

DProf thesis

**Enhancing environmental practices in Khoja faith communities –
a collaborative inquiry**

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DProf Thesis
Middlesex University, London
Thesis with Appendices
5 January 2023

Doctoral Thesis
By
Name: Makbul Hussein Mohamed Rahim
Candidate Number: M00508270

Thesis and Appendices

5 January 2023

**ENHANCING ENVIRONMENTAL PRACTICES IN KHOJA FAITH COMMUNITIES - A
COLLABORATIVE INQUIRY**

DProf Thesis

5 January 2023

**ENHANCING ENVIRONMENTAL PRACTICES IN KHOJA FAITH COMMUNITIES - A
COLLABORATIVE INQUIRY**

Makbul Hussein Mohamed Rahim

**A thesis For a Professional Doctorate Degree to be awarded by Middlesex
University, London**

**A doctoral thesis submitted in partial fulfilment of the requirements of the
Middlesex University, London, for the degree of Professional Doctorate**

5 January 2023

**Enhancing Environmental Practices in Khoja Faith Communities - A
Collaborative Inquiry**

Doctor of Professional Studies (Transdisciplinary Practice)

Islam and Environment

Doctoral Programme

Faculty of Business and Law

Middlesex University, London

Advisers

Middlesex University

Dr David Adams

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Doctoral Thesis

By

Name: Makbul Hussein Mohamed Rahim

Candidate Number: M00508270

**ENHANCING ENVIRONMENTAL PRACTICES IN KHOJA FAITH COMMUNITIES - A
COLLABORATIVE INQUIRY**

List of Abbreviations and special Terms used in this Thesis

Abbreviations relating to the faith communities of enquiry

BM - Birmingham

EC - Executive Committee

ES - Essex

HIC - Hussein Islamic Centre, Peterborough

LE - Leicester faith community

MC - Management Committee

MSIC - Muslim Shia Ithnaashery Communities

PE - Peterborough faith community

PW - Portsmouth Wessex faith community

SH - Stanmore Hujjat faith community

IFEES - Islamic Foundation for Ecology and Environmental Sciences, a UK-based charity

VP - Vice President

Special faith tradition terms used in this thesis

Aba Abdillah - the title referring to the third holy Shia Imam Hussein

Abul Fadhl Abbas - the brother of Imam Hussein who was martyred in Karbala

Ahsant - thanks

Al Qayim - the one who rises (one of the titles of the 12th holy Shia Imam)

Alhamdulillah - praise be to Allah

Alim - priest

Alimah - lady priest

AFTS - abbreviation for the prayer “May Allah hasten the 12th holy Imam’s mission soonest.”

Amanah - trust

Arbain - commemoration of the 40th day after Ashura

Ashura - the day of the 10th Muharram when the martyrdom of the 3rd Holy Imam Hussein took place in Karbala

Asbabe Nuzul - the reason for the revelation

Asraaf - wastefulness

Ayyamul Fatimiyyah - days of majalises held to commemorate the death of Lady Fatimah, daughter of the Holy Prophet

Chalismo - majlis on the 40th day after the death of a person

Dahwul Ardh - spreading of the earth from its center in the process of its creation which is believed to be from the Kaaba

Duas - supplication, praying for someone

Diniyat - credal elements of religion

Eimaan - faith

Fajr - early morning dawn prayers

Fitrah - obligatory alms given to the poor on the day of Eid after the end of Ramadan

Ghusal Khana - the place for the ritual washing of the deceased body

Hadith - the traditions comprising statements and actions and acquiescence of holy Prophet Muhamed and holy Imams from the holy progeny of the holy prophet

Hawza - specialist Shia seminaries to produce sheikhs and learned scholars and Marjah mainly in Qom, Iran and Najaf, Iraq

Imambargah - the house or place of the holy Imam

Inshallah - if Allah wishes

Jamaat - communal society or organisation

Karbala - in Iraq, where the holy shrines of Imam Hussein and Abul Fadh are located

Khari Mani - simple meal served for relatives of the deceased on the day of the funeral of the deceased

Mabruk - congratulations, blessed

Majlis (majalises plural) refers to the religious lecture and gathering in the mosque

Marthiyas - sad poetry recited on the commemoration of the martyrdom of the martyrs in Kerbala

Masjid - mosque

Marjah - the religious scholar who issues religious rulings binding on his followers

Mizan - balance

Muallim - an honorific title to refer to a teacher, knowledgeable person, lay priest or lecturer

Niyaz, tabarruk and fateha - refers to the sacred food offering to the congregation after a religious function

Nawhas - sad poetry recited at the time of beating of chests in commemoration of martyrs in Kerbala

River Furat - the river in Kerbala with symbolic significance to Ashura

Shahr - month

Shane Nuzul - context of revelation

Shia Ithnaashery - Shia Muslim sect that believes in 12 Divinely appointed Imams after the holy Prophet

Shura - Consultation - the Quranic recommendation to make communal decisions in consultation with members and brothers in faith

Subhanallah - Glory be to Allah

Tabligh - to propagate religion

Tafseer - exegesis of the Holy Quran

Tabzir - wanton wastefulness

Zakir - a lay priest

Explanation of other terms used

Assist - in the phrase “assist in bringing about change in current practices”, the term “assist” is used to indicate to initiate and facilitate the process of bringing about change in current practices.

BYO - bring your own cutlery

Carbon Brief is a UK-based website specialising in the science and policy of climate emergency, www.carbonbrief.org.

Epistemic roots - the ways of knowing and the process of knowing

Faith - the term "faith" is used as encompassing the entire belief system comprising the doctrines and teachings of religion and the moral and legal dimensions of religion. Faith also is used to indicate an inward personal and individualistic feeling and devotion associated with one's personal conviction, trust and confidence in belief. In considering faith as a motivational factor for change, all these aspects were considered.

Khoja - see footnote FN1 in Appendix 10.

LH - Learning history methodology

Tailings dam - A tailings dam is an earth-fill embankment dam intended to contain mine waste materials permanently. It is used to store by-products of mining operations after separating the mineral ore from the other extracted materials. These waste materials are usually highly toxic and acidic.

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Abstract

My research project was a fascinating exploration and research journey into an intensive collaborative inquiry with six Khoja Shia Muslim faith communities based in England to improve and enhance environmental practices in the faith communities.

The knowledge landscape within which this project is located is a wide and complex one and brings together several different domains of knowledge that arise and come into play in this research. These domains are the environmental issues, global and local initiatives to deal with these issues and the religious considerations underlying these issues.

The different epistemic roots (the ways of and the process of knowing) which are used in analysing and understanding the issues in this project include science and its emergent findings, the impact of global politics on climate change and its impact on global society and its mitigation, the emergence of moral and ethical dimensions on the environment, the faith teachings on the preservation of the environment, institutional structure and practices and the process of organisational change in the faith communities covered in this project.

The purpose of my research project was to contribute to the overall social process of change in the environmental practices in these faith communities. The aim of this research was to assist in bringing about change in the current practices of the communities.

The research approach in this project was a participatory, collaborative inquiry with discussion groups in the faith communities. I opted for the collaborative inquiry framework as one providing a direct pathway for taking a research approach to practice and change-making and enabling investigation, action and reflection and reporting the learning from it in a way best suited to the project and the participants and the faith communities. The collaborative inquiry was undertaken with community discussion groups drawn from the six UK-based faith communities. I gathered the research data through initial face-to-face meetings followed by separate ongoing online WhatsApp sessions of each discussion group. These six faith communities were the Birmingham, Essex, Leicester, London (Stanmore), Peterborough and Portsmouth Khoja Shia Muslim communities.

The collaborative inquiry format provided the discussion groups with a much-needed forum to jointly develop these groups' initiatives and strategies to bring about change in the communities' problematic practices and to trial them within the communities and learn from their outcomes. The discussion groups helped to motivate the communities to think about taking steps to improve their green practices and address environmental issues within their contexts and help in making the change in the problematic activities.

The research gives an engaging insight into the structure and workings of the Khoja Shia communities, the positionality of the key stakeholders and influencers in the community, and the decision-making processes involved in changing their practices.

The research considered the aspects that played a part in influencing the change process and examined the motivating factors and the elements that posed hurdles and impediments in effecting change in these faith communities. It considered how these factors affected the practice and approach of decision-makers and members of the communities.

The study showed that improving the long-standing, entrenched practices was a complex and difficult process in the communities. The communities faced Internal institutional and organisational constraints and external constraints in changing problematic practices.

A key finding of the research was that change in the faith communities could be facilitated by adopting a change strategy involving local change agents, including women and working with community leaders and volunteers in the change-making process, securing buy-in from the donors of the community, undertaking awareness building and education and scientific studies linking the problematic practices to environmental harm locally and globally and seeking motivation from both science findings and faith teachings combining bottom-up consensus building approach and top-down policy forming approach.

The project enabled the communities to develop a deeper understanding of both the Islamic faith's position on nurturing the environment and the impact of the current scientific findings on issues of global warming and climate change, carbon emissions and pollution.

The study highlighted the importance of eco faith and eco science in changing community practices. Both are needed together, working in tandem as borne out by Holy Quran, which states that good deeds should accompany beliefs. Faith remains in the heart and soul, but science or knowledge of scientific technologies acting through the mind opens the doors to operationalizing the practice of faith teachings in modern living.

This process of change-making in the communities needs long lead times and is a continuing process. For the process to be deep, transformational, and sustainable, it requires sustained efforts of awareness raising at grassroots levels and reiterative cycles of formulating and trialling green pilot initiatives in the communities to discover and arrive at acceptable and workable solutions.

The study makes suggestions and recommendations for further study, research work and efforts in this area to be undertaken and shared in the Khoja faith communities at the communities as well as regional organisational levels to enhance ways of addressing the environmental concerns within the Khoja Shia global communal network and also with other communities worldwide.

Key phrases: environment, eco faith, eco science, faith, religious beliefs, changing communities' practices; motivating factors, obstacles to change; collaborative inquiry; Khoja faith communities; collaborative research with communities, knowledge domains and knowledge landscape.

Chapter 1 - Introduction and Context

Introduction

My research is on enhancing environmental practices in Khoja Muslim faith communities based in England through collaborative inquiry undertaken together with community discussion groups in six Khoja Shia Muslim communities, namely the Portsmouth, Birmingham, Leicester, Essex, Peterborough, and London (Stanmore) communities. (FN1)

This research project addresses the issue of our physical Environment and its protection, which is much needed by the world today. Environmental degradation has become an issue of key concern to humanity at large and is a major global problem. There is at present manifestation of the growing concern shown by the world governments and the international community through various international summits on the Environment, Climate Summit meetings and decisions and by religious leaders such as Pope Francis, who has issued the Encyclical "Laudato Si" on the care of our common home on 18 June 2015. (FN2) More recently, there has been in September 2021, a joint declaration by Christian leaders Pope Francis, Patriarch Bartholomew and the Archbishop of Canterbury calling on all people to make meaningful sacrifices for the protection of the earth as the creation of God. (<https://www.archbishopofcanterbury.org/news/news-and-statements/joint-statement-climate-change-archbishop-canterbury-pope-francis-and>). Other examples are the 2009 Tehran Declaration on Human rights and the Environment and the 2015 Islamic Declaration on Climate Change (Istanbul). (FN3)

These concerns have highlighted environmental issues faced by human society arising from global warming and climate change and the rising carbon footprint of human activities. The effect of climate change is seen in the severe and now frequently occurring weather changes, melting of glaciers, rising sea levels, floods, landslides, and draughts globally. Recent increases in the occurrence of huge forest fires in Europe, the USA and other parts of the world are related to draughts and dry weather. Global warming and climate change have become a full-blown emerging crisis for the world community.

My approach underlying my research project was that action and initiatives taken at the local community levels worldwide to contribute to the fight against global warming and climate change, and environmental pollution would be an important and necessary step to deal with this crisis.

This involved bringing about change in the attitudes, mind sets and approaches towards how local communities and, ultimately, society view the protection of the Environment and nature in the context of modern lifestyles prevailing world-wide. This required sensitising local communities to the linkage between local environmental practices and the carbon footprint of the communities to the global warming phenomenon and environmental pollution. This involved making a change in community practices and activities contributing to their carbon footprint and global warming.

In locating the research within the six Khoja Shia Ithnaashery communities in England, including London Stanmore, the largest Khoja Shia community in the UK, I was conscious of the fact that these communities form part of a network of closely knit Khoja Shia Communities (over 140) located in several countries in the West, Africa, and the East. These communities have the skills and financial and cultural resources, and entrepreneurial spirit developed over decades of migration from India to Africa during the 18th and 19th centuries and, more recently, in the 20th and 21st centuries, migrating from Africa to the West. They have developed and demonstrated the adaptability, versatility, and resilience to respond to changing challenges brought about by globalisation in economic, social, religious, and

political spheres. They have also shown an aptitude for negotiating through the challenges of modernity and translating the application of their belief and value system to modern times. Appendix 7 throws further light on these aspects of their development.

These being faith communities with rich cultural and religious values and practices, including environmental protection and stewardship, there was ample scope for learning from this research as to how faith communities respond to challenges of global warming in terms of bringing about change in their thinking and practices.

As these communities formed part of the world-wide Khoja Shia communities with over 140 member communities, there was and remains immense potential for transferring learning from this research work across to the other Khoja Shia communities and benefitting the entire network of Khoja Shia communities. These are lessons that can be transferred to other faith communities and non-faith communities in terms of bringing about social change in practices in this key area of climate change, global warming, and environmental degradation nationally in the UK and furthermore internationally across the global society.

