Religious based water management campaigns for sustainable development: prospects and challenges

Sheriffdeen Muhammad 1, S Amal2

1 Natural resources and environmental management (PS-PSL IPB), Bogor Agricultural University, Bogor, Indonesia.
2 Department of Veterinary Clinic Reproduction and Pathology, Bogor Agricultural University, Bogor, Indonesia
Email: Musheriff307@gmail.com

Abstract. A raising awareness of the environmental issues associated with natural resources utilization and degradation has been grown since the past few decades. Depletion of the renewable and non-renewable environmental resources has occurred mainly as a result of unsustainable utilization. This paper presents the idea of water conservation and utilization campaigns based on Islamic principles, since Islamic religion still exerts great influence on societies and because water plays an extremely pivotal role within Islam. Awareness campaigns and water conservation programmes based on religious principles have proved very useful, beneficial and cost effective in different areas of the Muslim world. Teachings regarding practical and correct use of water in the Islamic religion were highlighted, applicable examples from some Muslim countries including the challenges were also highlighted, and it was concluded that public awareness campaigns based on Islamic principles, can be a powerful yet cost effective tool to supplement other water conservation and management policies.

Keywords: water conservation, Islamic principles, public awareness.

1. Introduction
A raising awareness of the environmental issues associated with current natural resource utilization and degradation has been growing since the past few decades. Depletion of renewable and non-renewable environmental resources has occurred mainly as a result of unsustainable utilization. Today, most countries are placing unprecedented pressure on water resources. Much of the natural resource base already in use worldwide shows worrying signs of degradation. According to the Millennium Ecosystem Assessment, 15 out of 24 ecosystem services examined are already being degraded or used unsustainably; these include capture fisheries and water supply. Moreover, the global population is growing fast, and estimates show that with current practices, the world will face a 40% shortfall between forecast demand and available supply of water by 2030.

Culture, which includes religion, clearly influences people perception and behavior regarding natural resource use and conservation. Researchers, policy-makers, and donor organizations are
beginning to acknowledge the need of coupling local values and culture in development projects and planning. The United Nations Environment Programme (UNEP) commissioned a collection of essays on ethics because "if the Rio consensus is to have any meaning, it has to be grounded in the notion of human right and wrong in relation to the way the earth and its bounty are made to serve the interests of all" (UNEP 1994, 2).

This paper therefore presents the idea of supplementing conventional solutions to water management problems with public programs based on religious principles. It argues that although technology always seems the ultimate answer to modern problems especially of this sort, public awareness programs based on Islamic principles and practices regarding water and its utilization could be adopted as an integral supplement.

2. Water in Islam

In Islam, natural environment and its resources such as water, air, sunlight, soil, plants, animals etc… are generally seen as evidence to God’s omnipotence and essence; it is also seen as mercy of God upon humans for their sustenance but also as a trust which must be strictly preserved. The vision Muslims have of water in particular has been influenced by different factors and several conditions throughout time and space. Water is the single natural environmental element most mentioned or expressed throughout the Quran. The Arabic word for water is (ma’a), it was mentioned sixty-three times in the Quran, emphasizing its importance and the obligation to manage and utilize sustainably. For instance, “And have you seen the water that you drink? Is it you who brought it down from the clouds, or is it We who bring it down? If We willed, We could make it bitter (undrinkable), so why are you not grateful?” [Qur’an 56: 58-70].

This is one of the various verses describing the importance of water. Other notions of water are also mentioned in the Quran many times such as, the sea, rivers, rain and fountains as mercies of God that has been bestowed upon human (Abdel Haleem, 1989). The Holy Qur’an has set down the foundations of water conservation and demand management by making it known to humankind that earth’s water resources are finite in verse 23:18 of Surah Al Mu’minun (The Believers): “And We sent down from the sky water (rain) in (due) measure, and We gave it lodging in the earth, and verily, We are Able to take it away.”

Among theoretical considerations, environmental ethics is considered as a proper solution for extensively and continuous environmental degradation. Since environmental ethics is essentially based on intrinsic values and beliefs, religions have been getting more recognized to define proper environmental ethics mainly because they try to illuminate what possessed intrinsic value and behaviors toward nature as a moral (Sarvestani and Shahvali 2008).

