

## **Foundation:**

# **Exploring Local Society Perspectives on Water Conservation Based on Islam Concept–Case Study in Some Sub District of Malang, Indonesia**

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**Abstract:** Islam has prestigious concept in protecting or conserving environment for air, water and land. The concept comes from the holy Qur'an and hadith that are rich in proverbs and precepts that speak of the Almighty's design for creation and humanity's responsibility for preserving environment. However, in general, a lot of Muslims on the other hand lack of knowledge about the thought and the others who already know the concept are also not all apply their understanding in their daily activities. Hence, this study tried to explore local society's perspective on water and water environmental conservation based on Islamic approach. 9 villages were selected for field work in three sub districts of Malang dominated by Muslim society (90 – 100 %) and have Islamic boarding school. Respondents were classified into three groups. The groups were 1) general society (GS = 136 respondents), 2) *Ustadz/Ustadzah* (Islamic teachers: UST = 83 respondents), and 3) *Kyai/Ulama'* (Islamic leader: IL = 36 respondents). A questionnaire was designed with questions regarding the respondents' understanding, attitudes, and their behavior towards water conservation. The result showed that majority of the respondents (GS, UST and IL) knew about the importance of river water for all aspects of life. UST and IL aware the consequence of pollution of water is detrimental to the environment, and that is prohibited by Islamic principles. On the other hand, GS had low awareness about the consequences of polluting river water and its consequence and also Islamic thought. Thereby even GS knew about the consequence of the polluting attitude of river environment, they did not perform daily practice, and also they did not know to conserve water and water environment is requested from Islamic instruction. The reason of consequence insensitive thought was considered that they thought that religious services only involve the five principle of Islam (*Syhadah*, Prayer, *Shaum* (fasting), *Zakat* (Giving) and *Haji* (pilgrimage to Mecca). Therefore, it was consequence that education on the importance of environmental protection from perspective on Islamic principles should be enhanced for public benefit. In this case study, the significant potential of Islamic leaders (*Ustadz or Kyai*) to mandate to teach their followers was stated.

Keywords: *Environmental awareness, Environmental education, Weakness of consequence sensitive thought*

## **1. Introduction**

In Islam, water is seen as an objective gift of God with no mystic value attached to it, yet, it is an endeared part of the environment since it is a God given source of life (Dien, 2009). The word *maa'* (water) is used in the Qur'an about 60 times. God said in Holy Qur'an about the importance of water:

"Do not the disbelievers see that the heavens and the earth were a closed-up mass, then We opened them out? And We made from water every living thing. Will they not then believe?" (Surah Al-Anbiya', 21:31).

Islam is a universal religion and has the solution for every problem of human kind and especially environmental problem. For many Muslims, citing Qur'an and hadith is enough to prove that Islam has always embraced complete environmental ethics, while others are more critical. Muslim

readily acknowledge that the guidelines are all there in Islamic doctrine as follow (1) *Tawhid* (unity), (2) *Khilafa* (trusteeship), and (3) *akhirah* (accountability, or literally, the hereafter), three central concepts of Islam, are also the pillars of Islam's ethic (Hope and Young 1994).

The protection of water is encouraged, as it is one of the most precious commodities in the Qur'anic lands and also hadiths. It is forbidden to discharge sewage into streams and rivers. All water wells must be protected by excluding all potentially contaminating activities around them and no animals should be kept in close proximity to them (Kula 2000).

Indonesia is majorly an Islamic nation with world recognized biodiversity and conservation priorities (Supriatna *et al.* 2009). However it is inevitable that in cases that contradiction occur between Islam religion and diverse environmental problems. Hence taking example for local perception on water conservation was measured in this study on a base of Islamic concept. The study was focused on Malang, East Java, Indonesia since the consideration that in Malang region there are a lot of natural water bodies, which

