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TITLE	The Role Of Islamic Institutions In The Adoption Of Reduce, Reuse, And Recycle (3r) Practices Among Muslim Communities In Malaysia

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THE ROLE OF ISLAMIC INSTITUTIONS IN THE ADOPTION OF REDUCE, REUSE, AND RECYCLE (3R) PRACTICES AMONG MUSLIM COMMUNITIES IN MALAYSIA

Key Words: Islamic Institutions, Mosque, Small Mosque, Surau, 3R practices, Recycling, Muslim community, adoption of 3R

ABSTRACT

It has been argued in the literature that religious belief has a role to play in dealing with environmental issues and enhancing environmental practices. In line with this perspective, it is interesting to observe that Muslim communities have started to use the Islamic institutions as an organizational and institutional platform for shown their environmental programmes. In some mosques and small mosques (*surau*), inspiring green programmes such as the 3R programme have also conducted. However, previous research on the role of religious community in enhancing environmental practices is mostly discussed at the theoretical level and only a handful have undertaken in systematic empirical research on this topic.

The purpose of this study is to explore an innovation process in Islamic institutions which refer to ‘mosque and small mosque’ (*surau*), as a central organisational and institutional structure in the Muslim community especially in carry out the 3R programme. In addition, this study will also identify the potential role of mosque and *surau* in adoption of 3R program. The framework for this research is based on the adaptation of theoretical frameworks: “The adoption of innovation of organisational process framework” developed by Everett Rogers (2005). The article is mainly based on a qualitative study. It employs an in-depth case study on the 3R activities conducted in mosque at Rembau, Negeri Sembilan, Malaysia that are involved in the “*Amal Jariah melalui Kitar Semula di Masjid*” programme and 3R programme from small mosque - *Surau al-Husna* in Shah Alam, Selangor. In this research, semi-structured interview and focus group study have been carried out. Preliminary work reveals the inspired results.

From our key findings, both Islamic institution; mosque and *surau* have a big advantages in playing its role due to its systematic organisational structure and unique ability to adopt the 3R programme efficiently. The potential role can be seen in stability in organisational structure, formal and non-formal environmental education, strong element of leadership, provide a recycling point facilities, and Islamic institution as a community center and also

'innovation laboratory'. Another role that should be underlined is the way Islamic institution in cultivating the concept of charity/giving alms (*sedekah*) through recycling - where people have the opportunity to contribute their recyclable items to generate money for mosque and *surau*. These case studies is hopefully can gives inspiration and motivation to other religious institution in acting the good deeds towards environment through 3R practices.

1. Introduction

Malaysia has heterogeneous religions consist of Islam, Buddha, Christianity, Hinduism, and as well as other faith including Animism, Bahai, and Sikhism. Islam is the most common family of religious affiliation which contribute approximately 61% population in Malaysia. Optimism in the power of religion to create large-scale and deep-seated ecological transformation plus the strong religious socio-demographics of the country has encouraged policy ideas in enhancing the role of religious communities in the adoption of environmental practices in Malaysia (Zeeda et al., 2011). Mosque attendance may influence community to join the program as formation of social networks and sense of belonging within community. Hence, it is possible for Muslim to play as an anchor in promoting sustainable lifestyle via 3R activities.

Mosque is central to Muslims, and has considered as the main area for prayers and public assemblies. Meanwhile, small mosque or *surau* has different character in term of size and internal organisational structure. *Surau* is much smaller than a mosque and not has a complex structure or headed by a professional *imam*, however it is only supporting by a community neighbourhood. A very obviously character, *surau* does not perform the Friday noon prayer and that means no sermon (*khutbah*) is given. Generally, both mosque and *surau* are an appropriate location as a community centre as it organises various religious events and provide facilities that can attract people to frequent it every day. Mosque and *surau* are consider a social institution that has potential to communicate and diffuse information among Muslim community effectively.

