

ENVIRONMENTAL PUBLIC POLICY FOR THE ISLAMIC ECONOMIC SYSTEM FROM SHARI'AH PERSPECTIVE: EVIDENCE FROM MALAYSIA

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ABSTRACT - As a vicegerent of Allah *Subhanahu wa ta'ala*, human beings are entrusted to pursue revealed teachings, rights, and preserve order and harmony of nature with other forms of life and physical elements. This study investigates the awareness, attitude, and behaviour of households to suggest policies and economic incentives to improve the air quality in Klang Valley, Malaysia. The results show that the level of awareness and attitude towards air pollution is high among the household respondents. However, the behaviour of the respondents is very low. The public policy makers should focus on developing policies to encourage environmental behaviour of Malaysians. The beliefs of man need to be changed to protect the environment. An Islamic way of life that includes environmental consciousness, simplicity, planning, legislation, monitoring and resource development are crucial institutions to keep track of developments for environmental public policy making in the Islamic economic system.

Keywords: Environmental damage, Islamic principle of environment, public policy

ABSTRAK – Kebijakan Publik tentang Lingkungan untuk Sistem Ekonomi Islam dalam Perspektif Syariah: Studi di Malaysia. Sebagai khalifah Allah *Subhanahu wa ta'ala*, manusia diperkenankan untuk mengikuti wahyu, mengejar hak-hak dan pertapaan yang diwahyukan dan harmoni alam dengan bentuk kehidupan dan elemen fisik lainnya. Studi ini menyelidiki kesadaran, sikap, dan perilaku rumah tangga untuk menyarankan kebijakan dan insentif ekonomi untuk memperbaiki kualitas udara di Klang Valley, Malaysia. Hasil penelitian menunjukkan bahwa tingkat kesadaran dan sikap terhadap polusi udara tinggi di kalangan responden rumah tangga. Namun, perilaku responden sangat rendah. Pembuat kebijakan publik harus fokus pada pengembangan kebijakan untuk mendorong perilaku lingkungan orang Malaysia. Keyakinan manusia perlu diubah untuk melindungi lingkungan. Cara hidup Islami yang mencakup kesadaran lingkungan, kesederhanaan, perencanaan, legislasi, pemantauan dan pengembangan sumber daya merupakan institusi penting untuk melacak perkembangan pembuatan kebijakan publik lingkungan dalam sistem ekonomi Islam.

Kata kunci: Kerusakan lingkungan, prinsip lingkungan syariah, kebijakan publik

INTRODUCTION

Industrialisation, urbanisation, and growing environmental awareness have generated hot debate on how economic growth relates to the environment. The relation of environmental quality with economic development evoked many discussions, researches, and policy recommendations in the last few decades due to environmental degradation and its consequences. As a result of environmental degradation, respiratory diseases are among the highest ranked diseases suffered by Malaysians (Afroz et al., 2005; Jamal et al., 2004).

A survey conducted in Klang Valley in 2004 stated that approximately 49% of diseases were air pollution related. Out of the 49%, allergy due to dust or pollen comprises 20%, asthma 14%, heart disease 12%, and chronic bronchitis 3% (Afroz et al., 2005).

It is predicted that the emission load from vehicles in 2016 would increase two to three-fold higher than emission loads in 2005 (RPR, 2009). Thus, air pollution related diseases might be increased by twice or thrice over in 2016 compared to 2005. When it comes to age group, those most affected by air pollution (PM₁₀) are the elderly and children (Environmental Protection Agency, 1996; WHO, 2009). Hence, consideration of the human health effects in policy discussions should emphasise air quality.

For this reason, if the government wants to implement effective policies to improve the air quality, taking into consideration the awareness, attitude, and behaviour of the citizens/households towards environment is essential. Otherwise, government policies cannot be efficiently put into practice. With the possibility of an existing information gap, there is an urgent need to investigate the environmental awareness, attitude, and behaviour of households. This study seeks to understand the awareness, attitude, and behaviour towards environment and to suggest policies to improve the air quality in Malaysia.