2.1 Water utilization and conservation in Islam

Moderation in consumption is one of the most virtues in Islam which is urgently needed to be applied. Even if there is a large availability of clean water resources, it does not justify its wastage, as Prophet Muhammad (peace be upon him) advised Muslims not to waste water even if they were near a river. Water preservation lies at the heart of preserving life in all its aspects; it plays an essential role in Islam due to the major importance placed upon purity and cleanliness. Purification through ablation is an obligatory component of the Islamic prayer ritual; prayers carried out in an impure state are invalid. This means Muslims are obliged to carry out ritual ablation before each of the five daily prayers. In addition, a more thorough ritual is required on specific occasions (Assayed, 1981). Therefore, the Islamic Law does not just urge moderation and thriftiness in the use of water during ablation but goes
into great detail on the subject of water and its use to ensure the fair and equitable distribution of water within the community. For example: « And [recall] when Moses prayed for water for his people, so We said, “Strike with your staff the stone.” And there gushed forth from it twelve springs, and every people knew its watering place, So eat and drink of the sustenance provided by God, and do no spoiling on the (face of) the earth» (Q2:60).

The Prophet also said: «Beware of cursed things: defecating in water, in shades (where people rest) and in the path that people take». Limiting waste and conserving water is also highlighted in Islamic teaching. The Qur’an tells mankind that they should care for precious resources and limit waste: “O Children of Adam eat and drink: But waste not by excess, for God love not the wasters.” Furthermore, there is evidence which states that the Prophet used just 2/3 of litres of water to perform ablution and that he spoke of not wasting water even when it was abundant: “Do not waste water even if performing ablution on the bank of a fast-flowing, large river.” Whilst these two principles may appear to be common sense notions, the strength of invoking these Islamic principles is their ability to reach out to a wide group of people and also to change behaviours in the Muslim world.

3. Islamic public awareness campaigns

In Islam, human are the only being that God has “entrusted” with the responsibility of looking after the earth. According to the renowned Indonesian conservationist professor H. Alikodra, building conservation moral regarding natural resources must involve three important aspects, which are; intellectual, emotional and spiritual aspects. Since religion still has a great influence on society, awareness campaigns and resource conservation programs based on Islamic teachings have proven to be quite successful and cost effective in some Muslim countries (Gilli, 2010). In a survey conducted in Amman, 64 per cent of respondents thought that imams had an important role in environmental education and public awareness – although only 34 per cent indicated that imams were already filling that role (Al-Sodi 1993).

This approach to public awareness has been adopted in several awareness campaigns in Yemen and some other predominantly Muslim states since the 1990s mainly due to its strong influence and ability to reach all strata of society (Gilli, 2010). According to Atallah et al., 1999, the Islamic based awareness strategy is feasible first, because Islam has a strong influence on Muslim faithful’s anywhere in the world, secondly, water conservation and protection are stressed in Islamic teachings, and lastly, Islamic communication channels are very effective in raising public awareness because it is able to reach even the less educated ones that might not have a proper ecological knowledge. The goal of these campaigns has been to make people more aware on water issues in their region focusing mainly on scarcity and conservation. This was done by teaching the public basic data but also by stressing the importance of a change in behaviours in water use (Atallah et al., 1999).

These campaigns have also been used to introduce new techniques like the reuse of treated wastewater for agriculture, or dry sanitation applets in households (Faruqui et al, 2001). While this strategy may not appear to be a huge ambitious project in comparison to the expensive desalination projects launched by some countries, the reality is that these are working towards long-term solutions. Desalination does provide clean water but it is a quick fix with harmful environmental side effects which doesn’t tackle the root causes of water scarcity or try to change people’s water habits. If the Muslim world is serious about dealing with water scarcity than it will need to do both- change people’s attitudes and embrace technologies which provide clean water for their populations.
3.1 Examples of Islamic water management campaigns
In an arid climatic zone, high population growth and limited natural water reserves, Jordan one of the most water-stressed countries in the world is a good example. The annual average water availability per person dropped from 3,600 cubic meters in 1946 to 145 cubic meters in 2008, the influx of more than 628,000 Syrian refugees since 2011 has put further pressure on the country’s scarce water resources, with annual water availability dropping to around 128 cubic meters per person since 2011. Jordanian water authorities in conjunction with the Ministry of Awqaf and Islamic Affairs are running a religious based water use campaign. Imams were trained and enlightened regarding issues of daily life, including water conservation. They were provided with information about Jordan's water resources and the shortage the country faced, and about the need for public co-operation and participation in water conservation through the Islamic approach. Posters, leaflets, booklets and stickers have also been used to promote awareness on water issues, this way people could be reached in the streets or in their households thus not confining the campaigns to only religious environment. So far available studies have reported positive impacts of these campaigns (Ayesh 1996). According to Abderrahman (2009), Saudi Arabia experienced extensive and rapid developments in all sectors during the last two decades with a rapid and vast increase in water demand. The country follows the sacred principles of the Muslim law “Shari'a,” where water is considered the common entitlement of all Muslims.