In Islam, believers, worship as a lifestyle, and the notion of the mosque as a community centre, are inseparable - hence, reviving idea of the mosque as a community centre is crucial (Omer, 2011). Mosque can be a focal point where the community is able to interact each other

and have a beneficial events such as social activities that will bring people in the same faith - Islam. Historically, concept of mosque in the past 1400 years ago is central focus of Muslim lives's in various issue including social and politic. It also serves as courts, schools, and assembly halls, even the libraries, hospitals, and treasuries are often connected to the mosques. It has proven that mosque is a vital Islamic institution which grants such an impactful institution to Islamic civilisation. Besides, it has emphasis to the balance lives, in both physical and spiritual. The combination of two elements; physical and spiritual be able to develop a strong community or *umah* to counter any obstacles facing in future including the issue of environment.

Implementing 3R at the mosque and *surau* is a best strategy in a pipeline to encourage people to throw away the rubbish in proper manner. 3R practices have been considered to be a base of environmental awareness and an alternative way of promoting ecological balance through conscious behaviour among community. This kind of effort will lead to savings in materials and energy which will benefit to environment. 3R approach is innovates for people enable to understand how to segregate their waste wisely. Mosque with its capacity would be a appropriate platform to have real-life experience on playing an active role for 3R activities and galvanizing such an educational and awareness about environmental practices in Islamic teaching hence the institutional organization and community's belief (both physical and spiritual) can be strengthened. Thus, a mosque should provides useful facilities as possible with the good services and activities to serve the community well. For example, interesting effort has been implemented by government to utilise the role of mosque in maximum level. Beginning May 2010, a recycling program for religious community has been launched by the National Solid Waste Management Department in the country (Berita Harian, 2011 cited from Zeeda et al., 2011: 2). This is a pilot program that specifically designed for religious community particularly Muslim and mosque is identified to be a recycling centre. This program involved by various parties from policy makers in waste management, government, private sector, committee of mosque, and nearby neighbourhood. These parties form an excellent combination of community which contribute a structured organisation with the role of each parties to pursue a successful and impactful program.

This is an expand research from paper of 'The role of religious community in recycling: Empirical insights from Malaysia' written by Zeeda Fatimah and team (Zeeda et al, 2011).

Paper content the empirical evidence of successful recycling activities in Malaysia specifically by religious communities which consist of Muslim community (Surau al-Husna), Buddhist community (Tzu Chi Association), Christianity (Beautiful Gate), and Hinduism (Batu Caves Temple). In contrary, this paper focusing on the role of mosque and *surau* in adoption of 3R activities by Muslim community which is obviously practices on recycling activities. This is an exploratory research that trying to catching up the empirical evidence on the potential role of mosque and *surau* to play as an active institution for Muslim to involve in 3R activities. The crucial research question pop-up: In what stage of the innovation process in mosque and *surau* organizations occurs in adoption of 3R within Muslim community and how Islamic institutions can play a role in providing continue commitment to the program? However, this paper supports by particular analytical framework gain from literature that guide into the findings.

2. Past Literature

In the literature, there is a growing topic on environmental issue which close related to human life. Hence, awareness and concern regarding environment problem have been a debating issue in recent years. Everyone has takes part in a way to find the solution, in fact, religious community has take a vigorous action to play the role as part of human responsibility towards environment. This shows that religion can play an effective role in protecting the world's ecological system (Foltz et al., 2003; Tucker & Williams, 1997; Chappel & Tucker, 2000; Hessel & Ruether, 2000). To activate this role, religious community should be aware and concern of the problems that always be faced by the environment.

In Malaysia, the number of waste generate are alarming increase every day. Solid waste management is still requires vast improvement in practices. 3R is a simplest innovation that been introduced for a long time ago. According to National Solid Waste Department (2012), Solid Waste & Public Cleansing Management Act (Act 672) has defined a "Recycling" as collection and separation of solid waste for the purpose of producing products It can also be described as method for processing used materials (waste) into new products to prevent waste of potentially useful materials, reduce the consumption of fresh raw materials, reduce energy usage, pollution and lower green house gas (GHG) emissions. Recyclable materials can be in many kinds such as glass, paper, metal, plastic, textile and electronics. Theoretically, this kind of technology can be implemented with flying colors but, technically it is hard as it involved

by various factors such as level of awareness and knowledge, people acceptance, adoption of technology into society, and so forth. Government tries to nurture the 3R habit in people lifestyle in order to reduce number solid waste. It was involved by multi level commitment of governments, NGOs, and other stakeholders to implement it in local and national level.