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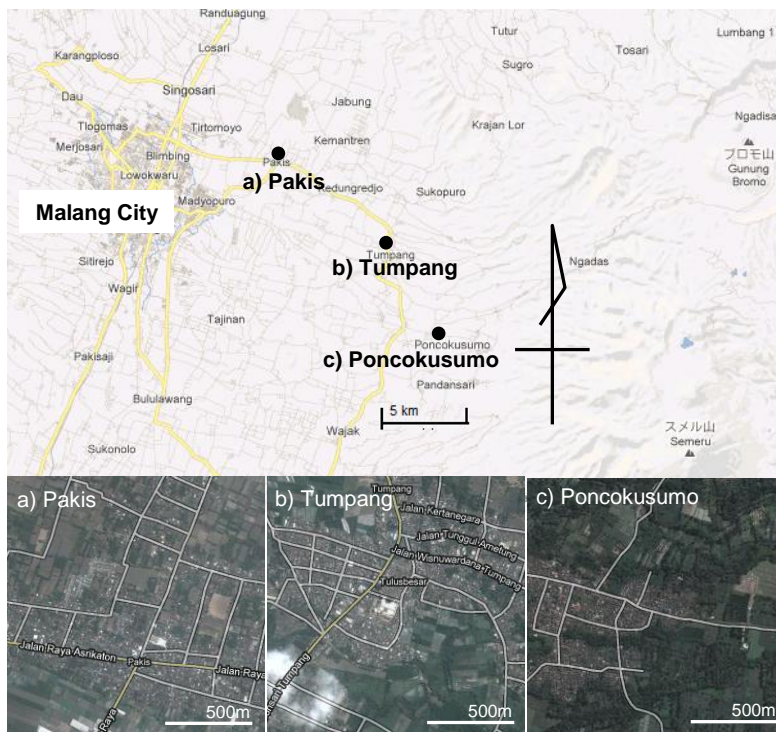


Fig. 1. Location mp of field survey (modified from Google map 2012).

has been used for local peoples' daily life, where Islamic followers are the dominant (90–100 %). This preliminary study is intended in order to look for problem statement and approach to enhance Islamic community's awareness about water and all problems related with it.

## 2. Methods

This study was conducted in nine villages of three sub-districts of Malang District, East Java, Indonesia. Field works were performed from September to October 2012. There were four considerations to select areas for study sites: 1) the locations of the study sites are near from river, 2) people in the study sites use river or spring water for their daily activities, 3) dominant people of study sites are Muslims, and 4) each of study sites has Islamic boarding school to explore Islamic perception from Islamic leader. Study sites are along Raya Belung road, where a) Pakis is semi-urban area of Malang city, c) Poncokusumo is country side of Malang city, and Tumpang is between these areas (Fig. 1). From each of study sites, these three districts are explained in Table 1.

It was assumed that respondent's understanding on Islamic concept in water protection contributes to attitude of Islamic followers, for example, it was considered the attitude to dispose out waste to the water *e.g.* flowing water (river). Then, the distributions of questionnaires were applied in field survey. In addition to support the approach, semi-structured interviews, field observations, and In-depth interview were preceded. It was considered the interviews from Islamic leaders were as key informants in this study *via* their perspective on water conservation based on Islamic concepts. The contents of questionnaire include respondents'

Table 1. Distribution of respondents according to locations and personalities.

Sub District	Village	Total Respondent			Total
		GS	UST	KY	
Poncoku-sumo	Poncoku-sumo	15	8	4	27
	Wonomulyo	15	7	4	26
	Wonorejo	15	8	5	28
Tumpang	Duwet	15	6	3	24
	Tulus Besar	15	8	3	26
	Bokor	15	11	3	29
Pakis	Sumberpasir	15	15	5	35
	Bunut	15	10	4	29
	Pakisjajar	15	10	5	30
Total		135	83	36	254

GS = General Society, UST= Ustadz/ Ustadzah (Islamic teacher); KY= Kyai (Islamic Leader)

understanding, attitudes, and their behavior towards water conservation.

The questionnaire was designed by these nine hypothesizes. Water and water resources have enormous benefits for humans. Thereby, water was comprehensively used in people's daily life as essential resource, for example, cooking or all alive or ecosystem benefit of a person. Once responder recognize the beneficial properties for the water, the person do not dispose some rubbish or waste material to river (*e.g.* household waste, plastic, *etc*). If a person has ever polluted the water, the experience has particular reason. In this context, responders anyhow know the consequence of polluted state of water and river environment. Then if a responder know Islamic's rule about water and the consequences of polluting water, the person does not degrade water and water environment. Thereby the rate of awareness of Islam and water environment is related to educational attainment and regional characters.