My background

By way of explaining my background, I am a member of the Khoja Shia Ithnaashery Muslim community, an immigrant community that migrated in and around the late eighteenth to the early nineteenth century from India and settled in Zanzibar and Tanganyika (now Tanzania). My forefathers came from the Khoja Indian community, which had converted from the Shia Ismaili faith (being followers of Agha Khan) to the Shia Ithnaashery faith. They migrated initially from Gujarat (in India) to Zanzibar, where they settled and formed a Khoja Shia Ithnaashery community with its Mosque, community school, medical clinic, and other social amenities in Zanzibar. From Zanzibar, many members of the community went in search of livelihood and better business opportunities to inland Africa and various neighbouring countries like Tanganyika, Kenya, Uganda, Mogadishu, Aden, Madagascar, and Mozambique and eventually settled there, leading to the formation of faith communities in those countries.

In Zanzibar, the Rahim family members started initially as small merchants and business people and progressed over time with higher education to join the colonial administration service in the fields of administration of law such as the police, the prosecution service and the magistracy and private legal practice. My parents and my immediate family moved from Zanzibar to the Tanzania mainland in the 1930s. I did my pre-university schooling in Dar es Salaam and completed my LLB degree at the University of East Africa in 1970.

My interest in law and the legal profession began with listening as a young teenager to exciting stories of police detective work and court experiences of my uncle and grandfather and two granduncles who worked as practitioners in the legal fields and the Justice departments in Tanzania. These stories captivated me and attracted and propelled me to select a law degree course and a career in legal practice.

My interest in environmental matters

During my legal career, while working extensively as a legal adviser in natural resources projects in various developing countries, I developed expertise and experience in mining and petroleum projects and the governing regulatory framework. I was also introduced to legal and operational issues and concerns relating to environmental matters arising in these projects and experienced by people living around and near the mines and petroleum fields. My work included advising on and dealing with these environmental issues and concerns and protecting and safeguarding the Environment from adverse effects and impacts of these

extractive industry projects. It brought home to me how integral and close the natural Environment and its protection were to people living in these areas and how severely they were impacted by the air, water and soil pollution caused by these operations.

My motivation for entering the DProf research programme

As indicated in the (Open University note on professional doctorates) (www.open.ac.uk), one generally enters a professional doctorate programme in order (a) to develop one's knowledge, understanding and competence in work-based research, (b) to develop research skills, expertise and confidence to advance one's practice and become champions of change in the areas of professional practice; (c) to promote the creation and interpretation of new professional knowledge and practice (d) to contribute to existing knowledge and practice; (e) to contribute to the development of new ideas, methods and approaches and (f) to develop transferable skills.

In my case, I was first introduced to this DProf programme by the Islamic College, London and thereafter, Middlesex University. I started this programme as I was approaching retirement from the quite hectic cycles of intense full-time work on project activities which had occupied me in my professional life. I regarded the DProf research programme as a new postgraduate avenue to engage with high academia and an exciting pathway to dive into academic research at the doctoral level. I felt that the DProf programme would help sustain my personal development. I saw the programme as a way of acquiring new perspectives on knowledge and learning and, in the process, also being able to make a difference in my community and society at large.

My research journey

In retrospect, my research journey began with my increasing concerns with adverse and, at times, quite drastic environmental effects and impacts of petroleum and mining exploration and development projects on land and sea areas for people and communities living in those areas. These effects and impacts were witnessed and felt by me during my professional practice as a natural resources lawyer and consultant involved in these projects in several developing countries and my visits to the various mine sites. It then continued with my deep dive over two years into the different faith traditions and teachings on nurturing and protecting our natural planetary Environment in discussions with religious scholars and priests of the three Abrahamic faiths. This exposure was undertaken during the Faith in Creation project with the Heythrop Institute for Religion, Ethics, and public life at London University in 2007-2008. It then culminated with the collaborative inquiry with the six faith communities on changing their environmental practices undertaken as part of my DProf research project at Middlesex University.

Research purpose and aim

I have explained in some detail the research purpose and aim in Chapter 3 (Research design and methodology). The purpose of my research project was to contribute to the social process of change in the environmental practices in faith communities. In the context of the specific faith communities covered in my research, my aim was to bring about change in their current practices.

Research topic - diving into the Environment

In the various natural resources projects in many countries, I encountered and learnt of environmental issues and concerns about pollution and contamination of air, land and water bodies. These concerns included incidences such as land and water contamination from

leakage from a toxic tailing dam in a gold mining project, disposal of toxic waste materials from paint and other factories in the natural water streams and rivers, air pollution and its impact on the health of workers and neighbouring communities caused by mining and aerial transport of asbestos and the impact on fisheries and marine life and activities from oil spillage (such as the Deepwater Horizon oil spill in the Gulf of Mexico in 2010) and effect of natural gas leakage from gas fields in offshore areas.

I remember many mindsets changing moments in my professional career. In one case, while negotiating a mining agreement with a foreign investor company, the senior government official chose one day to highlight the importance of safeguarding against environmental pollution by writing on the big board in the meeting room a short statement in the form of a poem articulating a key question. The poem asks, "When the water in rivers and seas is contaminated, and the fish are killed and dead, then what will we eat? (FN4) Will the precious gold that we seek to mine from our lands then feed us and sustain our lives on our beautiful home island"? I have not been able to find the source of that poem, but a similar expression is found in the Oxford Dictionary of Proverbs (2009). It is quite likely that the official was adapting the expression from the source known to him to suit the occasion of the negotiation of the mining project to emphasise the importance of environmental preservation. This poem remained on the board throughout all our meetings. This was such an apt and effective reminder of not forgetting, in the pursuit of gold, to preserve the life-sustaining Environment in our economically driven transactional work, and it brought home the critical place and role of a pollution-free Environment in people's lives.

Another incidence is related to the instinctive negative reaction of landowners who were present at the consultation meeting to learn of the findings and recommendations of a consultant on a matter concerning safeguards against pollution. The angry reaction was triggered by a modification of his previous views regarding the need for industrial plastic reinforced base and lining for the tailings dam for the mine waste storage to indicate that possibly a less expensive option of relying on the natural configuration of the land and rock structure for the tailings dam without the plastic reinforcement was a workable option. A tailings dam is an earth-fill embankment dam intended for the permanent containment of mine waste materials. It is used to store by-products of mining operations after separating the mineral ore from the other extracted materials. These waste materials are usually highly toxic and acidic.

The landowners who were very concerned about protecting the land to which they were most attached and sensitive about the prospect and fear of pollution damage to their land, rivers and water sources immediately protested and refused to listen any more to the presentation and to know more about his views and recommendations and demanded that the consultant leave the meeting. The consultant then left the country and returned to his home base.

Coincidentally some weeks after that incident, the news came of a major tailings dam failure at a gold mine in another country that had burst and polluted the land and rivers in the vicinity with toxic acid waste from the mine. This pollution incident and tailings dam failure vindicated the fear and concern of the landowners.

Another story which I encountered in another country was about pollution caused by asbestos mining. It is related to the effects of mining and aerial open cage transport of mined asbestos (a hazardous material) on the atmosphere and health of the mine workers and the people living in the vicinity of the mining facility. This resulted in the prevalence of severe asbestosis disease affecting the lungs among mine workers and nearby

communities. This led to a series of court cases instituted against the parent mining company involved in compensation to the workers and people affected by the asbestos mining operations. The mining operation was a significant employer and foreign exchange earner for the country and ceased its activities in 2001 after operating for 62 years. The bustling asbestos mine village then became a desolate ghost town.

I was also inspired to do this research on the topic of Environment because of my personal interest in assessing the potential role of Islamic and other faith traditions and faith perspectives in addressing environmental issues. This arose from my involvement with the Faith in Creation Project with the Heythrop Institute for Religion, Ethics and Public Life of the University of London from 2007 to 2008, which discussed and looked at Islamic and other faith traditions on the Environment. The Heythrop project set up a project team, a small working committee of representatives of three major faiths, namely Christian, Judaism and Muslim faiths. I was nominated to the team by Dr Mohamed Shomali, a visiting fellow at Heythrop Institute and a leading Iranian scholar who was part of the project working committee. I was accordingly co-opted into the project team and participated in its deliberations and discussions. My role and task were to reflect on, research and contribute to the Muslim faith aspects and engage in reflective discussions and dialogue with faith teachings and traditions of the other two religions. The learning from the Heythrop project was a top-down and bird's eye view for me. It gave me a deep insight into how faith traditions of the three Abrahamic religions, as interpreted by their religious scholars, can be understood holistically and applied to provide possible approaches to addressing the emerging issues of concern in modern society, including how we regard faith and creation in our lives and we can bring faith into our decision-making matrix.

The objective of the Heythrop project was to discuss and examine the environmental and related social and economic issues in the present world context. It wished to discover the solutions and responses that the diverse perspectives and values and customs, and belief systems of these three faith traditions had to offer to the world community at large on these issues. Through various interfaith workshops that were held over a period of some 24 months, it sought to examine the modalities of cooperation between the faiths on significant issues such as the challenge of climate change and environmental issues and the place of faith and morality in the economy.

The Faith in Creation project sought to look at wider issues of the human relationship with creation and human responsibility towards present and future generations about environmental concerns, conspicuous consumption, and the just and equitable distribution of the world's limited resources through the faith traditions of the three Abrahamic religions.

The Heythrop project provided me with an important avenue and context within which to learn about and reflect further and deeper with a Muslim faith perspective on the links between faith traditions and environmental concerns. It brought home the immense role of faith and moral values in understanding human relationships with creation in its various dimensions. My involvement in that project led me to explore further the potential role that the moral dimension and faith could play through the cultural and moral values, resources and approaches available in the belief systems in this area of environmental concerns by bringing awareness among the various stakeholders involved and helping to make a change in environmental practices in faith communities.

The discussions with the project team on ecological and social, and economic issues and the place of various faith traditions in addressing these issues increased my understanding and realisation of the potential role of the moral dimension and faith in this area. I thus began

to think about and examine the linkage between the faith dimension and environmental issues.

I felt that the DProf research would also help me in understanding the overall process of social change in the faith communities and the motivational factors and drivers underlying the various possible approaches that could be used in looking at environmental issues. These approaches were:

(a) the faith approach (highlighting the responsibility of stewardship and the obligation of humanity to the Creator).

(b) the science approach (assessing measurable and empirically discovered damage to the physical world and injury to nature).

(c) the commercial approach (assessing financial costs of mitigating measures and alternatives and their impact on business profit for stakeholders); and

(d) the non-faith-based ethical approach (based on compliance with the criteria of broadly defined ethical values and prevention of harm to present and future generations).

Context of the research project

In this section, I explain why I located my research in the UK-based Khoja Shia Ithnaashery communities and how I fit into this community. I also give an overview of the community and discuss its specific characteristics. I was born in and belonged to this faith community group and share its cultural, social, and religious background and bonds. I selected the Khoja Muslim faith communities for this research project from the network of Khoja Shia Ithnaashery Muslim communities based in the UK.

The reasons for my selection of the UK-based Khoja communities were because (a) as a member of these communities, I knew them well; (b) I felt that my being an insider researcher would facilitate the acceptance of the research project and collecting research data through collaborative inquiry in these communities; (c) I felt that my wide network of contacts within these communities would facilitate the recruitment and establishment of the discussion groups in the communities; (d) as a person well known to the communities as a community worker and lecturer on religious and community topics I would be accepted and trusted by them; and (e) the members of the discussion groups will find it easier to give their frank views and opinions on the research topic in the group meetings.

Khoja Shia Ithnaashery communities

This community group is the Muslim community that emigrated from India to East Africa in the last 100 years since the 1920s and from East Africa to the UK and other parts of the world since the 1960s. The UK-based Khoja faith communities have a common cultural, social and religious background and bonds. They share deep historical ties and subscribe to common cultural, social, and religious values and principles based on the Shia Ithnaashery Muslim faith. They have evolved a community structure revolving and centered around a mosque (Masjid) or religious community centre (known as Imambargah) as faith communities.

The communities have evolved a community structure as faith communities and charities with written constitutions, members' annual general meetings and regular election of office bearers every two years and a clear demarcation of duties and obligations of Executive/Management committees and rights and duties of members. The community has clearly defined and controlled decision-making processes for matters relating to the

community and is largely funded by wealthy donors from the community and, to a small extent, by annual membership subscriptions. The community has deeply entrenched social and cultural practices that have evolved and developed over decades, mainly in East Africa and the UK, to deliver community services and facilities to members.

The intermarriages that have taken place previously in East Africa and now continue to take place in the West between Khoja families in the faith communities have helped to create a very closely knit and integrated global Khoja faith community.

In these communities, there are regular religious meetings and functions throughout the year, totalling about two hundred days, including Ramadan and Muharram religious functions. These also include celebration ceremonies on the lives of our religious saints and Imams from the progeny of the Holy Prophet, wedding ceremonies and food events and privately sponsored religious functions. In addition, the community provides burial and religious funeral services for the deceased from families of members and for many non-Khoja Muslims who do not have established communities or any such facility in their own communities. The community also holds congregational prayers for members and has facilities for weekly day meetings of seniors at the Centre. The community also has a daily Montessori nursery for young children and a weekend madrasah for community boys and girls. The mosque functions and events are serviced by mainly unpaid volunteers, and they have a prominent role in running and facilitating the functions and helping in all community activities.

The membership numbers in the six faith communities in this project are approximately Portsmouth (350), Birmingham (700), Leicester (600), Essex (150), Peterborough (750) and London -Stanmore (5000).