Basically, recycling is a term to refer as environmental friendly strategy and it is such a great attempt for preventive strategy of source of reduction and reuse (Omra, Mahmood, Aziz, & Mai, 2006). 3R , especially recycling is seen as an important method in reducing waste volume, recovering resources and its economic benefits (Ananth, Nishimiya, & Visvanthan, 2007). It has proven by Denison (1996) regarding environmental life-cycle comparisons of recycling, landfilling, and incineration in North American. He found that recycling at the current rate of 26% reduces solid waste output by an amount equivalent to 32.9% of the total amount of MSW annually generated in the United States. Moreover, by practicing 3R, it can instil such cooperation and teamwork among various stakeholders especially governments, the private sector, NGOs and communities be it religious communities.

Frankly, there are lack of article discuss on role of religious institution in promoting green program such as 3R activities. In previous paper of waste management, a few issues have written concerning on 3R or recycling practices but implicitly to particular issue such as promoting 3R policy (Kuwabara, 2005; Hassan, 2007; Nadzri, 2007; Hezri & Nordin, 2006; Sakawi, 2011), practices, problems and challenges (Yhdego, 1995; Bai & Sutanto, 2002; Pokhrel & Viraraghavan, 2005; Jin et al, 2006; Ananth et al, 2007; Damghani, 2008; Agamuthu, 2009; Fauziah, 2009; Zhang et al, 2010; Omran et al, 2010) and facilities (Agamuthu & Takeda, xx). Meanwhile the article involved by the role of religious institutions is pertaining to role of mosque in society (Ezad et al, 2010; Omer, 2011), small mosque (Zaleha, 1999), religious community (Zeeda et al, 2011), churches play in 4R (Peter, 2010) and so forth. Thus, this paper aims to reveal the relationship between two different strands of literature which is the role of Islamic institution and 3R practices because there are still non-integrated and unclear.

In case of Christian churches in Nova Scotia by Peter Young (2010), he believes that churches can play an active role in acting of environmental issue such as 4R (Reduce, Reuse, Recycle, Revere) as churches be able to bringing variety of people's background together based on a

common beliefs in God, so do to environment . It parallel to claims the church has a crucial role to play in developing informed concern for earth community, reverential appreciation for biological as well as cultural diversity, and spirited passion for eco-justice” (Hessel, 1994). This article reveals an exciting findings that churches are becoming conscious towards the environmental implication of activities and operation. There has a desire among churches to have more interaction with society such as engaging their local government on environmental topics or hosting a community garden. It is shows that churches has grown step forward for having such environmental activities even it is an ongoing process that in some cases is still in its infancy. Hence, the power of environmental concern to be used as a way to bridge denominational barriers and bring churches to share ideas and work on a common issue was recognized. He has mentioned a few reasons for environmental concern was often attached to the Biblical notion of stewardship, and connections with social justice.

Organisation creation is fundamental to the process of innovation, then organizational rule is about the way responsibility and power are allocated, and work procedures are executed, among organizational members (Chong & Sheng-bin, 2006)(p. 1302). Religious institution should be good exemplar to other institution in the way of introducing the systematic organisation for environmental activities. There are a case on the role of religious community in recycling (Zeeda et al., 2011) which entails by four main religions and three of case studies are performed at *surau* (Muslim), temples (Hindu), and churches (Christianity). Definitely, they are using distinctive approach to perform recycling activities. Moreover, they achieved the highest level of adoption in recycling which is the level of confirmation. This finding shows that religious communities tend to have quite systematic process in recycling program and they are aware to cater the specifics needs of their community. This paper also highlights the conductive and unique institutional structure for recycling program especially the role of houses of worship such as *surau*, temples and churches as a centre of religious life and strategic platform for worshippers of each religion congregate and where many community-based religious activities are conducted, be it in terms of religious worship, education and acts of social service.