Respondents were classified into three groups based on their understanding on Islamic concept on water conservation. The three groups are as follow: 1) general society (GS = 135 respondents). They were farmers, traders, labours, housewives, and students. The age was from 16 to 62, 58 are males and 77 are females. 2) *ustadz/ustadzah* (Islamic teachers) in Islamic boarding school (UST = 83 respondents), and 3) *Kyai*/Islamic Leader (KY = 36 respondents). The total number of respondents was 254. Data were analyzed using descriptive statistic with Microsoft excel.

## 3. Results

### 3.1. Educational Background of Respondents

All respondents were Muslim. Educational background of respondents varied for each group (Fig. 2). The highest

percentage of educational attainment for GS was elementary school which was followed by those who had no form of formal education. Attainment degree of education had regional trend from urban to countryside that was higher and lower, respectively. Majority of GS who did not continue their studies from elementary to higher attainment degree were located in rural to country side of sub district Tumpang and Poncokusumo.

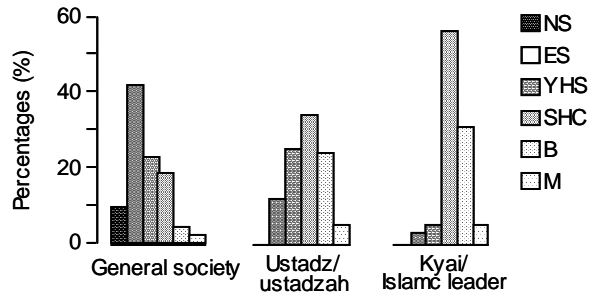


Fig. 2. Educational background of respondents (NS: Not study, ES: Elementary School; YHS = Junior High School; SHC = Senior High School; B = Bachelor Degree; M = Master Degree, D = Doctoral Degree).

### 3.2. Perspective on Water Conservation

The river and spring provides water used by respondents in all three villages for drinking, bathing, sanitation needs, irrigation, additional socio-cultural and religious usages, and role as comprehensive economic functions.

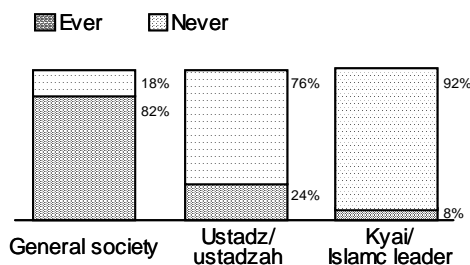


Fig. 3. Percentage of respondent's habit on the river. The question was “Did you ever drop out material to the river or make something potentially affected the river condition?”

82% of GS respondents were fond of drooping out waste as the waste disposal habits in dropping out materials (degradable or un-degradable waste) to the river or spring water. In contrast, it was 24% for UST, and then only 8 % for KY were involved in such practices (Fig. 3). There was difference of attributed to their level of education. Besides most of responder of GS, UST and KY knew about the consequences of dropping waste on the river, such as

pollution, flooding, and scarcity of water, but were not concerned enough about the consequences of their daily attitude.

67 % respondents of GS did not know that Islam teaches its followers not to drop out all of kinds of waste to the water, even flowing water (river), as this activity was a sin that has negative effect on others. The concept and 14% were already enlightened about it. While majority of respondent from UST and KY knew about the concept, 79% and 100% respectively (Fig. 4). The high level of understanding and attitudes indicated the majority of respondents for UST and KY positively correlated with the low level of their abuse to the environment.

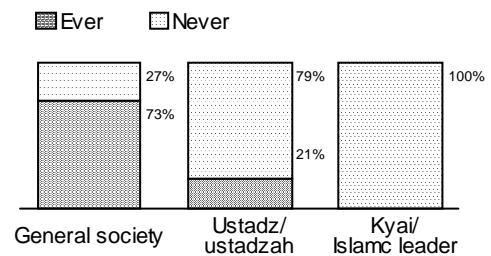


Fig. 4. Respondent understanding about Islamic concept on water conservation. The question was “Did you ever know Islam prohibit their followers to pollute water or use it more than necessary?”

## 4. Discussion

### 4.1. People’s perception

The data from questionnaire and the information from semi-structured interviews, field observations, and in-depth interview with Islamic leaders were used to focus Muslim’s perspective on water conservation based on Islamic concepts.