In 1997, the WHO launched the first "Health Education and Awareness through Mosques" campaign series in Afghan cities in order to promote good health practices and to raise awareness about water conservation and the importance of safe water, adequate sanitation, and disease prevention. The campaign included the training of local imams and preachers by water and religion experts, providing them with clear and strategic messages obtained from the available literature. After the training, each imam prepared a special Friday sermon and delivered it fortnightly at two consecutive Friday prayers. Initial evaluation showed that the messages were well received.

3.2 Strategies for effective Islamic awareness campaigns
The success and effectiveness of these campaigns largely require a close co-ordination and partnership and institutionalization between the agencies responsible for water supply, demand management, and education, media, and awareness. The religious authorities must not only be fully engaged but also make an official religious stance on water and its utilization. Islamic awareness campaigns should always be integrated with the use of other communication tools and channels such as social media, newspaper ads, roadside billboards etc.

Women and children especially teenagers are important players in water utility within the domestic environments and a change in water attitudes must certainly pass through them. It would therefore be wise to focus more awareness campaigns on women and teenagers thus providing them with the tools to ensure a sound management of water, at least domestically. These campaigns should also not be targeted only at domestic consumers, rather industrial, agricultural and other possible and reachable consumer should also be targeted as much as possible.

Finally, these campaigns require long term planning and scope because they involve behavioural change which naturally takes slow pace and long period to yield positive results.
3.3 Problems of Islamic awareness campaigns

When it comes to programs such as these, the main problems are usually that of government authorities not having faith or underestimating the effectiveness of these kinds of approaches due to the fact that they seem less ambitious and actually requires longer periods to yield results. Also the religious leaders who are crucial players in these programs may sometimes be unwilling to render adequate or required support to the programs even though the programs can be religiously justified.

4. Conclusions

No doubt that religion is a very important tool in shaping people’s behavior and attitudes towards natural resource utilization, the Islamic water campaigns have been found to be really effective in this regard. However, to make them more effective and sustainable, governments must demonstrate real commitment by institutionalizing and ensuring adequate partnerships and co operations among relevant agencies and partners which include both private and public organizations and also noting the role of women and teenagers. Religious institutions and leaders especially at the local level must also show great commitment and support towards these programs by declaring it as religious obligations thereby making official religious stance regarding sustainable water use.

References

[1] M Abdel Haleem 1989, Water in the Qur’ān. Islamic Quarterly, 33(1), 34-50.
[2] S Atallah, MZ Ali Khan and M Malkawi 1999. Water conservation through Islamic Public Awareness in the Eastern Mediterranean Region. Eastern Mediterranean Health Journal, 5(4), 785-797.
[3] Al-Sodi, Abdul Mahdi 1993. Attitudes of Jordanian Citizens towards Environmental Protection in the Sweileh and Naser Mountains Areas (in Arabic), Environmental Research and Studies Journal, 3, Jordan Environment Society, Amman.
[4] As-Sayyed, Sabeq 1981. Fiqh essounna [Understanding the Prophet's traditions], 3d ed., Dar El-Fiqh, Beirut.
[5] Ayesh, Mohammed 1996. "Awareness Project in Water," in Environmental Communication Strategy and Planning for NGOs, Ma'ain, Jordan, 27–31 May 1996, Jordan Environment Society, Amman.
[6] NI Faruqui, AK Biswas and MJ Bino 2001. Water management in Islam. IDRC, Ottawa, ON, CA.
[7] F Gilli 2010. Islam, water conservation and public awareness campaigns. University of Ca’ Foscari, Venice, Italy.
[8] UNEP 1994. Land degradation in south Asia: Its severity, causes and effects upon the people. 78 World Soil Resources Report.
[9] A Abedi-Sarvestani, M Shahvali 2008. Environmental ethics: Toward an Islamic perspective. 3(4), pp.609-617American-Eurasian Journal of Agricultural and Environmental Sciences.
[10] WA Abderrahman 2000. Application of Islamic legal principles for advanced water management. 25(4), pp.513-518. Water International.