Appendix 7 sets out further information on Khoja communities in a note on the Khoja Shia Ithnaashery communities in East Africa and the global community-building process.

Specific characteristics of the Khoja communities

The defining key characteristics of the Khoja communities include a consensual decision-making process, community nurturing through sacred food offerings in majlises, symbiotic relationship of leadership and members, gender factor in the community and the essential role of community volunteers.

Consensual decision-making process

As Muslim faith communities, the Islamic concept of Shura (consultation with members and brothers in faith) has been an important element of maintaining communal cohesion in the Khoja faith communities. Based on the experience of establishing new communities from scratch in East Africa after migrating to these new territories, the communities have evolved a social structure revolving and centered around a mosque or centre as faith communities. The communities learnt to function autonomously under the jurisdiction of the colonial charities laws and the laws and regulatory framework governing the voluntary sector as registered charities or as voluntary sector organisations in these countries.

The governance structure of the community provides for consensual decision-making as a subscription-based membership body. There is a written constitution which sets out how the body should operate as a charitable organisation. The written constitution provides for the objectives of the charitable body and the rules of membership of the organisation. The management function is carried out by an Executive Committee or Management Committee, which is elected by the registered paid-up members in Annual General Meetings of the

members periodically, usually every two years. There is also a separate board of custodian trustees elected periodically, usually every five years, with the specific mandate to protect and safeguard the properties and assets owned by the community.

I learnt from a knowledgeable senior elder during my youth days in East Africa (when discussing the community governance model with him) that the origin of the communal constitution prepared by a community pioneer leader was the model memorandum and articles of association of a company (provided for in companies law in force in East Africa as an English colonial statute of general application in East Africa).

Following the emigration of the Khoja community members to the West and specifically to the UK, the Khoja faith communities have, in essence, adhered to this basic organisational and governance structure albeit with the necessary modifications to reflect changes in the UK charities legislation over the decades and the evolving needs of the communities and the organisational practice in the West.

In this organisational structure, there is a clear rule-based demarcation of duties and obligations of Executive/Management Committees, the charity trustees and the rights and duties of members. The community has decision-making processes for matters relating to the community and is funded largely by voluntary contributions and donations from wealthy donors from the community and, to a very limited extent, by small annual individual and family membership subscriptions. The core paid-up membership of these bodies varies from about 200 to 2000, depending on the size of the respective congregation.

Community nurturing through sacred food offerings in majlises

The key matter to note here is the integral religious practice of providing sacred hospitality to the congregation and the blessed offering (usually savoury snacks and sometimes meals) to them after a religious function called the majlis and how this practice of meeting regularly in the Mosque for the religious majlis brings together community members and sustains the community as an integrated social entity. The practice of providing hospitality to guests has been a part of the Indian and the Khoja traditions since the times when the Khojas lived in India, but this practice has been much enhanced and is now entrenched in the Khoja culture by the religious concepts of sacred hospitality and blessed offering in the community functions to community members.

Most of the religious functions in the faith involve the provision of sacred hospitality to the congregation in the form of meals or tea and snacks (called Niyaz in Urdu and Tabarrok in Arabic) at the conclusion of the functions. This practice dates from the times when the communities lived in India prior to emigrating to East Africa and settling there. The provision of this hospitality is a religious practice and has social and cultural significance. These sacred offerings symbolise blessings for the attendees arising from their participation in religious functions.

Its religious significance is that the offering, be it a snack and tea or a meal, is given after the recitation of the Quran and remembrance of the Holy Prophet and his holy progeny and the divinely appointed Imams, and it is therefore blessed by this sacred recitation and remembrance. This blessed offering comes with the moral duty of respect to be given to it, namely, to eat it respectfully and not to waste it or leave it half-eaten. This specific duty of respect to the blessed offering is in addition to the faith teaching against food waste generally.

This sacred hospitality and the large number of congregations to be served (ranging from 500 persons in small communities to up to 2000 persons in large communities) explains why

many of the communal, environmental practices involve and revolve around the communal food events and the processes relating to these events. In larger communities where in some major events like Ashura, up to 3000 to 4000 persons attend the religious event, the process of serving food to such large gatherings is very challenging and requires close and careful coordination by the Mosque, kitchen, and main hall volunteers.

The communal food events also play an important role in bringing together community members who interact with and come to know each other well. This regular seeing and meeting of community members in the Centre has a huge social impact on members. It enables social interaction among them and helps to galvanise the community into a closely-knit extended family and to sustain the community. Members can become very familiar with each other's personal and family backgrounds and develop personal links and professional and work networks. The women and girls in their separate sections develop such close linkages with each other also. This knowledge of each other facilitates key decisions members make about social matters, such as engagements and marriages between eligible boys and girls in the community and decisions on business transactions and work and social networking.

The symbiotic relationship between leadership and members

There is a symbiotic mutual relationship between the leadership, the community donors, the community volunteers, and grassroots members within the community, which cuts across the formal decision-making matrix of the governance structure.

In practice, the Khoja faith communities operate by process of consensus between the Executive Committee members (leadership), the high-net-worth donors (core financial support) and the volunteers (the muscles and manpower) carrying out day-to-day services and activities. There is regular coordination between the Executive Committee and various specific sub-committees that are formed by the Executive Committee with their delegated specific responsibilities and functions in various areas.

The organisational structure has evolved in terms of its scope and complexity over the years. The constitutional annual general meetings provide an important forum for discussion on decisions that have been taken by the Executive Committee during the year and giving explanations and providing public accountability for the expenditures incurred by the leadership of the community and the major decisions taken on behalf of and in the name of the community. The total contribution and donations income and expenditures of the larger communities can amount to more than £2 million per annum.

The gender factor in the community

Community functions are held in separate mosque areas for men and women. There is, therefore, separation of women from men. There are joint programmes for ladies and men where the ladies sit in the ladies' section and listen and see via TV the men's programmes. There are also ladies-only programmes where only women participate. The women have their own leadership structure of a ladies' committee with the chair lady elected by members and a committee of ladies selected by the chair lady or elected by the women.

These ladies' committees organise and run the ladies' programme functions. The chair lady and representatives of the ladies' committee also sit on the Executive Committee meetings and participate in decision-making with men. The ladies have their own volunteering teams for the ladies' kitchen and ladies' hall. Thus, there are many avenues and opportunities for women to participate in and influence community decision-making. The women are also represented in various community groups like youth, social, professional and sports groups.

Essential role of community volunteers

A key feature of the community structure is the central role community volunteers comprising both men and women, play in servicing and carrying out the various functions and activities in the Mosque. They are mainly unpaid volunteers, and they have a prominent role in running and facilitating the mosque functions and helping in all community activities. These volunteers, numbering one hundred to two hundred in total, assist in the funeral services, wedding services, car parking, cooking in the kitchen and serving food and drinks in the main halls, IT streaming of programmes on the internet and audio and video support teams and all other needed services in the Mosque.

This group of volunteers are indispensable to the smooth operation of the Mosque, and they wield immense strategic power through their unpaid service to the community. Without their continual services, the centre's activities would be immensely disrupted and come to a halt. Their voices and opinions also carry a lot of weight in the community decision-making process affecting the conduct and logistics of the mosque activities.

Both sections of the community, namely the gents' and ladies' sections, have their own corps of volunteers who have been serving the community since its establishment. The ladies' volunteers' services include cooking, cleaning up and serving from the kitchen, serving to ladies in the ladies' main hall and other rooms where ladies' activities are taking place, taking care of children and toddlers with their mothers in a separate room, helping elderly ladies all in the ladies section.

The volunteers have a special status in the community. A unique uniform identifies and distinguishes them. They have their own organisational operations and management structure with the head of the volunteer and several heads of different activities spheres and divisions under the head, and this structure is replicated in the ladies' section also.

Any visitor to the community mosque and centre during a community function would not fail to see and feel the extensive presence of the volunteers at all moments in the centre's programmes. These volunteer corps include the car park volunteers who help the congregation to park their cars in the mosque car parks or guide the attendees to the alternative parking areas in the neighbourhood arranged by the volunteers. This important role is shared between men and women volunteers in all aspects of the activities and work being done in the mosque programmes.

The concept of the influence of volunteers and their strategic power positionality in the community through service and volunteering is also discussed later in this thesis.

Conclusion

I have highlighted the various distinctive features of this research project that make the undertaking of this project in the context of the Khoja faith communities very worthwhile for me. These features comprise the emergence and crystallization of my interest in the Environment in the course of my professional life and work projects, the way I came to be doing this DProf research programme through the Islamic College, my research journey from the Heythrop Institute to the Middlesex University, the location of the research in the Khoja Shia faith communities and the defining characteristics of the faith communities and the juxtaposition of faith and science in understanding and framing the approach of the communities to environmental practices.

Chapter 2 - knowledge Landscape

Key markers of the knowledge landscape

The knowledge landscape within which this project is located is a wide and complex one wherein I have encountered, and I have sought to bring together several different domains of knowledge that arise and come into play in this research. These domains are the environmental issues, global and local initiatives to deal with these issues and the religious considerations underlying these issues. The different epistemic roots (the ways of and the process of knowing) which are used in analysing and understanding the issues in this project include science and its emergent findings, the impact of global politics on climate change and its impact on global society and its mitigation, the emergence of moral and ethical dimensions on the environment, the faith teachings on the preservation of the environment, institutional structure and practices and the process of social and organisational change in the faith communities covered in this project.

In the context of the faith communities, in broad terms, the key markers or signposts of the landscape for me were (a) the problematic environmental practices in faith communities, (b) faith teachings on the environment, (c) the impact of faith teachings on faith communities and (d) the process and outcome of making a change in environmental practices in the communities.

In terms of the global and international scene, the key features of the landscape were (a) the local and global impact of the problematic environmental practices, (b) global concerns relating to climate change and environmental damage, (c) initiatives taken at global levels to address these concerns (d) development of moral and ethical dimension on environmental issues at the international level. A knowledge landscape mind map of the different domains of knowledge and the epistemic roots used in this thesis is set out in Appendix 1.

The complexity in the knowledge landscape arises from the different but highly interconnected knowledge domains involved in this research. The domains comprise, on the one hand, the scientific perspective and expert consensus on the causes of climate change and global warming and, on the other hand, the faith perspective giving rise to the moral case for changes in lifestyle practices and other changes at individual and community and country levels worldwide to slow down and arrest climate change and global warming. Given the context of the research project in the faith communities, issues about social change and shifting mindsets and cultural shifts also arise.

The scientific perspective points to the huge visible and catastrophic global impact of ongoing climate change and global warming on the planet and its inhabitants worldwide on the one hand. The complexity within the scientific realm includes the following: Our modern lifestyles and huge demands of industrialised economies in the developed world and developing economies require energy consumption that contributes to high carbon levels in the environment. Our massive utilisation of plastic materials and their disposal is leading to immense plastic throwaway waste in our landfills and oceans. The human activity-driven pressures on the environment are pushing the global ecosystem's functions beyond a dangerous threshold. In the view of climate scientists, the manner in which these pressures simultaneously impact several different critical earth systems is causing overlapping crises of environmental sustainability.

The governments, however, face the constraints faced by global and national politics grounded on the preservation of their national strategic and economic interests, which

affect the ability of countries which are contributing significantly to global warming to take immediate, effective and decisive measures to mitigate and prevent activities causing global warming and climate change.

At the local faith communities' level, the complexity arises from identifying and understanding the various drivers of change that could help improve community practices. These drivers include developing a better understanding of the faith teachings on environmental protection among the communities and how the change in the practices could be made in the face of entrenched community practices and modern lifestyle practices, and other constraints and impediments facing the communities.

The complexity within the realms of faith perspectives includes the following: while there is acceptance by the faith communities of faith teachings on environmental protection, on the one hand, there is also an inability on the part of faith communities to put into practice the faith teachings due to internal organisational and cultural and external systemic impediments. The cultural barriers relate to the difficulty of making cultural shifts in the communities to move from their entrenched practices.

The activities and practices of the communities are rooted in religious and cultural practices and the traditional ways of delivering communal functions and services to the membership. The complexity and the cultural shift are also situated in the lack of the communities' realization of the linkage between the communal eco-unfriendly practices and the global warming taking place at the global level with its devastating consequences for the Earth's inhabitants in various parts of the world. This acceptance requires a cultural shift through extensive sensitisation and awareness, and understanding in the communities of the global phenomenon and a deeper profound understanding of the vital role of faith teachings and their practice in contributing to balanced and environmentally sustainable communities worldwide.

A key issue that arises is obtaining an understanding of the environmental concerns locally and globally, the ethical dimension of the environmental problems and exploring the role that faith teachings can play in making change at the local community level and contributing towards international efforts in this area. In this study, I explain current international global concerns on climate change and environmental degradation and the various international initiatives being taken to address this issue. I look at the ethical dimensions of climate change as manifested in the initiatives. I highlight the issue of plastic pollution within communities and society at large. I also discuss the Islamic faith teachings and consider their role in the change process of environmental practices of faith communities.

It is important to consider the importance of assessing the environmental issues from both the faith and scientific perspectives in bringing about change within faith communities in their thinking and environmental practices at the local micro level. The current scientific investigations and studies have highlighted major ecological issues facing the planet earth, such as global warming and climate change and the plastic waste generation, disposal and pollution that is taking place on land and in the seas. See UNEP Global Environment Outlook 2000 Report (UNEP 1999) (<https://wedocs.unep.org/20.500.11822/8219>). My research shows how the scientific perspective coupled with a deeper understanding in the Muslim faith communities of the Islamic faith position on nurturing environment could enable the communities to address and deal with issues of global warming and climate change and carbon footprint within their contexts by changing or modifying those social, cultural, and religious ceremonial practices, which contribute, to environmental degradation and pollution.