One survey has carried out at Palestine (Hassan & Amjad, 2010), who are majority is Muslim and had identified that several Islamic tradition and teaching are known to emphasize and support the concepts of “cleanliness”, “environment protection”, and the “litter prohibition”.

This survey involved by fifty imam (person who leads daily prayer and delivers sermon or *khutbah* every Friday prayer) and 1000 residents. The findings have shown the Muslim pattern of those three concepts. The result revealed that significant statistical correlation does exist between the level religious convictions and their perspective on certain issues related to the littering problem. Well, it still need to be explored in different area. However, empirical investigation on how Islamic institution influenced environmental (specifically 3R practices) action on the ground is rare, especially in the context of research in modern society. Most work those have been done in this aspect only covers the lessons that we can learn from the past. Indeed, the importance of Islamic institution can play as salutary role in helping humans regulate and manage natural systems in ecologically sustainable ways.

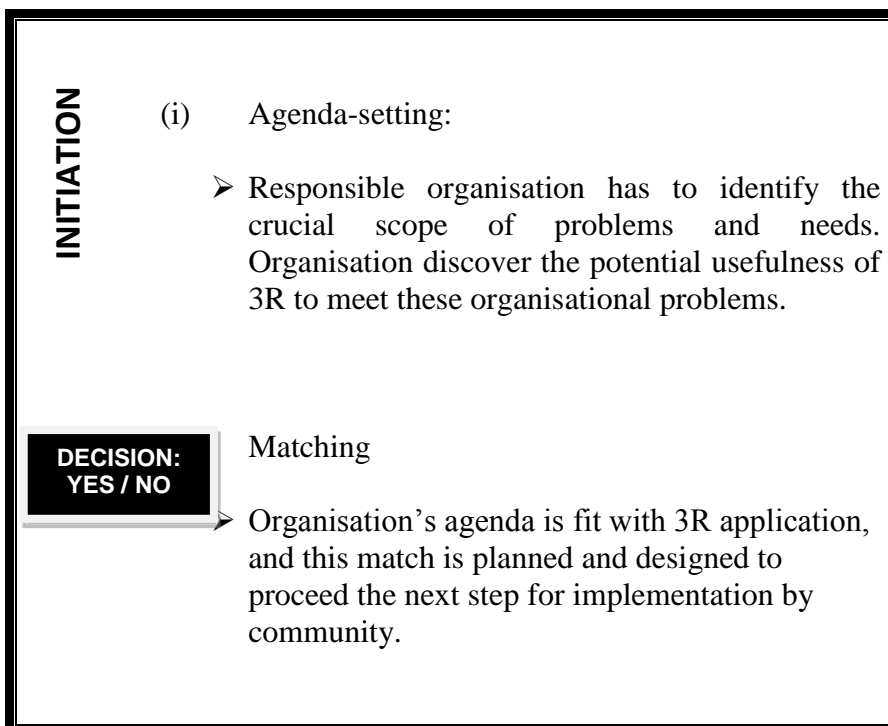
3. Methodology and empirical evidence

This paper is attempts to reduce the gap by investigating the role of Muslim community in Malaysia (especially the mosque and *surau*) in enhancing the adoption of 3R, a type of environmental practice in waste management. This study employs an exploratory research with limited case studies to Islamic institution consist of mosque and *surau*. Two different states identified; mosque in Negeri Sembilan and *surau* in Selangor. Different institution definitely gives dissimilar organisation, mechanism and operation structure of 3R program. Conducting multiple case studies gives an understand human practice affects the environment, has a chance to look individual (or group) initiatives to explore consequences, possibilities and potentialities which result from particular social practices and their relationships with outcomes in the environment (Evans, 2011: 54). Through this case studies, it gives a specific phenomena of practices, response, and interaction within community over the program.

The best case studies recognized through their consistent and committed performance in the 3R program by communities. The best means that particular communities in the program have shown their effort until they manage to reach routinising level which the highest level of innovation process in organisation. The best case studies is tends to serve as a formal documentation and provides a compendium of its activities and programs since its establishment. Muslim community here means a group of Muslim people who take part in this program which is sort of a backbone of this program. Innovation is refer to an idea, practice, creative approach or added value that is perceived as a new by the community. The main reason for case studies has been selected because it has been a pioneer in conducting 3R

campaigns, create a practicable mechanism, setting-up policies, and providing related facilities on recycling (Hassan et al., 2000; Agamuthu, 2001, p. 59 cited from Zeeda et al., 2011).

