِينَ السَّمَاءِ وَالْأَرْضِ لَآيَاتٍ لِقَوْمٍ يَعْقِلُونَ

Surely, in the creation of heavens and earth, and the alternation of night and day, and the ships that sail in the sea, carrying that which benefits men, and in the water, Allah sent down from the sky, then revived with it the earth after it was dead, and in every creature, He has scattered on it, and in turning of winds, and in the clouds employed to serve between heaven and earth, there are signs for those who have sense¹⁹.

وَهُوَ الَّذِي مَرَجَ الْبَحْرَيْنِ هَذَا عَذْبٌ فُرَاتٌ وَهَذَا مِلْحٌ أُجَاجٌ. وَجَعَلَ بَيْنَهُمَا بَرْزَخًا وَحِجْرًا مَحْجُورًا
He is the One who joined the two seas, so as this is sweet, very sweet, and this is bitter, very bitter, and made between them a buffer and an insurmountable barrier²⁰.

Allah has united the two seas in such a wonderful way that they don't mix up and retain different characteristics while flowing together. Another verse of Quran describes the same thing

وَمَا يَسْتَوِي الْبَحْرَانِ هَذَا عَذْبٌ فُرَاتٌ سَائِغٌ شَرَابُهُ وَهَذَا مِلْحٌ أُجَاجٌ. وَمِنْ كُلِّ تَاكُلُونَ لَحْمًا طَرِيًّا وَتَسْتَخْرِجُونَ جِلْيَةَ تَلْبَسُونَهَا. وَتَرَى الْفُلْكَ فِيهِ مَوَآخِرَ لَتَبْتَغُوا مِنْ فَضْلِهِ وَلِعَلَّكُمْ تَشْكُرُونَ

And two seas are not alike; this one is sweet, saturating, pleasant to drink, and that one is salt, bitter. But from each, you eat fresh meat and derive ornaments that you wear. And you see the boats therein cleaving through water, so that you may search for His grace, and that you may be grateful²¹.

Although the two salty seas are different in many respects, they seem to be the same in many benefits such as both provide means of transport and employment. Seas are a means of bread and Allah has provided

أُجِلَّ لَكُمْ صَيْدُ الْبَحْرِ وَطَعَامُهُ مَتَاعًا لَكُمْ وَلِلسَّيَّارَةِ

Made lawful for you is the game of the sea and eating thereof, as a benefit for you and travelers²².

Allah has made it lawful for humans to eat from waters and use waters for transport. Ships sail in the sea and boats sail in small rivers in which trade goods

are sold from one place to another which is of great benefit to the people. It provides proofs of the Oneness and Perfection of Allah Almighty.

b) River

Rivers are significant sources of water and the backbone of human civilization. A river is a water body that flows and carries water, gasses, nutrients as well as organisms to other places making its way to the sea. Rivers provide drinking water, transport, electricity (through Hydroelectric dams), and irrigation for agriculture.

In the Qur'an, the word Anhar is used for small and large rivers that naturally occur. After the rain, water from lakes and springs starts flowing downwards and ultimately these small canals form a river.

وَهُوَ الَّذِي مَدَّ الْأَرْضَ وَجَعَلَ فِيهَا رَوَاسِيَ وَأَنْهَارًا

He is the One who spread out the earth and made mountains and rivers on it.²³

Many earth features and habitats of species are shaped by rivers.

وَأَلْفَىٰ فِي الْأَرْضِ رَوَاسِيَ أَنْ تَمِيدَ بِكُمْ وَأَنْهَارًا وَسُبُلًا لَّعَلَّكُمْ تَهْتَدُونَ

And He placed mountains on the earth, lest it should shake with you, and rivers and tracks, so that you may find the right way²⁴,

The natural pathways that form along canals and rivers are of great importance, especially in mountainous areas. Moreover, ships sail in rivers, and cargo services provide a source of income to many. So, rivers are not only a source of water but also a means of transportation and income. As Quran says,