The link between the problematic current community practices at the local level, such as the use of plastic and Styrofoam materials and products in religious events and its contribution to plastic pollution in oceans and the harm that plastic waste contamination does to fish, sea birds and marine life is not generally made and understood by all in the communities. Similarly, the link between the carbon footprint of the communities and global warming and climate change is not being made. This needs to be made if a change is to take place.

Current global context and background to climate change concerns

It will now be helpful to look briefly at the global context of the current environmental issues facing the world within which my research is located. Environmental degradation is now acknowledged to be an issue of crucial concern to humanity at large and a major global problem. The ecological issues include global warming and climate change resulting in increasing earth temperature, rising sea levels and wildfires, hurricanes, floods, droughts and heat waves, changing weather patterns and the growing carbon footprint of human activities. This environmental degradation is manifested in diverse ways through air, water and soil pollution; soil erosion and salinization; desertification and deforestation of land; extinction of plant and animal species; global warming and climate change and the melting of glaciers in the arctic and contamination through toxic, chemical, and radioactive waste. [www.soas.ac.uk] [UNEP Global Environment Outlook 2000 Report (UNEP 1999)].

Other eco concerns include water scarcity, emission of carbon dioxide and five other greenhouse gases, reduction of the ozone layer and harm caused by UV radiation from the sun's rays, acid rain, destruction and over-exploitation of medicinal plants, loss of biodiversity and extreme weathers and storms. [www.soas.ac.uk] [UNEP Global Environment Outlook 2000 Report (UNEP 1999)].

It is stated that 150,000 people die every year from climate change. The economic costs of global warming are doubling every decade. The number of people affected by disasters is up from 740 million in the 1970s to two billion in the 1990s. The land stricken by drought more than doubled from the 1970s to the year 2000. By 2025 three billion people could be affected by serious water shortages. The UN expects 50 million environmental refugees by 2010 and 150 million such refugees by 2050. It is predicted that 30 million people could starve because of climate change by 2050. A new study by Laura Millan Lombrana (2021) (www.bloomberg.com Bloomberg Green Energy and Science) indicates that almost 10% of global deaths amounting to five million deaths per annum, can be attributed to climate change and extreme weather.

Our modern lifestyles are also contributing to environmental degeneration through our carbon footprint. The ever-increasing demands of modern society require constant high levels of energy consumption through the burning of fossil fuels for domestic household and industrial use, utilising fuel for private cars and public land, sea, and air transport. The deforestation and loss of rainforests and virgin forests in favour of commercial activities like growing agricultural cash crops such as tea, coffee, tobacco, cotton, soya, and sugar cane and developing industries such as logging, mining, cattle ranching take a huge toll on the environment and damages the 'Earth's ecosystem.

The problems are compounded by the extensive commercial production of cheap and affordable plastics and their use in every aspect of our daily lives and the pollution caused by the use and disposal of non-biodegradable materials such as single-use throwaway plastics cutlery, bottles and other materials which end up in landfills and oceans harming

fish, corals and other marine life and enter the human food chain through fish. As indicated by the UN Sustainable Development Goals (SDGs), there is a link between sustainable development, the environment, and poverty alleviation. It is noted that the degradation has a greater impact on the poor and the marginalized sections of society in the poor developing countries of the world as their lives are further impoverished by it.

There has been growing concern shown by the international community as seen in various international and multilateral climate conferences, seminars on the environment, climate summit meetings and declarations such as COP 26 under UNFCCC (see Appendix 9). A brief historical background of the various key international initiatives taken so far to address these concerns is set out in Appendix 9.

Global concerns about climate change and global warming

Professor Sachs, in his paper on MDGs and SDGs (2112), refers to the use by scientists of the new term "Anthropocene" to denote the human-driven age of the planet following the lead of Nobel Laureate Paul Crutzen (one of the discoverers of the chemistry behind stratospheric ozone depletion) and goes on to highlight the notion of planetary boundaries namely the idea that human activity is pushing crucial global ecosystem functions past a dangerous threshold, beyond which the Earth might well encounter abrupt, highly non-linear, and potentially devastating outcomes for human wellbeing and life generally.

He states that the present era is distinguished by the fact that these pressures are both global and local and that they impinge simultaneously on several different crucial earth systems, including the carbon, nitrogen, and water cycles. Humanity faces not only one but many overlapping crises of environmental sustainability, including (a) climate change as the result of human-caused emissions of greenhouse gases; (b) massive environmental pollution (e.g. the poisoning of estuaries and other ecosystems as a result of heavy runoff of nitrogen-based and phosphorus-based fertilizers); (c) the acidification of the oceans, caused mainly by the increased concentration of atmospheric carbon dioxide, which is the most important human-produced greenhouse gas; (d) the massive loss of biodiversity caused by unsustainable demands on forests (e.g., logging for timber or wood fuel; (e) the continuing conversion of forests and remaining wilderness into farms and pastures; and (f) the depletion of key fossil resources, including energy (oil, gas, coal) and groundwater.

In relation to the last matter, namely the depletion of key fossil resources, including energy (oil, gas, coal) in the world, it may be argued, however, that the depletion of key fossil resources may not in itself be an environmental issue directly and may perhaps be seen as being helpful to reducing carbon footprint. But it will give rise to issues of finding new and sufficient energy sources, including renewable energy, for economic, social, and industrial activities of the world society.

As stated by Posas (2007), in her Ethics in Science and Environmental Politics (7:31-49) (ENSP) essay on the role of religion and ethics in addressing climate change (2007), in the case of global warming, the scale of the transition from fossil fuels to cleaner energy is massive. Energy is the critical driver for the global economy and pervades our lives. The impact of globalisation and reliance on mobility, both international and national, makes huge demands on energy. Humanity is overwhelmingly dependent on fossil fuel consumption not only for development but for survival. Commercial energy is required both in cities and towns where 46% of the world's population lives and in rural areas for food production.

Global impacts of problematic environmental practices

Plastic pollution is a major environmental issue globally. As stated by McCarthy (2019), Plastic has become an integral part of the consumer economy over the past seven decades and is extensively used to encase foods and beverages, makeup tools and toys, and as integral material in the construction of clothes and buildings and medical equipment. Since the 1950s, plastic production has increased from 2 million metric tons per year in 1950 to 350 million tons per year in 2015. However, most of the plastic manufactured is the single or few-use throwaway variety and is discarded.

As indicated by Oceanic Global, a non-profit body that helps organizations and people go plastic-free, it is estimated that of 6.3 billion plus metric tons of discarded plastic, 12% is incinerated, and 9% is recycled. The rest 79% of plastic waste is deposited in landfills or contaminates land and marine ecosystems. It decomposes over several hundred years, leaching chemicals into the environment and causing myriad problems, including degrading the oceans. There are an estimated 5.25 trillion pieces of microplastic contaminating the waters. It is estimated that between 8 and 12 million tons of plastic enter the ocean annually, and by 2050, plastic waste in the oceans is expected to weigh more than all fish.

Plastic enters the oceans in three main ways, namely direct dumping (dumping of massive plastic nets and gear in the oceans by fishing boats and littering), indirect dumping, and leakage. They all have one overarching similarity, which is dysfunctional waste management systems. Poor waste management systems in urban areas coupled with local bodies of water connecting to rivers lead to the depositing of plastic waste in the oceans. In fact, an estimated 90% of the plastic in the 'world's oceans comes from just ten rivers in Asia and Africa. In many countries, recycling facilities are few and far between, which leads to high rates of improper plastic disposal.

Plastic waste causes extensive harm to marine environments. Plastic waste containing carcinogenic chemicals harms animals as small as microscopic amphipods and animals as big as blue whales. It even harms the coral that sustains coral reefs. Plastic bags and other types of plastic debris (including the microplastics into which plastic waste breaks down) are regularly mistaken for food and accidentally consumed, raising their mortality rate.

Ralph Payet of the United Nations Environment Program states that because plastic waste takes hundreds of years to degrade, it breaks down into microplastics that float to the bottom of the ocean, which are then consumed and mistaken for food by plankton, which then accumulates up the food chain, eventually affecting humans.

The approaches suggested for dealing with the plastic pollution crisis include (a) reduction of plastic production imposed and enforced by countries. So far, more than 60 countries have imposed some limits on plastic. (b) investment by plastic producers and consumer companies that use plastic in sustainable alternatives such as glass, aluminium, and paper alternatives and encourage consumers to participate in circular consumption models in which packaging is returned to the company and reused. (c) investment in better waste management systems and facilities that can either sort, clean, and repurpose plastic waste or convert it into energy. (d) increasing marine clean-up initiatives such as the Pacific Garbage Patch with the help of activist organizations such as Ocean Voyages (e) developing technologies to separate microplastics from water and beach environments. (f) reduction of plastic footprints and participation in clean-up efforts by everyday citizens.

Recent measures to mitigate plastic pollution and waste

According to a Guardian report (Sanchez et al. 2019), most of the world's countries have now agreed to actively prevent plastic from entering the 'world's oceans and to better manage plastic waste in general. In May 2019, the signatories agreed to amend the Basel

Convention, a United Nations treaty designed to fight hazardous waste, to include thousands of types of plastic. By classifying these thousands of types of plastic as hazardous waste, the UN was seeking to create broad shifts toward sustainability in industries as diverse as healthcare and food production.

Because this measure was being undertaken through an already established framework, 186 countries would be legally bound to abide by the new rules. Several countries, including the United States, did not agree to the measure, as per the UN source. This means that most countries in the world (except some countries, including the USA, which did not agree to the measure) will have to effectively manage plastic waste and prevent it from entering environments where it can cause harm.

"I'm proud that this week in Geneva, parties to the Basel convention have reached agreement on a legally binding, globally – reaching mechanism for managing plastic waste," Ralph Payet of the United Nations Environment Program, said in a statement. "Pollution from plastic waste, acknowledged as a major environmental problem of global concern, has reached epidemic proportions with an estimated 110 million tons of plastic now found in the oceans, 80 to 90% of which comes from land-based sources."

The deal was to go into effect in 2020, Payet said, and that it marked a landmark achievement for the United Nations, which had long sought global regulations on plastic. He added that the passage of the framework was helped by the global momentum around restricting plastic production.

In recent years, more than 60 countries have taken action to restrict plastic, and the European Union recently announced it would ban various single-use plastics. Public awareness of the problem has skyrocketed as well, following documentary series showing the problem of ocean pollution and news coverage of marine animals dying from ingesting plastic. The announcement means that nearly all the countries in the world will now have to effectively manage plastic waste and prevent it from entering environments where it can cause harm.

State of knowledge and awareness in the faith communities

With the topics of global warming, climate change and environmental pollution and plastic pollution in oceans being at the forefront of mainstream media, the advocacy of Sir David Attenborough and, more recently, Greta Thunberg (a Swedish teenage environmental activist) on environmental matters and discussion of these matters in social media these concerns were matters of public debate nationally and globally. So, there was information out there at the national level on environmental problems, and this was available to community members of the faith communities. There were no environmental groups within the communities at the start of this project.

These matters had not, however, entered the community thinking and mindset in terms of the need to make the change to protect the environment at the local community level. There was not much discussion of the implication and implementation of faith teachings on the environment in terms of community practices from the pulpit by religious scholars or by the leadership.

The various awareness-raising measures of discussion groups and trialling of the proposed green measures had the effect of bringing the issue of plastic pollution and environmental concerns to the forefront to the grass root members and the community decision-makers. The various YouTube video clips shown in the community functions highlighted the plight of birds and fish in the oceans and plastic pollution entering the human food chain. The visual

impact of dying birds and fish was quite impactful to grassroots members who may not have otherwise viewed these clips themselves. At the leadership level, as a result of this project, the community discourse moved from indifference to how to make the change, e.g. by reducing plastic utilisation, switching to biodegradables, installing dishwashers and drinking water fountains at the mosque and thinking about longer-term environmental plans.

Focusing on problematic practices in the faith communities

At the start of my research, I found that there were many entrenched eco-unfriendly practices in the Khoja Faith communities which were being accepted as normal ways of doing things. There was little attention given in the faith communities by leadership or members to key environmental issues and their relationship with the prevalent practices such as extensive use of throwaway plastic and Styrofoam cutlery. There was little awareness of the impact that the community practices were having on the global environment in terms of carbon footprint, climate change, global warming, and pollution. There was little connection being made between community faith teachings on the environment and their observance in community practices.

By way of exceptions to the above, there had, however, been some instances in two of the communities, such as Leicester and Wessex communities, where during the construction of new mosques in the past ten years, some eco-friendly features had been incorporated in the design and construction of the new mosques. These related to water and energy saving measures and, in Wessex, outdoor spacious garden space in the Centre which was dedicated to growing flowers, plants and fruits and vegetables.

The most pressing problematic practices of the faith communities comprised the extensive use of plastic and Styrofoam cutlery and materials in the mosque food events, the generation of food waste and throwaway of leftover food during these food events, the water and energy wastage during mosque functions and lack of environmental audits of mosque activities and absence of measures to evaluate and reduce the carbon footprint of the mosque activities.

Local community impacts of the problematic practices

The extent of the plastic and Styrofoam waste generated per annum by the six UK faith communities alone during the food events during the months of Ramadan and Muharram amounted to at least 230,000 units of plastic materials and cutlery. This figure is arrived at using estimated plastic material utilisation by the estimated numbers of people attending these food events, which is thrown and binned for local council collection in each of these faith communities. The extent of food waste which was generated in the food events as measured by leftover food thrown and binned was estimated to be at least two to three black bin bags per day in each community which amounted to 360 to 540 units of full bin bags of food waste each year for the month of Ramadan where most food events take place.