The key players are involved by various of organisations such as government, private sector, mosque or *surau* committee, and neighbourhood community. An organisation creates a stable system of individuals who work together to achieve common goals through a hierarchy of ranks and a division of labor (Everett Rogers, 2005: 404). Organisation here means the communities entailed in program that consist of multilevel parties; policy makers, NGOs, private sectors, and society/community. The policy maker's mission has not be accomplished without the cooperation by community. The clear of organisation process enable for innovation to move from stage to another with efficiently. An adopting organisation is a process includes awareness of innovation, attitude formation, evaluation, decision to adopt, trial implementation and sustained implementation (Rogers, 2005; Zaltman, Duncan, & Holbek, 1973). Rogers introducing an innovation framework in organisational process. The theoretical framework is based on Everett Rogers's Five stages in the Innovation Process in Organisation (Rogers, 1995, p. 421).



IMPLEMENTATION	(iii) Redefining/Restructuring
	➤ The 3R is modified and re-invented in order to fit the organisation. The organisational structures are altered to continue the program.
	(iv) Clarifying
	➤ The relationship between the organisation and the program of 3R is defined more clearly and corrective action can be taken to avoid such problems.
	(v) Routinising
	➤ The 3R program has becomes incorporated into the regular activities of the organisation.

Higher
level of
adoption

Table 3.1: Process 3R program in organisation (Rogers, 1995, p. 421).

The case of mosque and *surau* in sustainability programs.

A) Case of mosque in Kg Pilin, Rembau, Negeri Sembilan.

Pilin village is belong to Rembau district in Negeri Sembilan. The mosque has been established for residential community of Pilin village. It provides a place for Muslim community in the neighbourhood to perform prayers, having a religious talk, conduct religious rituals, and others religious event. Every Friday, men come to have Friday noon prayer and listen to sermon by *Imam*. In 2010, this mosque are being ownership to carry out a special recycling programme named “*Amal Jariah melalui Kitar Semula di Masjid*” programme. Auspiciously, this recycling programme enjoys strong support from government (PPSPPA, JHEAINS), private sector (SWM Environment), religious leader, committee, and neighbourhood community.

The innovation process in organisation.

Level of innovation process	Organisation
<p>Agenda setting:</p> <p>A meeting among PPSPPA (Solid Waste and Public Cleansing Management) staff in every week (Thursday) to identify the most suitable program to fit with organisation's needs. Brainstorming session is needed to justify the problem and its solution.</p> <p>Matching:</p> <p>Recycle activity is selected. This approach can be a appropriate solution to the organisation's agenda. Target people is adult (including working people and retired). Spot of location at the mosque as a recycling point. Time frame for this program is eight months. The organisation's members attempt to determine the feasibility of recycling program in solving the organisation's problem. The organisation's decision-makers should bring up the conclusion whether it leads to execute or reject. In this phase, effectively matching a recycle program with organisation's need is essential in order to make sure the idea is sustained over time. Therefore, a pilot survey regarding evaluation of recycling program has been conducted in community at mosque. This survey has shown the empirical data before program.</p> <p>In this phase, other parties play their own role in specific area to increase the effectiveness of this program such as JHEAINS, knows what is suitable approach of mosque to get involved in this kind of program. Meanwhile, SWM Environment gives an advice on process of recycle collection and measurement.</p> <p>* Interchange phase: Organisation need to decide whether the program should be implanted or not. If not, the process will stop at initiation sub-process. If yes, the program has to move to the next phase in implementation sub-process.</p>	<p>PPSPPA (responsible in educating people to understand about public cleansing and recycle);</p> <p>JHEAINS (as integrator between PPSPPA and mosque);</p> <p>SWM Environment (Private contractor to collect recyclable material.)</p>