The highest percentage of educational attainment of the UST and KY was senior high school or in higher level education (Fig. 2). Majority of respondent in this study spent their study in Islamic boarding school that generally has a perception that Islamic education can improve their personality in the world and the hereafter. Hereby, it is able to postulate that the level of their education indicated their higher awareness on environmental matters among respondents, and then the educational background reflect understanding differences on water and ecosystem awareness among respondents.

On the other hand, students did not continue their study to high level of education in country side. The significant factor was considered as economic reason or destitution. According to the field survey, regional water bodies were comprehensibly used in people’s daily life. The enormous benefits of water, and its environment were highly recognized as 82% for GS (Fig. 2). However even most of responders of GS knew about the consequences of dropping waste on the river, such as pollution, flooding, and scarcity of water, they have disposed rubbish or waste material to river and spring in reality. This is the real situation even responders knows the

consequence and polluted state of water and river environmental degradation, and also responder knows the type and meaning of pollution of river, the awareness is different from real attitude. Due to the nature, there were actual habits that respondents dropped out their waste directly to the river or spring water. On the other hand according to interview, the reasons of the habits were as follows: 1) habit owing to non-availability of rubbish collection system, 2) insufficient disposal sites around their homes, and 3) non-consideration on the consequential effect of dropping waste to the river. Considering the reason of course due to social problem, however, it is obviously rooting personal habits.

According to interview, most of GS knew that water plays a role in sustaining human life. Thus, when better co-existence between their life and environment (river) is considered from Islamic thought, it is required to notice that water is not only beneficiary for their personal daily consumption, but also essential for other aspects in environment. When people have a good understanding of their environment, it need to be sensitive to give another priority to environment and required to be sensitive with it. Islamic thought is logical and comprehensive. However according to the interview, not small number of Muslims were thinking that religious services in Islam only involves the five foundational principles of Islam which are *Syhadah*, (Praying five times every day), *Shaum* (fasting) in *Ramadhan* month, *Zakat* (Giving) and *Haji* (pilgrimage to Mecca), and then their sense was not consequence sensitive for problems in their daily life. Considering the context, an optional survey was tried to do during the field survey with several GS responders. That were showing some God's word in holy Qur'an and Prophet's word in hadith about Islamic rule in water protection to the respondents, their response and future attitude towards water, where majority of respondents showed commitments to save and not pollute water.

It indicates the further enlightenment through Islamic teachers and leaders was required to teach the *ummah* (Islamic followers) about the Islamic rule in water conservation.

#### 4.2. Islamic approach

Islam has prestigious concept in protecting or conserving environment for air, water and land. The concept comes from the holy Qur'an and hadith that are rich in proverbs and precepts that speak of the Almighty's design for creation and humanity's responsibility for preserving environment. According to Islam, the presence of water on the earth is a manifestation of God's love for all living creatures, especially for humans. God has glorified human with the presence of water on Earth. God gives human right to take benefits from the existence of water as His word:

“And it is He who made the sea to serve you, which you may eat from it, tender meat, and extract from it ornaments that you wear. And you see the ships plowing through it, as you seek His bounties, so that you may give thanks” (Surah An-Nahl, 16: 14).

In fact, the purpose of water creation by God is to facilitate the life of living creatures, especially human beings on earth (Kula 2000). In this case, God does not demand anything from man but an expression of gratitude for the existence of favors in the form of water. The form of gratitude that God expected from human is obedience to God as His creation and willingness to maintain and utilize the favor of God wisely (Al-Baghawi 1993).

The holy Prophet also emphasized every one of us as a guardian, and will be asked about his subjects. The meaning of this hadith is that we are not here to conquer nature. We can use the resources that Allah has created, but we have to be responsible. We are to treat Allah's creation with mercy and gentleness when using them.

To facilitate Muslim in managing nature, Islam has a law called *Shari'a* (the moral code and religious law of Islam). The *Shari'a* divides human action into categories: 1.) *Wajib* (obligatory actions), 2) *Manditb* (devotional and ethical virtues), a Muslim is encouraged to perform those actions, 3). *Mubah* (permissible actions), complete freedom of choice, 4). *Makruh* (abominable actions), morally but not legally wrong, 5). *Haram* (prohibited actions) forbidden by Islam. Every human action will be rewarded according to its actions, and every act will be held accountable in hereafter.