ISLAMIC VIEWPOINT ON ENVIRONMENTAL DEGRADATION

Muslim scholars have discussed environmental degradation from the Islamic viewpoint (Kijas et al., 2013; Deuraseh, 2009; Hamed, 1998; Akhtar, 1996; Hamdy, 2000; Hassan, 2005; Sirageldin, 1995; Naqvi, 1994). According to Islam, Allah is the creator of heaven, earth, and all in between (Quran 46:3, 40:57). It regards as important maintaining the environmental balance in quality



and quantity (Quran 55: 7-9; 54:49; Deuraseh, 2009). It is the responsibility of human beings to protect the environment.

Deuraseh (2009) discussed the contribution of the Islamic ethos in protecting the environment. He concluded that Islamic attitudes are positive towards protection of nature and prohibition of abuse and destruction. *Al-Mizan* and *Adab* (attitude) play important roles to protect against environmental pollution. Akhtar (1996) examined the issues of nature and solution to environmental problems from an Islamic perspective. Sirageldin (1995) and Ibrahim (2011) conducted a comprehensive study to explore the possibility for society to implement the Zakat and Islamic banking as ethical economic systems. He compared the Islamic and modern framework of nature and material resources and their sustainable use. Hassan (2005) discussed the relationship between a potential application of material flow analysis which is quantifying the pattern of flows of material and energy into the economy and the Islamic economic system. Naqvi (1994) emphasised a need to guide the society along an Islamic way of life as developed by unity, equilibrium, freewill, and responsibility in order to achieve sustainable development.

According to Akhtar (1996), in the Islamic way of life, environmental consciousness, simplicity, planning, legislation, monitoring and resource development are crucial institutions for environmental balance. Islamic teachings encourage awareness of the environment, while a simple lifestyle contributes to environmental security. Hassan (2005) mentioned that the Islamic economic system is reliable with material flow analysis in terms of reduction of human socio-economic metabolism, suitable technological, and consumption changes. Material flow analysis is a valuable instrument which motivates and implements sustainable concepts in line with Islamic faith. Faith protects nature based on concept of unity, vicegerent, and trust (Sirageldin, 1995), and the development of ethical system as axioms; unity, equilibrium, freewill, and responsibility (Naqvi, 1994).

Naqvi (1994) stated that unity, equality, freewill, and responsibility are basic characteristics to sustain the balance between a person and their environment, current and future consumption, and fair distributional income and wealth. It will continue to pass through the ethical rules at minimum cost to politics and welfare, as long as it provides net gain to society (Ibrahim & Kamri, 2013). The stability of social contract (ethical axioms) depends on the gain realised from its enforcement (Ibrahim, 2015). Meanwhile, Hamed (1998) investigated the



building capacity of society and revitalising the institution of historical resources management in Islam to reach sustainable development in the 21st century.

Hamdy (2000) reviewed efforts in natural resource management using Islamic sources and their contribution. The findings suggest that professionals are trying to solve the dilemma by computing or accurately defining the parameters such as resource use, preservation, and renewal which can be led to a better judgement that we face on sustainable natural resource management. The use of natural resources for economic activities must be balance between human society and the natural environment. According to Hamed (1998), organisations and institutions, human resources, information base, and public involvement are the main conditions to build the capacity for sustainable development. They are highly interactive, mutually dependent and self-reinforcing.

METHODS

Population, Sampling and Data Collection Procedures

The study sample consisted of 600 households from Klang Valley where air pollution is bad (Department of Environment, 2013). The respondents were selected among the households. This study employed multistage cluster sampling. Interview method is administered by means of a 10-15 minute face-to-face survey among the participants to understand their awareness, attitude, and behaviour towards environmental quality.

RESULTS AND DISCUSSIONS

This section presents the level of awareness, attitude, and behaviour of the respondents towards air quality improvement in Klang Valley using descriptive analysis. A five-point Likert type format is used which ranged from 1 (strongly disagree) to 5 (strongly agree). If the score of the scale for the respondents is more than three, the level of knowledge, attitude, and behaviour of the respondents is high. If the score for the respondents is three and below three, the level of knowledge, attitude, and behaviour of the respondents is medium and low respectively.