الَّذِينَ أَنْزَلْنَا مِنَ السَّمَاءِ مَاءً بِحَمْرٍاءَ لَنُخْرِجَ بِهِ الْحَبَّ وَالنَّارَ وَالنَّخْلَ وَالزَّيْتُونَ وَالنَّارَ وَالزَّيْتُونَ وَالنَّخْلَ وَالزَّيْتُونَ وَالنَّارَ وَالزَّيْتُونَ

Allah is the One who created the heavens and the earth and sent down water from the sky, then brought forth with it sustenance for you from the produce, and subjugated for you the ships, so that they may sail in the sea with His command, and subjugated for you the rivers.²⁵

So, rivers are the water resources which have a hugely important part on social, cultural, economic aspects of human life. The yearly profusion of rain is one of the earth's most vital resources, which contributes to excessive consumption of water by users around the globe.

c) Canals

Water is a crucial need of human beings and a great blessing of Allah. Quran has also mentioned water canals (انهار) as a gift for human beings in the hereafter. It repeatedly encourages and cheer good deeds by citing garden having canals underneath, as mentioned in Surah Tauba verse 72,

وَعَدَ اللَّهُ الْمُؤْمِنِينَ وَالْمُؤْمِنَاتِ جَنَّاتٍ تَجْرِي مِنْ تَحْتِهَا الْأَنْهَارُ خَالِدِينَ فِيهَا وَمَسْكِنٍ طَيِّبَةٍ فِي جَنَّاتٍ عَدْنٍ
وَرِضْوَانٍ مِنَ اللَّهِ أَكْبَرَ. ذَلِكَ هُوَ الْفَوْزُ الْعَظِيمُ

Allah has promised to the believers, male and female, gardens beneath which rivers flow, where they shall live forever, and good homes in

gardens of eternity. And Allah's pleasure is above all. That is the supreme success²⁶.

It shows the significance of water as a gift of Allah. The verse “جَنَّاتٍ تَجْرِي مِنْ تَحْتِهَا الْأَنْهَارُ” canals underneath the gardens may also illustrates water reservoirs underground.

3) Underground Water Resources

Water seeped into the soil makes underground water resources. It is mostly filtrate and pure water worth drinking, but nowadays pollution is causing infiltration of underground water resources.

Water Springs

The word “uyoon” is used for water springs in the Holy Qur'an. Most of the earth's surface is mountainous. Drinking water in these areas depends on spring waters. Quran says

وَجَعَلْنَا فِيهَا جَنَّاتٍ مِنْ نَجِيلٍ وَأَعْنَابٍ وَفَجَّرْنَا فِيهَا مِنَ الْعُيُونِ - لِيَأْكُلُوا مِنْ ثَمَرِهِ وَمَا عَمِلَتْهُ أَيْدِيهِمْ أَفَلَا يَشْكُرُونَ

And We have placed gardens of date palms and grapes and caused springs to gush forth therein. so that they may eat fruits thereof, while it was not made by their hands. Would they not then offer gratitude?²⁷

أَمَدَّكُمْ بِالْأَنْعَامِ وَبَنِينَ - وَجَنَّاتٍ وَعُيُونٍ

He has supported you with cattle and son, and with gardens and springs.²⁸

In above-mentioned verses water spring has been denoted as a reward from Allah for righteous persons. Quran precisely points out towards creation of water springs in Surah Baqarah,

إِنَّ مِنَ الْجِبَارَةِ لِمَا يُتَفَجَّرُ مِنْهُ الْأَنْهَارُ ، وَإِنَّ مِنْهَا لِمَا يَشَقُّقُ فَيَخْرُجُ مِنْهُ الْمَاءُ ، وَإِنَّ مِنْهَا لِمَا يَنْبِطُ مِنْ خَشْيَةِ اللَّهِ ، وَمَا اللَّهُ بِغَافِلٍ عَمَّا تَعْمَلُونَ

For surely among the rocks there are some from which rivers gush forth, and there are others that crack open and water flows from them, and there are still others that fall in fear of Allah. And Allah is not unaware of what you do²⁹.