One of the prohibited actions (*Haram*) in this context is polluting the environment. Human beings are not allowed to consume and pollute nature carelessly. The Prophet Muhammad *sall Allahu 'alay-hi wa- sallam* (May Allah pray on him and grant him peace) warned people when he said: “Be on your guard against three things which provoke cursing; easing in the watering places, and on the thoroughfares, and in the shade (of the tree)” (Dawud 1990). The meaning of this hadith that Prophet prohibits humans from defecating at places frequented by others and teaches them that human waste has its specific place. If it is dropped at unguarded areas, it can cause a health hazard and can lead to many illnesses (Gallant 2009).

Based on hadith above, it is announced that Islam teaches us to respect the rights of others. If we correlate this hadith in this study, considering the number of people that dropped out their waste to the river and spring. Of course, the attitudes are contradiction with Islamic teaching, in which the action is to be removed or to be negated in order to keep the right of another human's to access to clean water and healthy river. In Islam, we call this action as *dholim*, (despotic) and this action is a big sin. Though in absolute Prophet always emphasizes to his *ummat* (followers) that all people, especially Muslims, are brothers. In this case, the definition of brothers is the request for every Muslim to look after each other's honor and then protect the rights of other Muslims from acts that would prevent the negative impact from other not informed Muslims. Therefore, Islam prohibits disposal of waste directly into the river, especially if the waste disposal is defined as negative effect, and moreover dangerous for the safety of other humans.

Another lesson from hadith explained above is that Islam has a good concept of hygiene. Hygiene, the usage of water and sanitation facilities all work together in Islam and are interdependent (Gallant 2009). Cleanliness starts with the

individual. The Prophet Muhammad *sall Allaahu 'alay-hi wa-sallam* (May Allah pray on him and grant him peace) has linked cleanliness with our beliefs, and as we know, to believe is one of the basic principles in Islam. As it is reported from Ibn Malik Al-'Ashari that Prophet Muhammad *sall Allaahu 'alay-hi wa-sallam* (May Allah pray on him and grant him peace) said: Cleanliness is half of faith (Muslim 2004).

Islam is also against the extravagant usage of water. This applies to private use as well as public, and whether the water is scarce or abundant. This action could be categorized as *Haram* action. The hadith that refer to this instruction was narrated from Abdullah bin 'Umar (May Allah be well pleased with both of them), that the Prophet Muhammad *sall Allaahu 'alay-hi wa-sallam* (May Allah pray on him and grant him peace) passed by Sa'ad (May Allah be well pleased with him) when he was performing *wudhu* (ablution), He, the Prophet Muhammad *sall Allaahu 'alay-hi wa-sallam* (May Allah pray on him and grant him peace) said: What wastage is this? Sa'ad said: Is there wastage in *wudhu* also? The Prophet Muhammad *sall Allaahu 'alay-hi wa-sallam* (May Allah pray on him and grant him peace) said: Yes, even if you are at a flowing river (Ahmad, 2000). In another hadith, the Prophet Muhammad *sall Allaahu 'alay-hi wa-sallam* (May Allah pray on him and grant him peace) said: wasting water and using it more than necessary has been declared *Makruh* (undesirable) (Majah 1975).

Even *makruh* in this context is lighter than *haram* (prohibition) context, but there are Quranic verses that explain the prohibition to use water more than necessary or we called this action as *Mubazir*. God said in Holy Qur'an: The Qur'an states (17:27): Verily, the extravagant are brothers of devils, and devil is ungrateful to his Lord. Based on this surah, using water than necessary is a sign of ungratefulness towards God. All Muslim must obey this direction.

Another note according to Islamic scholars, the reason why this type of behavior has been discouraged in Islam is that it would lead to the development of a wasteful outlook towards the gifts of nature. In the light of hadith from (Ahmad 2000), excessive use of world non-renewable resources such as fossil fuels, even by those who can well afford it, is totally out of line with Islamic teaching (Kula 2000 and Hussain 2007).

All of God's words and Prophet's words showed that Islam has complicated rule in water conservation. We argued that lack of social understanding of the Islamic teaching to protect water is the negative effect, which is anyhow caused by community leaders (or Islamic leader).