Awareness of the Respondents About Air Pollution in Klang Valley

In the survey, nine items are given to the respondents to rank their level of awareness about air pollution in Klang Valley. Table I summarises the results. All items that measured the respondents' level of awareness towards air pollution show mean levels above 4.0 except item number eight which aimed at understanding their awareness whether using public transport can help to reduce the air pollution. The majority of the respondents are aware that air pollution occurs mainly from transportation, industries, and open burning in Malaysia. However, item number eight; using public transport can help to reduce the air pollution, scores the lowest mean value (mean = 3.92, SD = 0.96). This indicates that their awareness about the role of public transportation in reducing air pollution is low. Some of the respondents are not aware that using public transportation could reduce air pollution. However, on average, the respondents scored average mean value of 4.37 which is considered a high score. This illustrates that the respondents in Klang Valley are highly aware about air pollution in their area.

Attitude of the Respondents towards Environment in Klang Valley

In this survey, eight items are given to the respondents to estimate their level of attitude towards the environment in Klang Valley. Table II illustrates the results of the survey on the attitude of the respondents. Most of the items have mean scores above 4.3 except the following two items; "In the interest of protecting the environment, I am willing to pay extra ten cents per litre for gasoline to decrease air pollution" (mean = 3.03, SD = 0.05) and "Family issues and stress at work do not stop me to think about the environmental problem" (mean = 3.39, SD = 0.05). The items "Everyone has the responsibility to take care of the environment in their daily activities" and "It upsets me when I see people pollute the environment through their activities such as throwing waste on the road side, littering cigarette and plastic cans, and burning the waste in open areas" scored the highest mean value of 4.76 and 4.69, respectively.

The highest mean values for these two items indicate that the respondents are concerned about their environment. This shows that the respondents in Klang Valley might accept any development programmes for a sustainable transport sector. The medium mean value of 3.39 is scored for the item, "Family issues and stress at work do not stop me to think about the environmental problems". This result shows that the respondents believe that the family issues and stress



at work could not affect their responsibility towards environment. They also believed that if they want to improve the environment, they could do that after fulfilling the family requirements and work place responsibilities. As a conclusion, the average score of the respondents for their attitude towards air pollution is 4.13. Hence, it is clear that the majority of the respondents have a positive attitude towards environment in Klang Valley.

Behaviour of the Respondents

In the survey, seven items are given to the respondents to estimate their behaviour towards air pollution in Klang Valley. Table III reports the findings of the survey on the behaviour of the household respondents. Most of the items that measured the respondents' level of behaviour towards air pollution show a mean value below 3.0. The average score for behaviour towards environment is 2.95.

The results reflect that the majority of the respondents have negative behaviour towards the environment in Klang Valley. Among the seven items, item number 6, "Turned off lights at home when they are not in use to save energy" has the highest mean value of 4.68. Other items scored below 4. The low mean value for the behavioural items illustrates that the behaviour of the respondents is not positive towards the environment. If the respondents have a good attitude towards the environment, they should also have good behaviour. The current study shows that the respondents have good attitude towards the environment but their behaviour is not as good as their attitude.

This result supports the findings of previous studies (Dunlap et al., 1993; Inglehart, 1995; Johnston, 2010) which show an inconsistent relationship between attitude and behaviour.

PUBLIC POLICY MAKING ON SHARI'AH PERSPECTIVE

The results of the study reveal that behaviour of the respondents towards environment to reduce air pollution is very low. Awareness, attitude, and behaviour are crucial factors in changing environmental problems. All these should come together. By having positive awareness and/or attitude towards environment is pointless if the respondents' behaviour is negative. The government should make public policy to change behaviour of the people in order to address the environmental problems.



Moral Policies to Improve the Attitude and Behaviour of the Respondents

As long as human beings respect and understand the value of nature, they will protect the environment. They should behave in a moral manner. Otherwise, the policies and programmes to care for the environment would be ineffective. Deuraseh (2009), Hamed (1998), Sirageldin (1995), and Hamdy (2000) suggested a similar solution. Deuraseh (2009) emphasised that attitudes and beliefs of man have to be changed to solve environmental problems effectively. Hamdy (2000) pointed out that the thinking of the people must be mobilised towards “saving the planet” and behaviours towards nature re-examined constantly from the Islamic viewpoint.