Here Quran marvelously and precisely describes the process of water spring creation that rain water infiltrates or seeps into rocks and rock cracks that cause water springs. Scientific studies say the same about the formation of water springs. The Lord of universe says in Quran,

الَّذِينَ تَرَأَوْنَ اللَّهَ أَنْزَلَ مِنَ السَّمَاءِ مَاءً فَسَلَكَهُ يَنَابِيعٌ فِي الْأَرْضِ ثُمَّ يُخْرِجُ بِهِ زَرْعًا مُخْتَلِفًا أَلْوَانًا

Have you not seen that Allah sent down water from the sky, then made it penetrate the earth (and gush forth) in the form of springs? Then He brings forth with it crops of different colors.³⁰

The principles of the formation of water springs, notable penetration of rainwater into rocks, are well understood. It's also interesting to note that knowledge of water springs originating from rocks is not for the faint-hearted. This is a recent

discovery from the 19th century or the early 1800s. However, it is mentioned in the Noble Quran, which was written in the seventh century.³¹ Quran has mentioned water spring, their formation, and their benefits in various verses especially while describing the blessings of the hereafter, Quran mentions it repeatedly.³²

Wells

Well (بئر) is mentioned only once in Quran, that too with the nations who got the wrath of Allah, as Quran says

فَكَأَيُّ مِّنْ قَرْيَةٍ أَهْلَكْنَاهَا وَهِيَ ظَالِمَةٌ فَهِيَ خَاوِبَةٌ عَلَيَّ عُرُوشُهَا وَبُيُوتُ مُعْتَطَلَةٌ وَقَصْرِ مَشِيدٍ

How many towns have We destroyed, as they were wrongdoers! So, they are fallen on their roofs, and (how many a) deserted well and (how many a) well-built

castle³³!

Stream or small canal (سريا) word is mentioned in Quran only once. It is a trivial water resource sometimes underground.

فَنَادَاهَا مِنْ تَحْتِهَا أَلَّا تَحْزَنِي قَدْ جَعَلَ رَبُّكِ تَحْتَكِ سَرِيًّا

Then he called her from beneath her: Do not grieve; your Lord has placed a stream beneath you³⁴.

Well, is a popular under waters resource and people from antique times used to dug well to get pure water. Some wells are ordinary from which water is extracted by buckets or other means but some wells are artesian, and they have higher water levels because of their inner pressure.³⁵

Water utilization: A Quranic perspective

Allah Almighty has described the water resources and their countless uses in Quran. Water is the vein of the universe that is used as a life source for all living things. Water is not only important for sustaining life rather its presence in an area has enormous effects on culture, civilizations, and economics. Water utilizations are mentioned in the following verses of the Quran,

Quranic Verses	Water Utilization
Al-Nahl 16:10 Al-Waqi'ah 56:17-21	Sustains life, humans, and animals drink water to nurture, nourish plants
Al-Baqarah 2:22 Al-Jathiyah 45:12 Al-Hajj 22:63	Source of economic development, maintenance, and income through farming, fishing, and agriculture, etc
Al-Muddathir 74:4 Al-Anfaal 8:11	Source of Cleanliness of body, clothes, and place that is mandatory for worship and keep evils away
Al Rum 30:24 Al-Hajj 22:63 Al-Nahl 16:65	Source of Environmental balancing, greening mediator, nature nourishment, reviving of earth
Al-Mulk 67:30	Awareness and knowledge source, explicit greatness of Allah
Fatir 35:12 Al-Luqman 31:31	Global and local transportation and communication mean

Quran has mentioned not only worldly uses of water but also describes water resources as a gift in the hereafter.³⁶

Quranic Injunctions Water conservation

The Quran is full of numerous references and accents on the necessity of natural resources especially water conservation, which is vital for survival in this world. Water is highlighted in Quran as being beneficial to nurture gardens, crops, groves, and reviving dead lands, all of which demand the proper use of this element. Desecrating it by excessive use is tantamount to violating Allah's revelations. In Surah Ara'af Allah Almighty states,

يَبْنَىٰٓ اٰدَمَ خُدُوْا زِيْنَتَكُمْ عِنْدَ كُلِّ مَسْجِدٍ وَكُلُوْا وَاشْرَبُوْا وَلَا تُسْرِفُوْا ۗ اِنَّهٗ لَا يُحِبُّ الْمُسْرِفِيْنَ
O children of Adam, take on your adornment at every mosque. Eat and drink and do not be extravagant. Surely, He does not like the extravagant³⁷.