<p>Redefining / Restructuring:</p> <p>At this point, committee realise that recycling program should modified and re-invented in order to fit with organisation's need. They aims to increase number of recyclable collection from community.</p> <p>It is just involved the minor changes in process of recycling and also the organisation. They come out with new approach which people who has recyclable material but not be able to send it by themselves, they can call committee to come over their house and collect that recyclable materials by motorcycle. This kind of approach need organisation to create new sub-division called collector service.</p> <p>Clarifying:</p> <p>The community has ready to join the program by contributing recyclable materials to the mosque. They are understand the purpose of the program which about giving alms to the mosque by selling the recyclable materials. It such a successful program as committee of mosque manages to run this recycling activities continuously and even after official program has done. Recycling program has been spread out over the neighbourhood and gradually becomes clearer to the organisation member and community. Their initiative has shown the increasing number of collection and achieved the highest number of collection in Rembau district.</p> <p>Routinizing:</p> <p>Recycling practices has become incorporated in routine activities of organisation especially community. At this point, it is not a program anymore but it become a part of necessary practices for most of them. Typically, innovation process is completed. Decision to continue this program has determined by committee and support by community. They feel that, it is good program and should be continued as its gives many benefits for them in term of reduces the number of waste in their house and moreover, be able to raise the mosque fund. At this stage, they just improve in technical part for example the location of collection corner which is replace with proper bin (to avoid unwelcome monkeys from outside).</p>	<p>Committee of Mosque (Committee board must ensure the recycling program is running as planned. They are key person who executes this program with community / neighbourhood);</p> <p>Community (Consist of multiracial, and diverse of background. Basically, recyclable resources come from neighbourhood.)</p>
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Table 3.2: Innovation process in 3R program at Masjid Kg Pilin.

B) Case of Surau al-Husna, Section 20, Shah Alam, Selangor.

Another successful story in conducting 3R activities that has been established for the residential community. The recycling program has started in July 2005 with assistance by Shah Alam Municipality (MBSA). This green idea has initiated by one of committee member and manage to get strong support from chairman and other committee member. The committee members come from various employments background such as academicians, government officers, private sectors, NGOs and others. They are persist in doing the recycling program and enjoy contribute their idea, time and commitment. The community especially from nearby areas are always offer a moral supported and encouraged to donate recyclable material for *surau*. After all, the recycling profits are used for surau's renovation, repair-work and also to fund other religious activities.

The innovation process in organisation.

Level of innovation process	Organisation
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<p>Agenda setting:</p> <p>The idea has initiated by Mr Mazlan Idrus, one of committee member of surau Al-Husna. A meeting has set up among the committee to identify the most suitable mechanism can be applied to fit with organisation's needs. Brainstorming session is needed to justify the problem and its solution.</p> <p>Matching:</p> <p>Recycle activity can be a appropriate solution to the organisation's agenda. The reason in choosing recycling because, they strongly believing that recycling can provide extra sources of income and promoting good lifestyle. So, they started to plan the proper way of recycling operation and designed the best approach to attract people join this program. MBSA has shown their support by giving away a set of recycle bin. After the plan is ready, committee agreed to proceed another phase, implementation.</p> <p>* Interchange phase: Organisation need to decide whether the program should be implanted or not. If not, the process will stop at initiation sub-process. If yes, the program has to move to the next phase in implementation sub-process.</p>	<p>Committee of surau</p> <p>(One of the member has suggested to the board for run a recycling activities to collect <i>surau</i> fund in order to build in a proper building of <i>surau</i>.)</p> <p>Support by Shah Alam Municipality (MBSA)</p>
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<p>Redefining / Restructuring:</p> <p>At this point, committee realise that recycling program should modified and re-invented in order to fit with organisation's need. They aims to increase number of recyclable collection from community.</p> <p>It is just involved the minor changes. They have expanded the recycling centre to another strategic spot at community hall in once a month (limited time). Community hall can provided more convenient place compare to <i>surau</i> which is limited space. But, practically public still can send their recyclable items to the <i>surau</i> in any time. By doing so, people can come to hall and send their recyclable items in a bulk.</p> <p>Over the time, committee create initiative of expanding the other area of 3R, reuse. They ensue with another project to collect used cooking oil and sell it to particular private company. They provide a special store room for people fill up the used cooking oil into the bin. Another project in future will be water harvesting but the planning still in progress.</p> <p>Clarifying:</p> <p>They received positive respond from community regarding this green program as they does not been exposed by this kind of project before. It shows that community glad to join the program by contributing their effort to donate recyclable materials to the <i>surau</i>. They understand the purpose of the program which about giving alms to the mosque by selling the recyclable materials. It such a successful program as committee of <i>surau</i> manages to run this recycling activities continuously over than seven years. Recycling program has been spread out over the neighbourhood and gradually becomes clearer to the organisation member and community. Their initiative has shown the increasing number of collection and community participatory over time.</p> <p>Routinizing:</p> <p>Seven years of establishment is a good indicator to show their excellent performance in recycling program. Recycling practices has become incorporated in routine activities of organisation especially community. At this point, it is not a program anymore but it become a part of necessary practices for most of them. Typically, innovation process is completed. Decision to continue this program has determined by committee and good respond by community. They feel that, it is good program and should be continued as its gives many benefits for them towards sustainable lifestyle.</p>	<p>Committee of surau</p> <p>(Committee board must ensure the recycling program is running as planned. They are key person who executes this program with community / neighbourhood)</p> <p>Community</p> <p>(Consist of multiracial, and diverse of background. Basically, recyclable resources come from neighbourhood.)</p>
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Table 3.3: Innovation process in 3R program at *Surau* Al-Husna.