Development of Moral and ethical dimensions of climate change

In her Ethics in Science and Environmental Politics (7:31-49) (ENSP) essay on the role of religion and ethics in addressing climate change (2007), Paula Posas notes the link between human activities resulting in the emissions of greenhouse gases, particularly carbon dioxide in the atmosphere (by burning fossil fuels etc.) and the rise in global temperature.

She highlights the need for strategies to address climate change, including mitigation, adaptation, technological development, and research. She sees the need for action at all levels from governments, international organisations and individuals encompassing science,

technology, policy and economic measures as key elements in mitigating and addressing climate change. She most notably makes a strong case for the role of religion and faith in this process.

Posas states that religion and faith have a pivotal role in developing and implementing ethical solutions to climate change and identifies factors such as religion's function in society, its ethical teachings, reach and influence and ability to inspire adherents to action. She makes the point that "religious involvement helps support the critical linchpin of ethics that is often missing from science, economic, technology and policy discussions" and that climate change is a moral and ethical issue.

She names many religious groups and communities, such as the Alliance of Religions and Conservation, Green Faith, Interfaith Climate Change Network, Interfaith Power and Light Initiatives, Interreligious Eco-Justice Network, The Regeneration Project, and Religious Witness for the Earth who, are articulating compelling moral and ethical reasons for tackling climate change and drawing linkages with spiritual principles and modern challenges illuminating human responsibilities and highlighting needed priorities.

She quotes the 2006 statement of Bishop of Canberra, George Browning, Chair of Worldwide Anglican Communion Environmental Network, which states, "One of the Millennium Goals was to make poverty history by 2015, but unless we stop climate change, this great aim will be an empty dream. Indeed, without action now, we will assuredly make poverty permanent". The charge to steward the Earth and all creation, including unborn future generations, makes climate change not an "optional extra" but a core matter of faith (Millais 2006 page 8). One key example of the declaration on the environment by the head of the Catholic Church is the Encyclical "Laudato Si" on the care of our common home issued by Pope Francis on 18 June 2015.

The Rio Declaration and UNFCCC (see Appendix 9 for further information) were instrumental in establishing norms about responsibility for climate change, stating that 'nations have the responsibility to reduce greenhouse gas emissions of activities within their jurisdictions' and that 'developed nations have the responsibility to take the lead in reducing the threat of climate change' (Brown et al. 2006, p. 14).

At UNFCCC-COP10, the Program's partners spearheaded the Buenos Aires declaration on the ethical dimensions of climate change, which posited the urgent need for ethical reflection on climate change.

There were key instances of increased acknowledgement of climate change's ethical nature and implications at the international policy level.

In December 2005, at Montreal's UNFCCC-COP11, faith community participants sponsored several side events and delivered their Spiritual declaration on climate change, which highlighted several of climate change's ethical aspects and pledged solidarity with those most affected by climate change.

Building from the 2004 Buenos Aires declaration, the White Paper on the ethical dimensions of climate change (Brown et al. 2006a) was launched, presented, and discussed at the UNFCCC-COP12 in Nairobi. It argued that ethics, human rights, and distributive and procedural justice must be integral components of international negotiations on climate change solutions and exposed several unethical but widely used arguments for inaction or delayed action.

The joint statement of the 33rd annual G8 Summit (June 6 to 8, 2007), hosted in Heiligendamm (a German seaside resort) by German Chancellor Angela Merkel, found common ground on climate change's ethical aspects and pledged to take concrete steps in the needed direction. The summit statement asserted that 'tackling climate change is the shared responsibility of all' (G8 2007, p. 13) and specified that further action should be based on 'the UNFCCC principle of common but differentiated responsibilities and respective capacities' (G8 2007, p. 16). The G8 (2007, p. 19) affirmed its 'willingness to continue and enhance cooperation and support for developing countries,' particularly those most vulnerable to climate change's negative impacts.

These points of agreement on ethical principles and the full G8's endorsement of the UN climate process as 'the appropriate forum for negotiating future global action on climate change' in the words of Ivo de Boer (CCS 2007, p. 1), Executive Secretary of the UNFCCC, represented a 'breakthrough' that 're-energised the UN's multilateral climate change process,' paving the way for the subsequent December 2007 negotiations at UNFCCC-COP15 in Bali on a post-2012 global climate regime. I have set out in Appendix 9 recent developments on international and multilateral climate agreements and initiatives to provide the current international context.

Islamic faith teachings on the environment

I now move on to discuss the key theological underpinnings of Islamic teachings. Islam, in common with the other religions of the Abrahamic faith, has the basic ontological principle that the realm of being has a Lord or Master. This is expressed in Islam in the principle of "Tawhid", the existence of one God, the Creator and Sustainer of the realm of being and the Supreme Being. The principal epistemological principle is that it is possible for mankind to acquire knowledge of the Lord or Master of the realm of being. In Islam, this basic principle can be extended to human beings' cognitive, knowledge needs, and non-cognitive needs, as stated by Dr Ali Paya in his unpublished article (2020) entitled "What and how can we learn from the Quran? A critical rationalist perspective").

To understand the Islamic approach to the environment, one needs to begin with the sacred sources, namely the Qur'an and *hadith*, the Islamic faith traditions. The moral-ethical approach is seen in Islamic traditions, and the legal (Islamic Law) approach is manifested using *fatwas* (religious rulings) issued by the Shia *Marja* (the leading jurisprudent). The understanding of the Quranic text and verses requires the knowledge of their *shane nuzul* (circumstances and occasion of the verses of the revelation) and *asbabe nuzul* (reason for the verses of the revelation), which is found in the *tafseer* (exegesis) literature and works by acknowledged eminent Shia scholars on Quranic studies, translation, and commentary.

These scholars include Allamah Sayyid Muhamed Husayn Tabatabai (1983), Mir Ahmed Al and Agha Mirza Mahdi Puya (1990), Ayatullah Makarim Shirazi (2004), Ayatullah Sayyid Kamal Faghih Imani and a group of Muslim Scholars (1998) and Abdolali Bazargan (2016). (FN5) These commentaries and works constitute secondary sources but provide useful explanations of the Quranic verses and the context of and the reasons for the revelations. The exegesis and interpretation placed on the relevant verses assist in the understanding of the relevant verses and the assessment of their possible application in today's circumstances.

The Shia hadith literature comprises the four major Shia canonical works on Hadith (FN6), and the Sunni school has six major hadith works as the source of law. (FN7).

Muslim intellectuals and jurists have sought to answer questions related to the environment as these issues started to emerge. A good example of an analytical work that highlights and discusses some key aspects of Islamic thoughts on the environment and its protection and their interface with the sphere of human endeavour is Ayatullah Javadi Amuli's *Islam and the Environment* (2008). Another recent work is Fazlun Khalid's book on *Islam Modernity and the Climate crisis* (2019), which discusses how religion and ethical values can help mitigate climate change concerns. One recent example of a possible legal Islamic law approach is the 2010 Fatwa of Ayatullah Khamenei, prohibiting the use of nuclear weapons as a serious threat to humanity and, by extension, the planet and environment (FN8). Professor Seyyed Hussein Nasr, in his book "Man and Nature, the spiritual crisis in modern man" (1968), took a profoundly faith-based spiritual approach in analysing the relationship between Man and Nature and the ecological crisis of the twentieth century.

The principle of divine guidance is manifested by various forms of knowing or acquisition of knowledge that human being possesses and has been endowed with, such as human intuition, ability to reason and rationality and revelation and prophetic teachings. In the Shia school of religion, the revealed knowledge to human societies is also manifested through the teachings of the holy Imams appointed by God after the Holy Prophet. Therefore, in Islam, the role of reflection, reason and critical rationality and interpretation in the process of knowing is recognised and highlighted.

The key principles underpinning the ecological outlook of Islam and Islam's philosophy of natural order and creation derived from the abovementioned ontological and epistemological principles include the concept of the sovereignty of God as the Creator and the Owner of all creation, including the environment as stated in Holy Quran - Sura Najm 53:31. (FN9) The other principle is that of responsibility and accountability of the human being which means that he is entrusted with trust and care of fellow creation and his role is not the domination and exploitation of fellow creation as stated in Holy Quran - Sura Ahzab 33:72. (FN10) The latter is the other major overarching principle of Islam. This is the principle of accountability to the Creator for freedom of action given to human beings as the vicegerents of God on Earth and implementation of divine guidance and the utilisation of the Universe and all its resources made available to them.

The concept of moderate utilisation and prohibition of *asraaf*, namely irrational, excessive and compulsive consumption and *tabzir* (squandering), states that humanity has divine permission to utilise the environment and the resources of the Universe but not to waste them and cause wanton harm to creation. Islam enjoins proactive care of the environment and responsibility to future generations and inter-generational equity in many verses such as Holy Quran - Sura Al A'raf 7:31 and Sura Bani Israel 17:27 and Sura Hud 11:61; (FN11) and the concept of balanced order and harmony (*Mizaan*) in creation based on justice and wisdom as stated in Holy Quran - Sura Al Rahman 55:7-9. (FN12) There are also other verses emphasising justice (interpreted to include climate justice) and prevention of degradation (interpreted to include environmental degradation). (FN13). So, in Islam, the Quran and the *Hadith*, which represents the explanation of the Quran by the Holy Prophet, constitute the primary sacred texts and the source of divine guidance.

In addition to the Quranic text discussed in this section, there is considerable *hadith* literature emphasising maintaining a clean and pure environment, conserving nature, and greenery, planting trees, maintaining parks, gardens and forests and protecting air, water and land resources from pollution. Holy Prophet Muhammed's practice at the outset when

establishing the Islamic city-state of Madinah was to establish protected zones such as *Hima* and *Harim*. Fazlun Khalid (2010) and Lutfallah Gari (2016).

These were inviolable protected areas and zones established by Prophet Muhammed in which resources were to be left untouched for the greater good of society and sustainable use of fertile land, forbidden areas around wells and water sources to protect the groundwater and underground water table. The protected zones were to protect wildlife and forestry, where grazing and woodcutting were restricted, and certain animal species were protected. Prophet Muhammed also emphasised the importance of making unused land productive by planting trees, sowing seeds, and irrigating dry land.

These Islamic teachings represent the espoused principles, but the issue that needed to be considered in the context of the faith communities was how these principles were understood and interpreted in their application in their daily and key life choices and decisions by community members in the context of modern lifestyle conditions. If their practice indicated a gap between the Islamic-espoused principles and the community environmental practices, then the question that arises is what the explanation for this divergence between principles and practice was. Did the problem lie in the formulation, understanding and interpretation of the principles or was the answer to be found in the compromises and trade-offs underlying the choices made in the implementation of these principles in daily living and the reasons for these compromises and trade-offs?

Conclusion

My study shows that we live in a global environmental crisis. This phenomenon manifests itself on a national and local level in smaller communities. It also indicates that initiatives at the global, national, and local levels to tackle ecological problems as well as faith teachings on the environment, have an important role to play in seeking to mitigate the crisis.

The COP 26 process has shown that the top-down approach that it exemplified is a slow and long drawn-out process to address and deal with climate change and global warming. In the meantime, environmental degradation continues to take place unabated at the global and national levels, and the daily practices and actions that have negative and harmful effects on the planet's environment and ecosystem continue to take place.

It seems to me that action at the local level within the faith and other communities and local organisations, and the grassroots population is a strategic lever for change and has a key and significant role to play in the process of contributing to changing the mindset and environmental practices. This could occur firstly at the individual and community level and then eventually through concerted and effective pressure on governments and countries globally as decision-makers and regulators to arrest and mitigate the climate crisis. This grass-roots-based approach needs to be promoted and trialled in the faith and all other communities.

There are many movements and organisations that are seeking to make this change in society in diverse ways. These movements and bodies include faith-based organisations such as Christian churches, Synagogues, faith organisations and interfaith action on the environment and non-faith-based organisations and organisations like extinction rebellion, local town transitioning movements and Green Peace. The Greta Thunberg “effect” example (FN14) and the impact of the Sir David Attenborough’s TV series on the blue planet and environmental pollution has been immense on communities worldwide. (FN14)

There are also many Muslim communities and organisations seeking to make this change at the local level. Some notable examples include the construction of the Cambridge green mosque. Others with which the Birmingham faith community interacted were IFEEES based in Birmingham and Sultan Bahu Trust and other neighbouring Muslim communities located in Birmingham. In other communities, such as Leicester Mosque and Al Mehdi Mosque, the opportunity has been taken in the construction and reconstruction of mosques to incorporate green features to make the mosque green. This trend is continuing in other communities, such as the Essex Mosque, the Peterborough Mosque and Birmingham Mosque, in their new mosque construction or refurbishment projects. The Stanmore Hujjat Mosque has also joined this group in their mosque reconstruction refurbishment project started in 2020 during the covid lockdown.

The key question is that since the faith communities are not able to make a big impact at the global level, what is it that they can do at the local level to bring about social change in the attitude towards environmental issues and concerns?

Chapter 3 - Research design and methodology

Introduction

I now outline, explain and discuss the research design and methodology framework used in this research project in this Chapter.

Purpose, aims and objectives

The purpose of my research project was to contribute to the overall social process of change in the environmental practices in faith communities. In the context of the faith communities, my aim in this research was to make a difference in the environmental practices of the Khoja Shia Ithnaashery faith communities based in the UK and help in bringing about change in their current problematic practices.