This study has shown that the level of awareness and attitude is high among the household respondents. However, their behaviour is very low. Decision makers should focus on developing policies to encourage the behaviour of Malaysians. From the findings, the following steps are suggested to increase the moral behaviour of Malaysians towards sustainable environmental improvement:

- 1) Motivate people for recycling behaviours (glass bottles, jars, aluminium cans, and newspapers). It would help reduce the waste dumping problem.
- 2) Encourage people to contribute money for environmental protection. It would help reduce the burden on government organisations.
- 3) Environmental crimes such as open burning, the waste in the river, and littering on the road are common in rural areas and people’s behaviour towards the environment is very poor. Encouraging people to report the crimes happening in rural areas would help promote a sustainable environment. For instance, the air quality in Malaysia is unhealthy due to open burning during March and April. This could be reduced if people are willing to report to the relevant authorities. The relevant authorities can establish offices in rural areas to prevent such crimes in the area. It would also create employment opportunities. The office can implement summons and the income from summons can be used for activities to protect the environment.
- 4) Encourage people to participate in environmental campaigns, and/or clean-up programmes.
- 5) Encourage people to buy environmentally friendly products such as green cars, and green bags instead of plastic bags. The policy makers can consider providing the subsidies for the green producers that would help to increase



the green production. The availability of the green production would help the consumers to consume more green products.

Ideological Orientation with Equal Attention to Material and Spiritual Welfare

The government should focus on the fulfilment of the critical needs of the citizens and the provision of credible prevention. This includes protecting the environment. The government must ensure the sustainable economic growth and spiritual welfare of Malaysians.

Fulfilment of Basic Needs

The government must allocate enough resources to provide proper education for all citizens. In Islam, educating the *ummah* (society) is a major obligation. The first verse of the Holy Quran; "Read" and the Prophet's (PBUH) emphasis to seek proper knowledge from birth to the grave supports this. Thus, when governments make environmental public policy, attention should be given to educate citizens about the environment and strategies to protect the environment. It is the duty of Muslims to maintain the environmental balance in quality and quantity (Quran 54:59).

In Malaysia, promotion of Environmental Education (EE) programmes is focused on addressing environmental challenges such as littering, water pollution, air pollution and the degradation of biodiversity. In line with the objectives, various federal and state government departments, the private sector, educational institutions and non-governmental organisations (NGOs) are actively promoting EE in both formal and non-formal areas for the various target groups from all levels of society.

In terms of non-formal EE activities, environmental camps, talks, exhibitions, quizzes, workshops, seminars, tree-planting, and radio shows are actively planned and implemented. Other than that, celebration of environment-related events each year is another initiative to promote EE. Those events include Malaysia Environment Week (21-27 October), Earth Day (22 April), World Environment Day (5 June), Wetlands Day (2 February), and Water Day (22 March).

In terms of formal education, the Ministry of Education has developed a curriculum for EE and has implemented various teaching and learning



strategies to enhance environmental awareness and internalise values on the importance of environmental protection. In line with the National Education Policy, 'EE across the Curriculum' was introduced in both primary and secondary schools in the 1990s. EE is infused in each subject in schools, rather than taught as a single subject. Apart from this, the Malaysian secondary schools are facilitated with EE display rooms, EE newspaper and magazines. Also, Malaysian schools have necessary facilities and qualified resource-persons thereby impacting its implementation positively. The importance of EE and green strategies of the national environmental policy is mentioned for Malaysia's vision 2020. As part of its vision 2020 agenda, Malaysia's educational policies have consistently been on track with huge government spending and supervisory follow-up.

However, there has not been adequate coordination and structuring towards effective implementation in schools. This has become a great challenge. Therefore, the Ministry of Education should work together with educational institutions to implement policies. For that, the Ministry of Education could form a monitoring body to make sure the EE is effectively implemented. The body could pay visits to the institutions to check the teachers' study plan. The ministry could also request educational institutions to send monthly and/or annual report to the Ministry of Education pertaining to the implementation of EE.

The Malaysian government can formulate policies to focus on raising knowledge and behaviour of households towards the environment and air quality improvement under Islamic principles. The importance of EE in Malaysia is highlighted in the National Policy on the Environment 2002. One of the key areas outlined in the policy towards the environment is 'Education and Awareness' which aims:

- 1) To devise and introduce comprehensive formal and informal EE and training strategies and information dissemination programmes.
- 2) To integrate environment and development into educational activities from school to tertiary institutions.
- 3) To establish national centres for excellence for interdisciplinary research and education in environment and development.
- 4) To review education curricula at all levels to ensure a multidisciplinary approach with environment and development issues.