Man has the power to derive social and collective benefits from natural resources, as per his necessity. The Almighty, while mentioning His blessings, warned humans to take advantage of what he has created, but not to spend in vain, for he does not like those who spend in vain, as mentioned in Surah Al-Ana'am verse 141,

وَهُوَ الَّذِيۙ اَنْشَا۟ جَنَّتٍ مَّعْرُوْشَةٍ وَّغَيْرٍ مَّعْرُوْشَةٍ وَالتَّخْلِۙ وَالزَّرْعِۙ مُخْتَلِفًاۙ اَكْلُهُۥ وَالرَّيْتُوْنَ وَالرُّمَّانَۙ مُتَشَابِهًا وَّغَيْرٍ مُّتَشَابِهٍ ۗ كُلُوْا مِنْ ثَمَرِهٖۙ اِذَا اَتَمَّرْتُمْ اُوْتُوْا حَقَّهٗ يَوْمَ حَصَادِهٖۙ لٰكٍ وَلَا تُسْرِفُوْا ۗ اِنَّهٗ لَا يُحِبُّ الْمُسْرِفِيْنَ

He is the One who has created gardens, trellised and untrellised, and date palms and crops with a variety of edibles, and the olive and the pomegranate, (some) similar to one another, and (some) dissimilar. Eat of its fruit when it bears fruits, and pay its due on the day of harvest, and do not be extravagant. Surely, Allah does not like the extravagant.³⁸

Above mentioned verses show that humans are allowed to use the blessings of Allah as Allah has created these for him, but it is forbidden to waste these blessings. Of all the things on which the protection and survival of this universe depend, the most important thing is "water", in the survival of which lies the survival and protection of all creatures in the universe. Allah orders in his Holy book,

وَلَا تُفْسِدُوْا فِى الْاَرْضِۙ بَعْدَ اِصْلَاحِهَاۙ ذٰلِكُمْ خَيْرٌ لَّكُمْۙ اِنْ كُنْتُمْ مُّؤْمِنِيْنَ
and do not make mischief (corruption) on the earth after it has been set in order. That is good for you if you are a believer³⁹.

Corruption is a word with a broad meaning. Corruption in the original dictionary means that something changes from a healthy state to a bad state and goes out of moderation. So, excessive use of water also falls in this category. Water is a precious asset of this universe. Its existence has established a balance in this world. Allah Almighty has provided an opportunity for all the creatures of the universe to benefit from the things He has created. Allah Almighty warns man

that if he disturbs this balance or exploits the natural resources, or misuses, destroys, or pollutes them, then he will be considered as a rebel against the orders of Allah.

Water consumption and management in Islam

Man, due to his greedy and selfish interests, has always affected the balance and justice of this universal system. Quran and Hadith provide instructions for the consumption and management of water resources. Many obligatory religious practices, such as praying or reciting the Holy Quran, entail ablution as a condition of validity. Additionally, to accomplish the six components of ablution, water is used. However, following Islam's concept of moderation, the focus must be directed to how water is used. It is narrated on account of Ayesha (R.A) that

أَنَّ النَّبِيَّ صَلَّى اللَّهُ عَلَيْهِ وَسَلَّمَ كَانَ يَغْتَسِلُ بِالصَّاعِ وَتَتَوَضَّأُ بِالْمُدِّ
 “The Prophet ﷺ used to wash with a sa'a (of water) and perform ablution with a Mudd (of water).”⁴⁰

This piece of narration illustrates that Holy Prophet (PBUH) used to consume a specific amount of water to obtain purification. Once Holy Prophet (PBUH) wanted to perform ablution. A vessel containing 2/3 Mudd of water was brought to him.⁴¹

The importance of water in the eyes of Islam can be gauged from the fact that the ablutions that are performed for the five daily prayers and the water that is used in it are also monitored by Islam. Holy Prophet (PBUH) has commanded the servants of Allah to perform ablution but not to be extravagant.