What I attempted to do in this project was to guide the communities and raise awareness and encourage them to adopt more environmentally friendly practices drawing on faith principles and scientific facts. I sought to create an understanding of the environmental issues in the communities from both a faith and scientific point of view in order to drive the change in the practices and in the process, help develop a deeper understanding in the community of the Islamic faith position on nurturing environment as well as the evolving eco science position on environmental degradation.

The objectives of the project were to organise a self-selecting group of members in each of the six Khoja communities:

- (1) to identify their current problematic practices within the Khoja faith communities that contribute to damaging the environment;
- (2) to discuss in the community groups: (a) their understanding of the implications of their current practices; (b) possible ways of reducing the environmental impact of their practices; and (c) possible ways to implement and assess changes in their practices.
- (3) (a) to identify the impediments within the faith communities to changing the problematic practices and formulate ways to address them; (b) to initiate the strategies and green initiatives to be trialled in the faith communities and evaluate their outcome to lead to further change.

Selection of Khoja faith communities for this research

I selected the Khoja Muslim Shia Ithnaashery faith communities for this collaborative inquiry from the network of Khoja Muslim communities based in the UK. I did so because, as a member of these communities, I knew them well and was well-known by them. I felt that my being a knowledgeable insider researcher familiar with them would facilitate the acceptance of the research project and the collection of research data through collaborative inquiry in these communities. I felt that my network of contacts within these communities would facilitate the logistics of recruitment and establishment of discussion groups in the communities. I felt that as a community worker and lecturer on religious and social community matters, I would be accepted and trusted by them, and the members of the discussion groups would be comfortable giving their frank views and opinions on the research topic and issues in the group meetings.

I started the project with four faith communities, namely Peterborough, Portsmouth and Essex and Leicester communities (the latter community as a pilot project). When the Birmingham community came to know of the project and became interested in it, and

requested me to make it part of the project, I included it. I also added the Stanmore community, as I had around the same time in 2017 begun introducing green promotion campaigns of "bring your own reusable mug to save plastic" at the request of some of its members. There was interest in my project among them.

Of the six faith communities, I am a regular member of the Stanmore Hujjat community. So, I do not have interactions and contact with the other five communities on a daily basis. With those five communities, I was, therefore, not subject to the routine communal interests, influences and pressures of one who lives in the community and has daily interactions. In all the six faith communities, I was, on the one hand, an outside researcher and also an insider researcher sharing the same faith, identity and culture.

The Stanmore Hujjat (SH) community was the only one that presented me with issues of my positionality most vividly. Being a regular member of the SH community, I had interactions and contact with the community on a daily basis and was, to an extent, subject to the routine communal interests, influences and pressures of one who lives among the community and has daily interactions with it. I, however, felt that the inclusion of the SH community was important as it was a leading Khoja faith community in the UK with a large population (5000) and a major player in the network of the Khoja communities in the UK and worldwide.

I decided that I could and would seek to deal with the issue of independence and personal bias by acknowledging and being transparent as to the tensions present between routine communal interests, influences and pressures of living among the community and having daily interactions with it on the one hand and the research perspectives of the project on the other.

participatory, collaborative inquiry approach

I would describe my research methodology, which I eventually selected for this research project, as participatory, collaborative inquiry with the faith communities.

Choosing Research design and methodology

At the start, before commencing fieldwork, I had envisaged using the learning history (LH) methodology for the research. But after introducing it to and discussing it with the communities in the first three informal group meetings over three months (December 2016 to February 2017) before the University approval of my research proposal, I came to the view that this approach may not work well with the Khoja communities in this project. The communities were not familiar with this modality and what it would involve for them. I felt that the LH approach which would involve holding several structured meetings and preparing structured learning history documentation in the face of the various commitments and the time and other constraints of the discussion group members, could well constrain the field work and would not be sustainable.

As for myself, I had not used the learning history approach before. I became increasingly uneasy and uncertain of the logistics and whether and how this approach, with its prerequisites, would actually work in the communities. The strong reaction that I had received in Peterborough after the first informal meeting in 2016 with the potential participants after I had explained this modality and the meetings that would be involved was that the interest of almost all attendees in the project faded, and there was no sign up on the discussion group. It took several concerted recruitment drives, including one-to-one approaches by the local coordinator and talks by me at the community functions over one year in the community after that, to get any interest and sign up the discussion group participants for the project.

I needed to have the necessary flexibility to improvise and modify and tailor the approach to suit the context and situation as I went through the process of discussions with the community groups. I, therefore, switched to a flexible, collaborative inquiry with minimum face-to-face meetings, which was complemented by separate ongoing online WhatsApp sessions for each of the community groups. I will explain in a later section how the online Whatsapp discussion sessions developed. I felt that this approach would enable and empower the participants to take an active part in the face-to-face and online discussions and voice freely and in their own time and convenience their views and ideas on the problematic practices of the communities from both a scientific and faith point of view and seek to think deeper through the Islamic faith position on nurturing environment and its implementation in their contexts. I thus developed a modified and tailored approach and modality of collaborative inquiry for this project.

Opting for collaborative inquiry methodology

I decided that the collaborative inquiry approach would be a better design and fit for my research project to achieve the aim of social change in the faith communities. It is a widely used methodology for practitioner and collaborative research, and it provides a direct pathway for taking a research approach to practice and change-making. Furthermore, I took the view that the modality of seeking to make changes in each situation or context through discussions among participants in the discussion groups was better suited for the discussion groups from the faith communities in this project. This modality leads to a cycle or cycles of investigation, action and reflection and reporting the learning from it in a way that is useful to both the project and the participants in it and the faith communities.

In opting for collaborative research with discussion groups in this project, I was tailoring the approach to make it simpler, user-friendly, doable, and fit for purpose in the specific unique context of the Khoja faith communities in this research.

This approach involved setting up discussion groups of recruited members from the respective communities interested in changing community practices and holding collaborative meetings with them. I used the following key questions to start the conversation and discussion such as: (a) What were the problematic community environmental practices; (b) What should the community do to change these practices; (c) What kind of initiatives will work, and which initiatives will not work in the context of the community; and (d) What kind of motivational factors will help drive the necessary change in the practices in the community.

My research approach was participatory in nature and established discussion groups within the faith communities. The discussion group participants took an active role and led many of these changes. This indicated their strong involvement as agents of change. Each group discussion was chaired by the respective coordinators. My role in the discussion groups was to attend and initiate and initially to facilitate the discussion around the research questions and help the participants take up the active part of being change agents in the process of making a change to the eco practices in the communities. My key task in the groups thus was to attend and evaluate the discussions and gather the research data emerging from the discussions on formulating and trialling the green initiatives and learning from the outcomes.

As stated by Reason and Bradbury (2001), the purpose of this approach was to produce practical knowledge useful to people in everyday life and work towards practical outcomes and create new forms of understanding to accompany “action” within the discussion groups and to assist in making change. The participatory nature of the collaborative inquiry (also

known as Cooperative Inquiry (Heron 1996) approach made this possible within the process of questioning and sense-making, and group action.

The “group action” comprised the discussions in the groups on the practice of the communities and the undertaking of initiatives to improve practice. The various green initiatives introduced by the discussion groups in the communities highlighted the theories in use as distinct from the espoused theories in the faith communities. The basic elements of the approach were 'identifying a problematic issue, imagining a possible solution, trying it out, evaluating it (did it work?), and changing practice in the light of the 'evaluation' as formulated by McNiff (1996, 2002). As highlighted by Koshy (2009), researching into aspects of the practice of the communities involved carrying out ongoing evaluations and making modifications as the project progressed.

My collaborative inquiry research approach incorporated the following features identified by Koshy. These were (a) it was a method used to improve practice and involved action, evaluation and reflection and based on gathered evidence, changes in practice were implemented; (b) it was participative and collaborative and undertaken by individuals (discussion group members) with a common purpose; (c) it was a situation and context-based specific to the Khoja faith communities; (d) it developed reflection based on interpretations and contributions on eco science and eco faith aspects made by participants within the groups; (e) knowledge was created through action and at the point of the application when implemented in the faith communities; (f) it involved problem-solving (eco-unfriendly practices) to improve practice in the faith communities; and (g) the research findings emerged as the action developed, but they were context-based and not claimed as universal findings.

Key features and modalities of my research model

The format and modality were for these discussion groups to meet in the initial face-to-face meetings with the participants and me to discuss and formulate practical ideas and initiatives to change the communal practices and to introduce and trial these ideas and initiatives in their community and then, based on the outcome and experience of these initiatives and the response of the community members to develop and decide what further initiatives would be needed and should be developed to bring about the envisioned change in the practices.

As regards the number of face-to-face meetings of the discussion groups in the faith communities, I decided that there should be at least one such meeting held in each community. I accordingly held one face-to-face meeting in three communities (Peterborough (PE), Birmingham (BM) and Leicester (LE)). In the other three communities, namely Essex (ES), Stanmore Hujjat (SH) and Portsmouth Wessex (PW) communities, I was able to hold two such meetings.

Most of these meetings were voice recorded, and a summary of matters discussed and action points were described in written minutes. I requested the coordinators of each discussion group to set up WhatsApp groups for the participants. I had three main data collection methods, namely from WhatsApp chats, meeting notes and recordings of live group meetings. The flexible opportunities to contribute to WhatsApp's ongoing conversation proved to be very popular among all the groups and resulted in a continued long and enthusiastic dialogue between various members and proved a source of rich data.

At least one face-to-face meeting took place in each community (e.g. Birmingham (1), Leicester (1), Peterborough (2), Essex (2), Portsmouth (2) and Stanmore (5)) to discuss the

project and research issues and get participants to think about the problematic practices and faith and science considerations and to strategise the ways of changing mindset, thinking and practices of the community. The online WhatsApp Avenue provided further opportunities for continuous group member interactions.

I voice-recorded the face-to-face sessions. After introducing the research project in the face-to-face meeting to the groups, I let the coordinators run and administer the meetings and facilitate the group discussions to consider and strategise on the green initiatives. I provided initial inputs and interventions, and initial facilitation to keep the discussions going on the research topic and issues. The extent of my intervention and facilitation in these meetings reduced to minimal as the coordinators and the participants became familiar with the research issues and subject and confident to discuss the strategy and green initiatives for the communities and thus the facilitation role shifted to the coordinators. Each of the face-to-face meetings was, in practice, limited to and held over two hours. Thus, the time was limited for discussions among participants. However, the online avenue provided a valuable and integral forum for having additional discussions and formulating and agreeing on the green initiatives and reflecting on their outcomes.

I decided not to transcribe the face-to-face discussions recorded in voice files because I felt it would not add much to my analysis of the voice files and take up considerable time in the detailed transcription task. I felt that information was already captured in the voice files and WhatsApp texts, and I could code and analyse them without going through the transcription process. As regards the WhatsApp data of online discussions between members, I saved the WhatsApp texts digitally. These data sources assisted in capturing the stories and highlighting the voices of participants, i.e. the key and relevant storylines, themes and quotes from the discussions for analysis and reflection in the thesis document.

I will explain later in this Chapter the emergence of WhatsApp sessions as a proxy for face-to-face meetings. The WhatsApp group discussion facilitated the interaction and sharing of ideas and views among members greatly. There was a continual flow of ideas and suggestions being posted as they occurred to participants without the formality of a meeting or the need to attend a meeting. The main limitation of WhatsApp discussions was the extent of group chatter posted and irrelevant postings from members from time to time. The discussions at times tended to become unstructured, with participants raising different diverse matters and points outside of the specific matter being discussed for coming to a consensus or decision. There were indeed many times when multiple eager voices clamoured for attention altogether instead of the formal and polite one-to-one discussion of points between participants that you would find in many in-person meetings.

Since there were six separate WhatsApp groups representing each faith community covered in this project, I could share the key insights from each WhatsApp group with the other WhatsApp groups without holding face-to-face meetings with the groups. This included green initiatives discussed and formulated in various discussion groups, the process of introduction and implementation of these initiatives in the respective faith community, the response of the community leadership and membership of the faith community to these initiatives and assessment of the success and otherwise of the specific initiatives and lessons learnt from the overall process.

I found that this collaborative research approach worked well for the faith communities and turned out to be quite an effective tool for delivering project outcomes.

The key stages of the community engagement process are outlined below.

Introduction to the project and obtaining 'members' consent

I have explained the process of obtaining clearance from community leadership to undertake this project and set up the discussion groups in the faith communities in Chapter 4. This involvement of leadership, apart from it being customary, was quite important and necessary from the Khoja leadership governance and organisational protocols perspectives and also cultural viewpoint. There is included in the cultural perspective a custom of an underlying degree of traditional courtesy and deference accorded to community elders and leaders by members of the community. In each community, in the first formal meeting of group members, I introduced to and discussed with the group the research project, its background, its purpose and aims and what it would involve in terms of their input and participation. I obtained their written consent to participate in the research. The response of the groups was positive, and they expressed their interest and willingness to participate.

Broad format of discussions

The broad format of the discussions was to have an interactive group discussion where each participant was invited to express his or her views on the issues being raised by me as the facilitator of the meeting, and other members were asked and encouraged to give their comments and reactions to the views of participants. The issues raised by me sought to guide the discussion to identifying the problematic practices and how they could be addressed in the communities.

The basic approach was to agree on the problematic practices and discuss what needed to be done to improve the practices. The discussions took us to how one could learn from faith teachings and eco-science findings on the environment and develop doable steps and actions for the implementation by the communities. The discussions included the strategy to be used to raise awareness of community members to the learning from eco faith and eco science; the kind of green initiatives to be formulated and trialled in the communities and to see how and if they worked to change the community mindset and practice; to discuss the outcomes of these trials and how effective they were to change the mindset and practice and what could one learn from these trials and initiatives.