- 5) To actively promote non-formal education activities at local and national levels.
- 6) To strengthen the role of media in disseminating environmental information.

Encouragement programmes are crucial to develop environmental quality. Campaigns, special functions and ceremonies, talks, training, workshops, field trips, awareness programme provided by the media and government initiatives are designed to change their beliefs and lifestyles. In this way, they can be motivated to protect the environment. Encouragement could begin at primary schools or colleges by introducing topics on different environmental problems in their syllabus. If people formally learn it from school or college, it will be easy for them to adopt environmental improvement practices later in their life. The Ministry or the State Education Department could work together with the Department of Environment (DOE) to conduct lectures, seminars, or environmental courses in educational institutions. In addition, schools can conduct activities such as environmental week, recycling campaigns, poster competition, painting and essay writing competitions, innovation from disposed items, moral painting, or reciting environmentally related poetry.

Providing the Necessary Infrastructure to Promote Sustainable Economic Growth

The government should focus on the fulfilment of the necessary infrastructure and stipulation of a credible anticipation of environment to promote sustainable economic growth. For example, spending more on green technology and providing attractive public transportation with green fuel.

In the case of Malaysia, since mobile sources (transportation) are the biggest contributors of air pollutants (DOE, 2016) the increase of private vehicles and trips are emitting more harmful air pollutants such as particulate matter (PM), nitrogen oxide (NO_x), carbon monoxide (CO), hydrocarbons (HCs) and indirectly secondary gas ozone (O₃) into the air (Pola Singh, 2009). In order to reverse the situation, city planners and city councils should take effective measures in managing and planning the city development. Smart growth or sustainable development shall be the first priority for tomorrow.

The study of Stone et al. (2007) in Midwestern United States shows that compact development patterns, when instituted over a significant period of time, can reduce vehicle travel and pollutant emissions at the scale of the



metropolitan region. The single, biggest air quality project under the economic transfer project (ETP) is the mass rapid transit system (MRT) for Kuala Lumpur and the Klang Valley which might be a game changer for the environment in greater Kuala Lumpur. The MRT project made significant progress in 2013, with work continuing on the system's elevated guide way foundation and underground station excavation following the delivery of ten Tunnel Boring Machines (TBMs) to various sites. In June 2013, the Land Public Transport Commission presented its final implementation plans for MRT Line 2 and Line 3 to the Economic Council. However, the challenge still remains for the government concerning how to promote the use of green technologies as all of these strategies involve a huge amount of funding.

Establish Monitoring Agencies

Both initiative and necessary action for the improvement of environment purposes should come from the private sector with the government playing the role of facilitator. Government should also pay attention to distributive implications of its expenditures for a given target.

Akhtar (1996) and Hamed (1998) are exerting pressure to establish monitoring agencies to protect the environment. They suggested establishing environmental monitoring agencies such as *hisbah* and *awqaf* institutions to mitigate pollution levels and develop ecological resources (Akhtar, 1996). The suggestion of Hamed (1998) shows that cultural heritage of Shari'ah or elements of the traditional Islamic institutions; *Hisbah*, *Haram*, *Hema*, *Waqf*, and *Ihya* are employed rarely in the sustainable development efforts, policies and programmes in Muslim countries. Unfortunately, it is not practised by any of the countries facing environmental problems. Hence, it is a necessary to implement the Islamic traditional institutions to serve the earth in Muslim countries.

Malaysia has shown serious consideration for the environment by enacting the Environment Quality Act in 1974. Besides the act, the Ministry of Energy, Green Technology and Water was formed in order to cater for the rising need and importance of green technology towards environment. The Ministry has enacted the National Green Technology Policy (Malaysia Green Forum, 2010). The government has taken an approach known by the acronym AFFIRM which stands for awareness, faculty, finance, infrastructure, research, development and commercialisation and marketing. AFFIRM is designed to obtain



commitment from all stakeholders towards environmental protection in Malaysia for the sustainability of the environment (Malaysia Green Forum, 2010).