4. Key findings and discussion

4.1 The innovation process in 3R program conducting by Islamic Institution

From the previous table (Section 3.2 and Section 3.3) have shown that the innovation process in organisation provide the systematic and clear process in organisational structure to pursue an excellent program. Basically, both institutions accomplished the higher level of adoption in a stage of routinising. From the finding, mosque and *surau* illustrates the different level of routinizing. There are divided by two categories; 1) passive routine, and 2) active routine. Passive and active routine are defined based on the diversity of 3R activities, and participatory from community involved in 3R program. In the case of mosque, it is consider a passive routine because the 3R program is still fresh and needs space of exposure by showing them the real meaning of 3R activities in order to give them motivation in pursuing environmental activities in future. The good exposure and experience in environmental debate be able to formulate sense of consciousness in the community's life. Committee need to expand the operation by calling community especially nearby area to participate in collecting and segregating activities. It will foster a good relationship (*ukhwah*) among community involved. In other hand, *surau* plays an active routine since it is established program over seven years and they are highly motivated by committee to join this program. The recycling program has been evolved by time and act as a proactive committee to innovate another green idea such as used cooking oil and water harvesting project. By conducting this 3R program, community learned new approach pertaining proper manner in managing their solid waste at home and keep persistent in practices of 3R activities in daily life. By doing so, real life experience will be adopted in any way, be it at home, office, school, and so forth.

4.2 The role of Islamic institution in adoption of 3R programme.

From the empirical evidence of case studies has illustrated the various role of Islamic institution in adopting of 3R practices. The main features of their roles are summarised in table 4.1. This paper will highlight some insights based on empirical data.

Features	Kg Pilin mosque	Surau al-Husna
Period of recycling program	2 years	7 years
Organisation structure	Mosque committee (12 individuals): Nazir, imam, bilal, siak, others committee)	Surau committee: Chairman, imam, bilal, others committee.
Approach	Top down (policy comes from government)	Bottom up (committee initiative)
Education centre	<p>Formal: Friday sermon (only deliver by imam in once a year but it depends on committee decision),</p> <p>Talk: just happen indirectly in religious talk – tend to remind people and explain on surface about current issue debate because they do not have an expert person in environment field.</p> <p>Non-formal: words of mouth.</p> <p>Activities: 3R (mainly recycling program)</p>	<p>Formal: provide talk by committee member (expert in area of environment such as Mr Mazlan Idrus. He is an officer at Lembaga Urus Air Selangor). Basically, talk will be held based on request.</p> <p>Non-formal: words of mouth, pamphlet, banner, facebook, blogspot.</p> <p>Activities: mainly cover 3R program</p>
Leadership	<p>Imam as key person in this program but still be monitored by Nazir.</p> <p>A problem will be discussed by committee members. After they meet the consent, then the leader is responsible to make a final decision.</p>	<p>Chairman of committee has an autonomy.</p> <p>A problem will be discussed by committee members. After they meet the consent, then the leader is responsible to make a final decision.</p>
Recycling centre	<p>Small scale</p> <p>Type of recycling: paper, plastic bottle, aluminium, etc</p> <p>Other R- reduce (electrical consumption)</p> <p>Recycle bin created by community</p>	<p>Medium scale</p> <p>Type of recycling: paper, plastic containers, metal items, books and electronic devices.</p> <p>Progressive expand to another</p>