In the first instance, the groups identified the extensive routine use of plastic and Styrofoam cutlery in the mosque and the extent of food waste in food events in community functions as key problems to tackle in the communities. This was influenced by the issue of plastic waste and congestion being highlighted extensively in mainstream and social media outlets. Subsequently, during the progression of group discussions, further and holistic green initiatives such as focused environmental audits and five-year environmental plans to incrementally reduce the carbon footprint of community activities were considered, discussed and formulated.

My own role in the process of community engagement

As a member of the Muslim Khoja community involved in this research and a DProf research candidate, I had a clear and keen interest in the outcome of this project and its findings. I had insider knowledge of the Khoja communal social, cultural and religious practices and the generally held views and beliefs in the community. I was an attendee in the face-to-face meetings and the WhatsApp chats and monitored the collaborative inquiry discussions to keep the discussions ongoing in the groups. I encouraged and let the local group coordinators take the lead in the chairing and steering and facilitating the group discussions.

I acted as the facilitator and moderator in the initial face-to-face briefing meetings. This task was thereafter assumed by the local group coordinators as the coordinators and the

group participants became familiar with the research issues and the subject matter and confident to discuss the strategy and green initiatives for the communities and thus the facilitation role shifted to the coordinators. This shift coincided with the difficulty in holding face to face meetings and the utilisation of WhatsApp chat sessions for substantive group discussions online. I regarded my role in the discussion groups as being to introduce the research project and its aims and initiate the discussion in the group discussions. I introduced to the groups the faith and science aspects of the inquiry. My objective was to enable the participants to voice and express their views and positions on the research issues and to listen to and understand what they viewed as the problematic practices of the community and how they should be addressed and thereby collecting field data.

As the initial facilitator and an attendee in the discussion groups meetings, I gave careful attention to any manifestation of the influence of my views, thinking and perceptions on the group discussions. I also evaluated and objectivised my own perceptions as an aspect of reflexivity to enable me to critique them together with the perceptions of other members of the discussion group.

In the meetings, I initially spent some time introducing the issues and interacting with participants on their questions, comments and views and giving my perspectives on the matters. I was conscious of the need to encourage and provide an avenue for interactive discussions between the participants and the need to promote the inter-se discussions. After this initial briefing on the research issues and the project I encouraged the coordinators to take on the lead facilitative role in the groups and to stimulate and promote the interactive discussions in the groups with participants to think of a strategy to change the problematic practices and formulate measures and steps to enable that change. These related to changing mindset of community members, awareness-raising steps both on the faith and science fronts, shifting from throwaway plastics and Styrofoam materials to reusables, linking the communal practices to the global phenomenon of carbon footprint and climate warming and ways in which they could be effective change agents in this process.

There were two instances when I needed to actively intervene in group matters. The first was to jump-start the discussions in the Leicester group that had become totally inactive on WhatsApp for four months. This was because of a change in the position of the coordinator within EC leadership and a loss of clarity and direction among participants as to their roles. I did this by speaking to the coordinator and community leaders and suggesting fresh ideas for green initiatives to be proposed to the community leadership by the group. This move remotivated the group.

The other instance was when I sought to negotiate and smoothen the differences of opinions on the strategy on green matters between group members and EC members in Stanmore following the cancellation by the leadership of a ten pence cup levy against the wishes of the group because of strong resistance from community members. I have elaborated on this incident later in Chapter 4 on the research fieldwork.

My own positionality as an insider and outsider researcher in this research

I was both an insider and an outsider researcher in this project. As an insider researcher in this project, I was aware that I would not be able to avoid my own thinking, perspective and biases influencing the project and the discussions. I explained to the participants my different roles as a practitioner, as an inside researcher and as an outsider researcher and the need for open, frank, and transparent group discussions. Accordingly, for transparency, I made my own voice and views known and clear to the discussion groups in their meetings for their consideration and reflection.

I managed this process by inviting and providing an opportunity for expression and consideration of concurring and contrary views and disagreements with my views and views of other participants and enabling concurring and dissenting views to emerge and be considered. I provided avenues in the meetings for robust critiquing, and critical reflection on views expressed in the groups and gave careful attention to any manifestation of the influence of my views, thinking and perceptions on the group discussions.

Throughout the research process, there were times when I felt some tension between the roles of being a practitioner and being both an insider and outsider researcher, but I sought to deal with these tensions by my adherence to the procedures and modalities of the collaborative research and the open discussions with participants. I explained to the participants my different roles as a practitioner and both an inside researcher and an outsider researcher and the need for transparency provided by these procedures and modalities. The fact that it was understood by the group members that I was there primarily because of being situated as a researcher in the context of my Middlesex University DProf research project did help them to understand my positionality in this community-based project. As a Khoja myself, I was accepted by the community and discussion groups as a kindred one of the community.

Ethical considerations

The ethical considerations in research projects that would usually arise include the following: (a) obtaining permissions and agreements from participants and community bodies involved; (b) maintaining appropriate confidentiality and acting in good faith; (c) responding quickly, fairly and visibly to any unforeseen ethical problems, and (d) complying with any specific ethical requirements for the particular context.

In this respect, ethical competence or ethical literacy is important. The idea of 'ethical competence' (Friedman, 2007) or 'ethical literacy' (Lunt, 2008) reflects a more considered ability to act ethically across one's practice.

Among other things, acting ethically involves: (a) knowing what is right in any given situation; (b) being able to recognise ethical issues in practice situations; (c) being able to resolve ethical dilemmas, (d) ethical reflective practice and (e) the qualities of respect for others and their dignity and values, personal integrity and responsibility to others and broader professional principles.

Measures to meet ethical research requirements

In this research project, all the ethical issues that were likely to arise were taken into account and addressed. As a result, the research ethics was robust in compliance with the ethical rules and guidelines of Middlesex University as set out in the ICL (ISL) 4000 Module handbook and DPS 4561 Module handbook. I have also referred to works by Fox, Martin and Green (2007) and Gill and Johnson (2010) on ethical considerations in research projects.

For this project, approvals were sought from the respective administrative governing bodies of the communities and the communities were briefed as to the aims, procedures and processes involved in this research. The Jamaat's Executive Committee representatives participated in most project discussion groups.

The participants were given complete information about the aims, procedures and processes and possible risks involved in easily understood language. Assurances were given to the potential and signed-up participants that no person's position, treatment or care would in any way be prejudiced if they chose not to participate in the project. Participants were informed that their participation was voluntary. They could freely withdraw from the

project at any stage without risk or harm, or prejudice. In this research, no children or vulnerable persons were involved. They were assured that the confidentiality and anonymity of participants would be maintained.

There were regular consultations throughout the project fieldwork with participants in face-to-face meetings and WhatsApp group chats and discussions.

As regards conflicts of interest, whilst in some instances, there were some disagreements with respect to the modalities and implementation of the green initiatives proposed between the project discussion groups and the administrative Executive Committee, there were no instances of conflicts of interest on the green initiatives or policies being proposed by the green teams.

As both an insider and outsider researcher in this project, I was careful with respect to maintaining a professional distance and position in the community power relations and vested interests within the project and ensuring all points of view and voices were heard and taken into account in the discussion group meetings.

Complete courtesy and respect for participants and their views were maintained in the group discussions. No questions or procedures which were likely to be considered in any way offensive or inappropriate were utilised. The necessary steps to protect the privacy of participants and the need for anonymity of participants were in place. Participants were briefed on the intended use of data for writing a DProf degree research thesis at Middlesex University and ownership of data being with me. They were informed that I would have custody of the written data and video/audio recordings of participants' discussions and their safe keeping.

Steps to address the specific context of the faith communities

As the modality of the participatory, collaborative inquiry was new to the communities, I informed the members of community discussion groups as to what was involved and how the collaborative inquiry would work and the process and modalities envisaged so that they could decide to participate in the collaborative inquiry based on complete information. I discussed the procedures and modalities with the participants in the face-to-face group meetings.

The aim of the group discussions was to encourage members to reflect on and discuss the research questions critically and give their frank critical views so as to develop together initiatives for improving community practices and understanding of Islamic ecological principles. I sought to ensure that my views and those of all members of the group on the issues were subjected to rigorous evaluation and critical reflection in the discussions and that there was full interaction between differing views and there was no undue influence on any one's part to accepting or agreeing to other member's views without critical reflection.

The modalities and procedures of the project made clear that if any person chose not to participate or to withdraw at any time during the project from further participation, his or her position or treatment would not in any way be prejudiced. Participants were free to withdraw from the group discussions at any time without risk or harm, or prejudice. All necessary steps were taken to maintain the confidentiality and anonymity of their contributions or inputs and views in the discussions.

I was aware of the need to be flexible and ready to make changes to the modalities and strategy using the various options available to me in response to the issues I could encounter as I progressed with the project.

I clarified to participants that the data generated by this research will be used by me for the preparation of the DProf thesis and submission to Middlesex University and, subsequently, in due course, for writing a book by me.

Adequate arrangements for the recording and safekeeping of data were put in place. The ethical implications of data to be selected for use in the project, including data stored digitally on the computer, were addressed, and the obligation to accurately represent the views of participants was maintained.

The views and inputs of all participants were duly considered and respected, and taken into account. The impact of change of project activity on persons involved directly or indirectly in the project was considered. I informed the participants that I envisaged discussions with the faith communities and the COEJ regional body, and World Federation on my findings and recommendations after the research thesis completion and approval by Middlesex University.

As indicated earlier, my role as an insider and outsider researcher and initial facilitator in the discussion group was explained to the members. As a researcher and initial facilitator of the discussion group meetings, I sought to ensure that all voices were heard and that the positions and perspectives were reflected in the discussions and that the records of meetings were made transparently and accurately. My own biases and views on the subject matter were explained thoroughly and discussed rigorously in the group discussions to ensure there was no undue influence on participants' views, and the integrity of the data and information produced was maintained.

Field Data collection

The data was generated by discussions held within the community discussion groups. The discussions in the initial face-to-face meetings held with the groups were voice recorded and formed one set of data. This was supplemented by summary meeting notes prepared by the group coordinators. After the formation of WhatsApp groups of participants, the discussions held between the members online on WhatsApp groups constituted the second extensive set of data. Thus the field data was collected through three methods, namely the WhatsApp chat transcripts, notes of answers by group participants to questions and interviews and the voice files of discussion group meetings and the meeting notes.

Advantages and disadvantages of the WhatsApp group as a device for gathering data

Setting up WhatsApp chat groups for the discussion groups

The WhatsApp groups were initially set up by all coordinators of the project groups to assist with their recruitment of project group members, facilitate scheduling group meetings and quick logistic communications, and notify and update members. These WhatsApp groups were not envisaged as a substitute for face-to-face meetings at the project's outset.

The use of WhatsApp as an online avenue for facilitating and enabling discussion and interaction between group members emerged as a later development born of the logistical necessity of not being able to schedule physical meetings. I had envisaged and factored in my several journeys to the six communities for face-to-face meetings as a requisite and

inevitable part of my fieldwork and data gathering. I undertook at least one physical meeting in each community.

The face-to-face meetings had considerable advantages. It enabled people to get to know each other personally and better. I would not have come to know some of the members of the groups (whom I met for the first time) in such meetings and understand their mindset, thinking and views without the initial face-to-face meeting which I was able to hold at the project start in each community.

Their attendance in the physical meetings demonstrated interest and commitment to the project. It enabled the members to interact face-to-face and learn and understand each other's views and thinking better. The members could clarify and critique each other's opinions and ideas interactively and, subject to meeting time constraints, as fully as practicable. The face-to-face meetings helped create a sense of common purpose, identity-building, and cohesive bonding among the members of the groups.

The coordinators had in-person meetings with the EC to discuss green initiatives and get their leadership buy-in for the initiatives and their implementation.

During the project, I began to find that scheduling face-to-face meetings of the discussion groups and getting confirmation of the dates and attendance was becoming a critical logistical constraint. In addition, the coordinators began to encounter considerable difficulty in obtaining the signup for attendance from members for the face-to-face meetings of the group at their local mosques. The attendance of the group participants began to vary considerably with the drop in numbers because of their other commitments and unavailability.

The other key constraint was that there was insufficient time for discussions between members of the groups during face-to-face meetings. These were scheduled for up to two and a half hours slots at the mosques. The participants had full-time occupations, and their community activities had to be slotted into their spare time in the evenings and weekends. This meant that their spare time was heavily rationed between community evening functions and meetings, family commitments and leisure activities. This constraint deterred interested members from committing to the scheduling of evening or weekend meetings for this project despite their interest in the research subject and willingness to participate in discussions.

As this issue began to emerge in terms of the logistics of agreeing on dates for and fixing in-person meetings, the group members instinctively and on their initiative began to utilize WhatsApp chats for online substantive discussions between themselves and as a convenient proxy for in-person meetings. This was a welcome move, though not a specifically intended development by the coordinators or me. It, however, served as a very useful improvisation and a quick-fix solution to the problem. It also provided me with substantive field data from the digitally recorded text of WhatsApp chats.

It should be noted that in one discussion group, the local coordinator did not favour, at the project start, the WhatsApp avenue and instead opted for an email group list platform. He felt that WhatsApp would encourage many unnecessary postings and contact among the members since it was so tempting to be a texting keyboard enthusiast. In another group, the WhatsApp avenue was not favoured by a participant who thought it would be time-consuming for her and more distractive as opposed to other forms of communication, such as emails, and she did not sign up for the group discussions.