Integrity of Society's Ethical System

Sirageldin (1995) advised that the results of economic policies and their effects on the integrity of society's ethical system should be considered during policy evaluation. Shari'ah ideals must be included in policies and programmes which have to be rooted within Islamic governance and social ethics to gain public support in the Muslim world to achieve sustainable development (Hamed, 1998). Governments should pursue their fiscal agenda in conjunction with the options in preventing environmental degradation. They should spearhead the development agenda with the involvement of the private sector.

Reduction in Inter-Regional Conflicts

The government should maintain a good relationship and participate in economic activity, in particular, avoiding conflicts with neighbour countries. Malaysia is facing air pollution problem due to PM, and haze from forest fires during August and November from neighbouring countries especially Indonesia, which is known as transboundary pollutants sources (Jamal et al., 2004). To avoid this sort of environmental challenge, the problem could be solved with good relationship with neighbouring countries. Islamic Shari'ah stresses to be good with neighbours even if the neighbours are non-Muslim.

CONCLUSION

Each human being has the responsibility to protect the environment. It is a compulsory obligation for Muslims as vicegerent. In order to avoid environmental problems, the attitudes and beliefs of man to be changed. Monitoring agencies such as *hisbah* and *awqaf* (*Charity*) institutions beside the government involvement should be established. In the light of Islam, the riches of earth are a common heritage. Because everyone benefits and makes them productive and uses them for their wellbeing. Therefore, the development of the environment cannot be ignored.



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Table I. Frequency of the Respondents' Awareness of Air Pollution in Klang Valley

No	Items	Mean	Std	Variance
1	I am aware that the air pollution in my city is getting worse.	4.51	.03	.73
2	I know air pollution occurs mainly from transportation, industries, and open burning in Malaysia.	4.54	.03	.48
3	In my knowledge, air pollution and climate change are serious environmental problems in this 21 st century, worldwide.	4.34	.03	.50
4	I know that introducing green technology would reduce the air pollution problem in Malaysia.	4.12	.04	.96
5	As I know, too much use of fossil fuel and deforestation activities are affecting the human health in Malaysia.	4.44	.03	.59
6	I know about the environmental issues from TV programs, news papers, books, and magazines.	4.45	.03	.41
7	I know how to take care of the environment from the teachings of my religion.	4.51	.02	.47
8	I know that using public transport can help to reduce the air pollution.	3.92	.04	.92
9	I know that all living things can play an important role in maintaining the balance of the environment.	4.48	.03	.37
AVERAGE LEVEL OF AWARENESS SCORE		4.37		



Table II. Frequency of the Respondents' Attitude towards Environment in Klang Valley

No	Items	Mean	Std.	Variance
1	Everyone has the responsibility to take care of the environment in their daily activities.	4.76	.02	.27
2	Simple life style would help to maintain environmental balance.	4.45	.03	.49
3	It upsets me when I see people pollute the environment through their activities such as throwing waste on the road side, littering cigarette and plastic cans, and burning waste in open areas.	4.69	.02	.27
4	The government should enforce environmental rules and regulation strictly.	4.53	.03	.45
5	The government should subsidize the price for green fuel to save the environment.	4.38	.03	.63
6	It makes me happy to see people trying to save the environment by recycling, reducing, reusing and conserving.	4.61	.03	.48
7	Family issues and stress at work do not stop me to think about environmental problems.	3.39	.05	1.85
8	In the interest of protecting the environment, I am willing to pay extra ten cents per liter for gasoline to decrease air pollution.	3.03	.05	1.94
AVERAGE LEVEL OF ATTITUDE OF THE RESPONDENTS		4.13		



Table III. Frequencies of Respondents' Behaviour towards Environment in Klang Valley

No	Items	Mean	Std .	Variance
1	Recycled glass bottles, jars, aluminum cans and news papers.	3.36	.05	1.57
2	Contributed money for environmental protection	2.19	.04	1.19
3	Reported environmental crimes to the proper authorities.	1.58	.03	.94
4	Took part in environmental campaigns and/or clean-up efforts.	2.46	.04	1.31
5	Bought environmental friendly products to save the environment.	2.93	.05	1.56
6	Turned off lights at home when they are not in use to save energy.	4.68	.03	.53
7	Used environmental friendly bags instead of plastic bags during shopping.	3.47	.05	1.7
	AVERAGE LEVEL OF BEHAVIOUR OF THE RESPONDENTS	2.95		