This is one of the resource consumption rules in Islam that they must be used as per necessity. Even if the thing is in abundance, one is not authorized to overuse it or pollute it. It is narrated on the authority of 'Abdullah ibn' Amr that

أَنَّ رَسُولَ اللَّهِ ﷺ مَرَّ بِسَعْدٍ وَهُوَ يَتَوَضَّأُ، فَقَالَ: " مَا هَذَا السَّرْفُ؟ " فَقَالَ: أَفِي الْوُضُوءِ إِسْرَافٌ؟
 قَالَ: " نَعَمْ وَإِنْ كُنْتُ عَلَى نَهْرٍ جَارٍ
 “The Messenger of Allah (PBUH) passed by Sa'ad bin Amar (R.A) while he was performing ablution. He(PBUH) said: What kind of extravagance is this? Sa'ad (R.A) asked: Is there any extravagance in ablution? The Prophet (peace and blessings of Allah be upon him) said: Yes, even if you are sitting on the bank of a flowing canal.”⁴²

Water was fast-flowing and plentiful still Holy Prophet (PBUH) advised water conservation. It shows the importance of water management in Muslim tradition. Urinating in both flowing and stagnant water is forbidden in Islam, as narrated by Abu Huraira (R.A), the Holy Prophet (PBUH) said:

"لَا يَبُولَنَّ أَحَدُكُمْ فِي الْمَاءِ الدَّائِمِ ثُمَّ يَغْتَسِلُ مِنْهُ"
 “None of you should urinate in stagnant water and then take a bath with it”⁴³

Narrated Muadh ibn Jabal: The Messenger of Allah ﷺ said:

" اتَّقُوا الْمَلَاعِينَ الثَّلَاثَةَ: الْبَرَازَ فِي الْمَوَارِدِ، وَقَارِعَةَ الطَّرِيقِ، وَالْحِطْلَ "

Be on your guard against three things that provoke cursing: easing in the watering places and on the thoroughfares, and in the shade (of the tree).⁴⁴

These narrations explicitly show that it is strictly forbidden to defecate any water resource by urinating or any other means. Islam highlighted the importance of water in the minds of the people with a view to human health. Holy Prophet (PBUH) forbade urinating in both stagnant and flowing water, although a little impurity in flowing water does not affect its purity, it becomes contaminated. It was a precaution so that people would not make it a habit that can impurify the water which gives an idea of how long-ago Islam taught and directed water purification. Other impurities and wastes are also forbidden in the light of this hadith. Abu Hurairah reported: The Messenger of Allah ﷺ said:

إِذَا قَامَ أَحَدُكُمْ مِنَ اللَّيْلِ، فَلَا يَغْمِسُ يَدَهُ فِي الْإِنَاءِ حَتَّى يَغْسِلَهَا ثَلَاثَ مَرَّاتٍ. فَإِنَّهُ لَا يَدْرِي أَيْنَ بَاتَتْ يَدُهُ

When anyone amongst you wakes up from sleep at night, he should not put his hand in the utensil until he has washed his hand three times, for he does not know where his hand was during the night.⁴⁵

This hadith illustrates that how careful is Islam not only about the cleanliness of humans but also for water purification, as putting dirty hands in water may infiltrate it.

Preservation of clean water is a water management strategy and Holy Prophet (PBUH) gave much importance to this. He used to order his companions and family member repeatedly to cover the bowels and containers before going to sleep.

عَنْ جَابِرٍ أَنَّ رَسُولَ اللَّهِ صَلَّى اللَّهُ عَلَيْهِ وَسَلَّمَ، قَالَ: "أَطْفِئُوا الْمَصَابِيحَ إِذَا رَقَدْتُمْ، وَغَلِّقُوا الْأَبْوَابَ، وَأَوْكُوا الْأَسْقِيَةَ، وَخَمِّرُوا الطَّعَامَ وَالشَّرَابَ"، وَأَحْسِبُهُ قَالَ: وَلَوْ بَعُودَ تَعْرِضُهُ عَلَيْهِ