In this study, people in the three sub districts in Malang East Java, Indonesia were one particular area that retains the traditional social system. Mangunjaya and Abbas (2007) stated that Indonesian Muslim hold tradition and even Javanese society system, *Ustadz* and *Kyai* are the central figure of the most followed orders and *fatwa* (juristic ruling concerning Islamic law issued by an Islamic scholar) in a local society. Thereby the Islamic leader (*Kyai* and *Ustadz*) has been a more respected figure within the religious scholars, even when compared with the figure of the head of a village.

The World Bank Faith and Environment Initiative (2005) stated that religious leaders (Islamic leader) can play a role in influencing peoples' perspectives on water conservation in three ways: 1) They can teach about the environment and natural systems upon which life depends; 2) They can provide active leadership in initiating practical conservation projects; and 3) They can seek to persuade their members that each individual has a moral obligation to contribute in some way to conservation, and can provide guidance on how to pursue conservation objectives. Based on these reasons, optimizing the role of Islamic leaders in changing the mindset of the people in the conservation of water absolutely has significant role that must be done in order to improve water quality and quantity today and in the future. By this case study, the importance of consequence sensitive Islamic thought has stated for water and water environmental matter by the potential role of Islamic leaders.

## 5. Conclusion

Majority of the respondents already knew about the importance of water for all aspects of life. UST and IL were aware that pollute water detrimental to the environment and prohibited by Islamic principles. However, the GS still have a low level of awareness about the consequences of polluting river water, as well as, the problem definition in Islam. Although some respondent of GS knew about the consequence of polluting river, they do not practice Islamic instruction because they think that religious services only involve the five principles of Islam (*Syhadah*) pray, *Shaum* (fasting), *Zakat* (giving) and *Haji* (pilgrimage to Mecca). Optimizing Islamic leader to enhance general society is to be considered as key to establish better environmental awareness among GS in the future.

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## 7. References

- Ahmad (2000) *Musnad Imam Ahmad bin Hambal*. Daar El Fikr, Beirut, Lebanon.
- Al-Baghawi (1993) *Al-Tafsir al-Baghawi al-Musamma al-Ma'allim al-Tanzil*. Daar al-Kutub al-Ilmiah, Beirut, Lebanon.
- Bukhari (1987) *Shahih Al-Bukhari*. Daar Ibn Kathir, Beirut, Lebanon.
- Dawud, A.S. (1990) *Sunan Abi Dawud*. al-Maktabah al-'Ashriyah, Beirut, Lebanon.

- Dien, M.I. (2009) Cleanliness and Islam. *Conference on Faith Water, Alliance of Religion and Conservation. Sarum College, July 5<sup>th</sup>- 7<sup>th</sup> 2009*, U.K, pp59-61.
- Gallant, M.R. (2009) Water Conservation, Sanitation and Hygiene in Islam. *Conference on Faith Water, Alliance of Religion and Conservation. Sarum College, July 5<sup>th</sup>- 7<sup>th</sup> 2009*, U.K., pp51-55.
- Hope, M., and Young, J. (1994) Islam and Ecology. *Cross Currents*, Summer, 44(2): 180-192.
- Hussain, M. (2007) *Islam and Climate Change: Perspectives and Engagement, a Comprehensive Overview of Climate Change from an Islamic Perspective*, Source: <http://www.wisdominnature.org.uk/Resources/reading.htm>.
- Kula, E. (2000) Islam and Environmental Conservation. *Environmental Conservation*, 28(1): 1-9.
- Majah, I. (1975) *Sunan Ibn Majah*. Dar Ihya al-Turas al-Arabi.
- Mangunjaya, F.M., and Abbas, A.S. (2007) *Khasanah Alam: Menggali Tradisi Islam untuk Konservasi*. Yayasan Obor Indonesia, Jakarta.
- Muslim (2004) *Shahih Al-Muslim*. Daar El Fikr, Beirut, Lebanon.
- Supriatna, J., Mangunjjaya, F., Arisona J., and Perbatakusuma, E. (2009) Water and Spritual Life in Batang Gadis National Park. *Conference on Faith Water, Alliance of Religion and Conservation. Sarum College, July 5<sup>th</sup>- 7<sup>th</sup> 2009*, U.K., pp56-58.
- The World Bank Faith and Environment Initiative (2005) *Islamic Boarding Schools and Conservation*. The World Bank.