	initiative (special security needed to avoid messy by monkey).	type of R. Reuse - used cooking oil, water harvesting. They used 3 colors bin and special room/space is provide space for bulk of recyclable items such as sofa, computer, and others.
Community / social centre	Mosque is acknowledge as a community centre in conducting recycling activities. People can always coming to donate recyclable material in any time at mosque.	<i>Surau</i> committee periodically organises a “ <i>gotong-royong</i> ” (collective social activity) with the community to segregate recyclables from the mixed waste and sell them in bulk to a recycling contractor.
Spread the moral goodness	<i>Mahmudah</i> : Giving alms/charity (<i>sedekah</i>), do not waste, good deed should continue.	<i>Mahmudah</i> : Giving alms/charity (profit will be used to build in new <i>surau</i> and support another religious activities), cultivate sustainable lifestyle, conserve environment.
Innovation laboratory (encourage to think out of the box)	They create/innovate process that can enhance the number of recyclable materials such as collecting at home - home.	Exploring new resource to multivariate prospect of 3R activities such as used cooking oil, and water harvesting project.

Table 4.1: The role of Islamic institution in adoption of 3R program

Mosque and *surau* can be a good role model to other religious institution in promoting green idea and program to their devotees. Based on case studies, they have quite stable, organized and has clear objective in organisation to improve the program. Hence, responsible person in organisation need to utilize their role to create the environmental concern among the participant through formal and non-formal environment education, so that everyone realises the importance of 3R program in life and the 3R practices can be continued. Leadership power can shape a strong institutional to move forward in line with organizational goals. A leader has the ability to make decisions, however, discussion and consensus of the committee is also required to make a successful program. Mosque and *surau* can be used as community centre that provide fascinating facilities such as recycling point. This strategy enable for the

mosque and *surau* to emphasis community on the importance of environmental protection through 3R or recycling. Mosque and *surau* has a power to bring people together in to the program besides can influence people to do a good practices in their life. It can be a medium for community to unite by supporting with one religion brought by the Islamic teaching. Religion is an important element in influential human life to be more directive. Religion is an education that need to be applied in human life. Religion can control the behaviour from doing such immoral acts. In this study, obviously 3R practices can be adopted by community because of encourage good deeds such as giving alms or charity (*sedekah* in kinds such as newspaper, plastic, bottle, aluminium and etc), cultivate sustainable lifestyle, and conserve environment by maximise the use of waste. These good character (*Al-Mahmudah*) are highly demanded in Islam teaching. In addition, the mosque and *surau* has clear potential in the fact to become a nucleus of knowledge and innovation laboratory in encouraging creative and proactive community to create something useful for the sake of humanity.

5. Conclusion

As a conclusion, both Islamic institutions has clear prospective in conducting systematic structure of organisation in accomplish the goals of 3R program. It also can play a significant role in the adoption of 3R practices among Muslim community. Hopefully, early research evidence presented in this paper can provide useful insights on how both the mosque and *surau* organisation can encouraged the Muslim community to develop an effective environmental movement to deal with environmental issue. Such evidence may also inspire policy makers and the public to realise the important that Islamic institutions can play an important role in creating a sustainable transition in waste management – particularly in countries like Malaysia where religion has a strong significance in shaping its socio-cultural and socio-economic landscape. In such a context, policymakers may want to test the unconventional approach of increasingly incorporating religious communities as a part of its sustainable waste management strategy.

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