Narrated Jabir: Allah's Apostle said, "Extinguish the lamps when you go to bed; close your doors; tie the mouths of your water skins, and cover the food and drinks." I think he added, ". . . even with a stick you place across the container."⁴⁶

This clearly shows his concern for the purity of water and eatables. There are numerous injunctions in the Quran and hadith related to water consumption and management ethics which shows the significance of water conservation and sanitation for humanity.⁴⁷

Incorporating Water Management Strategies with Islamic principles

Islam is a versatile and universal religion that offers a complete code of life for humans. Islam provides rules and guidelines not only for worldly affairs but also for hereafter. Islam has imparted great stress water conservation and management for ecological stability and sustainability. Islam is an active and compliant religion that motivates to use modern strategies, technologies and policies for the well-being of human being. Water conservation is much needed today and Islam provided its very principles almost 1400 years, as mentioned above. Islam supports modern management strategies that are in compliance with its teachings such as the 3R rule of reducing, reuse, and recycle. As Muslim jurists have written

about the purification of used water by certain techniques describes in Islam such as adding a large and certain quantity of clean water in impure water in particular conditions purify the water because significant overflow takes away impurities. So, in the light of Islamic teachings jurists have found various ways of water conservation and used water management.⁴⁸ Purification of used water through different strategies and its treatment is also discussed in studies of Islam scholars and fatwas of Islamic jurists.⁴⁹ It illustrates that Islam has the ability to provide solutions to crisis of modern world.

As in 21st century many factors are causing water scarcity, world needs to adopt a more consistent approach towards water management.⁵⁰ Studies shows that some water re-use systems, balance of water resources consumption, influence of forestry and agriculture, water supply and sewage systems, groundwater reservoirs and watershed control can be beneficial for water resources management.⁵¹ Literature confirms that Islam suggested the same strategies centuries ago, sustaining ecological conservation.

UN status report on the application of integrated approaches to Water Resources Management 2012 shows that water resources are under threat and man is facing many water-management challenges in context of economic, cultural, political and social settings.⁵² A sense of social responsibility can play an important role to meet these challenges. Islam supports sustainable ecological setting in which man is given the stewardship of natural resources.⁵³ To assure the continuation of core activities of life on Earth, it is an obligation to conserve this precious resource. Misuse of water is tantamount to desecration since it would disrupt a well-balanced natural platform that ensures life. This 'blessing' must be used with reverence for Allah and discretion.

Recommendation

- * Islamic principles should be incorporated with modern water management strategies.
- * There should be public awareness campaigns and seminars about water conservation.
- * Islamic lectures citing Quran and hadith should be delivered at the local level to encourage people to reduce water usage.
- * There is a misconception in people that for ablution (Wudhu) or bath (Gusl) much water should be or can be used to get perfectly purified, to clear them examples from hadith can be cited that Holy Prophet (PBUH) used to consume only a small specific quantity of water.
- * There must be alternative approaches to water management based on Qur'anic injunctions as these revealed principles are often neglected while making management policies. There must be a group of jurists while making the policies who could specify the reuse conditions of treated water.
- * A traditional water management tool in Islam is giving significance to water and using it according to necessity. This conventional and spiritual tool is likely to have more success in the Muslim world as linked to religious beliefs.

- * Using recent storage technologies and water management equipment must be used as Islam encourages to struggle for betterment and survival.
- * Contemporary conservation techniques and management rules under Islam should be followed; such as Islam supports the 3R rule (Reduce, Reuse and Recycle).

Conclusion

Water is the sign of Allah's infinite blessings that not only rains down from heaven but is also abundantly present on earth. Thus, in the Holy Qur'an, the Lord of the Universe mentions water resources like oceans, rivers, canals, streams, springs, and wells as his mercy and source of life. Water resources are blessings from Allah not only for human beings but also for all living things. Water resources have diverse uses and benefits such as balancing ecological systems, nurturing plants and agriculture, providing means of transport, moderating civilization, and sustaining economic growth. Islam provides basic principles of consumption, conservation, and management of water resources. Considering water's vital roles and status in the world, it is obligatory for humans to acknowledge and express thanks to Allah for this ongoing bounty and great blessing.



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