I began to find the use of the WhatsApp platform a flexible modality in these circumstances to bring together the group participants to discuss the research issues, give their inputs, generate data, and complete my fieldwork. This platform also provided me with regular information and briefing on the state of the discussions and views of participants.

I did not need to make long journeys to these towns for meetings, and this saved me valuable commute time. I could participate in these online discussions to see and follow the ongoing discussions at all times. I also used WhatsApp to inform and share with the groups the key ideas being developed, what initiatives were being considered and were taking place in the other groups and their outcomes.

As regards the WhatsApp data of online discussions between members, I saved the WhatsApp texts digitally. These data sources assisted in capturing the stories and highlighting the voices of participants i.e. the key and relevant storylines, themes and quotes from the discussions for analysis and reflection in the thesis document. Appendix 6 sets out illustrative quotes from the WhatsApp chats in the communities to show the level of engagement of participants.

The WhatsApp group discussion facilitated the interaction and sharing of ideas and views among members greatly. There was a continual flow of ideas and suggestions being posted as they occurred to participants without the formality of a meeting or the need to attend a meeting.

One key limitation of WhatsApp discussions was the considerable extent of group chatter posted and not very relevant postings from members from time to time. These postings distracted participants from the focused discussion of the research issues. I saw no practical way of controlling these irrelevant posts or online chatter except by regular polite, subtle hints and reminders to stay focused on the research topics and not offend the senders of these posts or dampen their enthusiasm to participate.

I wanted to give the members a free hand and latitude to express themselves in their posts so as to receive their genuine views and opinions and to think. The discussions at times tended to become unstructured, with participants raising different diverse matters and points outside of the specific topic being discussed to come to a consensus or decision. There were indeed many times when multiple eager voices spontaneously clamoured for attention at the same time instead of the more formal and polite one-to-one structured discussion of points between participants that you would expect to find in face-to-face meetings.

Since there were six separate WhatsApp groups representing each faith community covered in this project, I could share the key insights from each WhatsApp group with the other WhatsApp groups without holding physical meetings with the groups. These matters included green initiatives discussed and formulated in various discussion groups, the process of introduction and implementation of these initiatives in the respective faith community, the response of the community leadership and membership of the faith community to these initiatives and assessment of the success and otherwise of the specific measures and lessons learnt from the overall process.

I found that the use of the Whatsapp device in this collaborative research project worked well for the group participants and faith communities and turned out to be quite an effective tool for delivering project outcomes. The WhatsApp modality was good for the communities because it was familiar to the participants and flexible and did not require a separate in-person meeting to be held. WhatsApp provided an avenue for ongoing continuous meetings, which group members could join in at times best suited for them.

The inputs required of the participants were attendance at and discussions in the face-to-face meeting when these were actually held, and participation in the WhatsApp chats to give their suggestions, ideas and views as to how the change in the community practices could take place and what initiatives would work and should be introduced in the communities. These avenues also enabled the community leaders to observe or participate in person and online or through their designated representatives in group discussions. It was workable and yielded measurable outcomes.

Advantages of Whatsapp groups medium

It is an instantaneous and faster way to communicate with members. Where scheduling and attendance at face-to-face meetings of the members is a critical logistical constraint, it can serve as an improvisation and quick-fix solution in some circumstances. However, in my view, an exclusive reliance on WhatsApp without some form of face-to-face meetings will be an imperfect remedy. Where Whatsapp is combined with visual platforms such as Skype, Zoom, Teams or such other digital platforms where the element of face-to-face interaction is present, then it could work reasonably subject to this combination being convenient, acceptable and utilized by the participants.

The use of the WhatsApp platform can be a flexible modality in circumstances where it is not possible to arrange face-to-face meetings. Whatsapp, in such circumstances, bring together the group participants to discuss the research issues with each other and give their inputs and generate fieldwork data.

Disadvantages of WhatsApp medium

The WhatsApp groups were not envisaged and cannot genuinely serve as a substitute for face-to-face meetings at the outset. Face-to-face meetings have considerable advantages over WhatsApp and other online meetings. It enables people to come to know each other personally and better than on WhatsApp alone. Whatsapp sessions do not allow one to get to know the group members if you have not met them face-to-face. With Whatsapp, it takes longer to understand their mindset, thinking and views without the benefit of an initial face-to-face meeting.

Attendance in the physical meetings aids in demonstrating participants' interest and commitment to the project better. On WhatsApp, the opportunity for members interaction is limited compared to physical meetings, and it takes longer to explore and learn and understand each other's views. Whatsapp does not always give sufficient space to clarify and critique each other's views and ideas interactively and satisfactorily. Whatsapp does not help in identity-building and cohesive bonding among the members to the extent that the physical meetings do.

One key limitation of WhatsApp discussions is the extent of group chatter posted and some irrelevant postings from members from time to time. This tendency needs some restraint on the part of the participants. This can be distracting from the focused discussion of the research issues.

I regarded it as important to give the members a free hand to express themselves so as to receive their genuine views and opinions and understand their thinking. The discussions, at times, tend to become unstructured, with participants raising different diverse matters and points outside of the specific issue being discussed to come to a consensus or decision.

There were indeed many times when multiple eager voices spontaneously clamoured for attention at the same time, which I found interesting and revealing. This contrasts with the

more restrained and polite one-to-one discussion of points between participants that you would find in a face-to-face meeting. This requires considerable patience, understanding and tolerance on the part of the researcher using WhatsApp as a device for gathering data.

My own experience of using this WhatsApp medium

It was combined with the initial face-to-face meetings, and I found it worked well and proved to be convenient in data gathering in my research project. I did not need to transcribe the WhatsApp chat texts, which saved me transcription time. I did not need to travel for physical meetings to the communities after my initial physical meetings. As an insider researcher and community member, I had the advantage of knowing many of the participants from my personal interactions with the communities. This was a specific advantage that I had as an insider and member of the community.

Points to bear in mind in considering the use of Whatsapp in future, such collaborative inquiry research projects in communities

I would caution against relying exclusively and entirely on the WhatsApp group modality for data collection without at least some face-to-face meetings. Whatsapp modality can be pretty effective and productive when combined with physical sessions, as shown by my research experience in this project.

It is, however, important, in my view, for a researcher to first come to know well the participants in the collaborative inquiry so that he can have a better understanding of their thinking and views and positionality on the issues being discussed.

The face-to-face meetings help to provide that knowledge and awareness to the researcher, especially if he or she is an outsider researcher and not from the communities and he or she does not know the communities with whom he or she is working in the collaborative research and wants to get a good feel of the communities' culture, thinking, history and mindset. This understanding helps in the process of analysis of the data generated by the collaborative inquiry.

Validity of the research model

This design was a good fit for the communities because it was flexible and did not require a specific high number of in-person meetings to be held. The inputs required of the participants were attendance at, and discussions in the face-to-face meeting when these were held, and participation in the WhatsApp chats to give their suggestions, ideas and views as to how the change in the community practices could take place and what initiatives would work and should be introduced in the communities. These avenues also enabled the community leaders to participate in person or through their designated representatives in group discussions. It was workable and yielded measurable outcomes.

Reliability of the research model

I have discussed in this Chapter the research design and methodology of my project and the collaborative inquiry approach used by me for this research. The research was based on the specific context, and the model was context-based and limited to particular unique faith-based Khoja communities. The research did not claim universal general outcomes applicable to other communities or make general universal claims.

Design limitations

This research project was carried out in the unique faith communities with social and cultural backgrounds which have very complex decision-making protocols, processes, and practices with a constant interplay of strong influences of key stakeholders of the communities in these processes. The research paradigm had to take these features into account in measuring the credibility/validity of the knowledge generated in the process in terms of the workability of actions and solutions being trialled and assessing the extent of increase of control of participants over their own situation.

As stated in this section, the research findings which emerge as the action develops are context-based and not universal findings and cannot be applied as valid across other contexts and to participants in other communities of inquiry.

Chapter 4 - Research Fieldwork

Introduction

In this chapter, I describe the research fieldwork carried out by me in the faith communities.

Fieldwork

My fieldwork comprised the following steps and activities:

- (a) establishing the discussion groups in the faith communities for the research project.
- (b) providing the groups with a platform and avenue for getting together interested community members to discuss the problematic community practices and to explore what could be done to make a difference in these practices.
- (b) initiating and facilitating group discussions to help create a better understanding of environmental issues from faith and scientific points of view within the group members and explore ways of sharing these understandings with community members and bring about public awareness and sensitisation of community members on these perspectives.
- (c) facilitating the identification by the groups of the problematic community practices that were contributing to global environmental damage and providing information to help them understand the linkage between the community environmental practices and global warming and climate change.
- (d) attending the group discussions in in-person meetings and online Whatsapp on the various green initiatives and interventions that could be introduced in the communities to make a change to the practices and the attitude and mindset, and thinking of the community members.
- (e) facilitating discussions and communications between group members and community leaders to discuss and agree to the trialling within the community of the green initiatives developed by the groups.
- (f) attending group discussions to consider and evaluate the outcomes of these trials of green initiatives and the learning obtained from them and to formulate further initiatives to be undertaken in the communities.
- (g) attending the group discussions to explore and develop holistic short-term and long-term environmental plans in the communities to make the desired change in the practices.

Thus, the fieldwork essentially was to identify the problematic practices and the impediments within the faith communities to change the problematic eco-unfriendly practices and formulate ways to address them; to initiate the strategies and green initiatives to be trialled in the faith communities and evaluate their outcomes; to help develop a deeper understanding of the science and Islamic faith position on nurturing environment, and to enable the groups to be change agents in the faith communities.

The key stages were (a) the preparatory steps for the fieldwork, (b) the engagement and discussion in the discussion groups and (c) the green initiatives undertaken by the groups in their communities.

The key elements were the establishment of discussion groups in the faith communities, having group discussions on understanding environmental issues, identifying problematic community practices, formulating strategies and initiatives to bring about change in the practices, trialling the proposed initiatives within the communities, evaluating outcomes of these initiatives and formulating environmental plans for further green initiatives and sensitisation and awareness raising among community members.

Preparatory steps for fieldwork

The key preparatory measures for my fieldwork were (a) to inform and get community leadership clearance for this project research to take place in the community; (b) to identify and get the agreement of suitable and willing community members from the faith communities to agree to become local coordinators for the discussion groups (c) to identify and recruit willing and suitable persons to sign up as participants for the discussion groups; (d) to begin discussions in the community discussion groups led by local coordinators; (e) to keep the community leadership informed on the project generally.

The research process thus began with explaining the project's reason and obtaining clearance and support from community leaders for the research in their communities. I briefed them in writing on the purpose and aims of the project and the research approach, and the purpose and modality of establishing discussion groups in the communities to participate in the research.

After obtaining agreement in principle and approval from the leadership of the communities, the next step was to begin recruiting members of the discussion groups to participate in the research. I was able to do some of these tasks through my direct telephone and email communications with the executive leadership of the communities. Still, I needed help from local coordinators with a physical presence in the communities.

The key role of local coordinators

I needed a local community coordinator in place in each community to be my voice and agency in the community in this project and to help me with organising initial informal meetings with the potential participants and interested community members. Therefore, I needed to identify and sign up suitable, available and willing volunteer local coordinators from the communities to help me in the project and recruit potential discussion group participants. I was helped in this process of recruitment of coordinators by the communities. The group coordinators, in most cases, were suggested by the community leaders concerned and, in two cases, identified by me from my network of contacts in the respective community. I enlisted the help of my contacts from the communities to suggest those who would be willing and available to act as group coordinators and begin the recruitment of group members within the communities. I prepared briefing notes on the research project for the local coordinators to assist with recruiting participants.

This is how I filled the position of local coordinator in Portsmouth, Essex, Birmingham, and Leicester. In Peterborough, a prominent professional started the process as a coordinator, but there were two successive changes in this position as the commitments of the task increased and the difficulty of signing up any group members emerged and continued.

In Stanmore, the group was signed up through self-selection by interested community members because of an appeal made by me during a green initiative talk to the community at a mosque event. The group then selected the coordinator, and there was one subsequent change in this position as the previous coordinator moved town.

In two of the communities, the local coordinators, one earlier coordinator in Peterborough and the coordinator in Portsmouth were my relatives.

Selection and signing up of members of discussion groups

In terms of the selection of the members of discussion groups from the communities, I used my personal contacts within the communities and enlisted the help of my relatives, friends, and contacts to get suggestions as to the interested persons who may be able to participate and contribute to the discussions. I also sought recommendations from the leadership of the communities as to the participants. The sign-up to the discussion groups was essentially by self-selection.

My essential criteria for membership of the discussion group factors were the willingness to participate, the commitment to devote time and effort in attending and contributing views, being interested in enhancing environmental practices and developing practicable and doable ways of bringing about changes in the communities. In the final analysis, participation in the discussion group was a voluntary undertaking, and the most important factor was an interest in the natural world and environment and a willingness to commit. The local coordinators contacted the community members who they felt met the above criteria to establish their willingness and availability. There was a large degree of self-selection in this process, and it was not possible to have representation of all different community sections or, except in the case of the Stanmore community, the participation of religious scholars.

Establishment of discussion groups

Except for Peterborough, the establishment of the discussion groups took place smoothly and without difficulties. The sign-up for the Peterborough group was delayed by one year because of a lack of response from community members to join the group. However, after the setup of the Peterborough group, it and the local coordinator did contribute actively to the project by engaging in discussions in the group and with community leaders and undertaking some green initiatives in the Peterborough community.

The process of group sign-up was relatively smooth in all the communities except in Peterborough. In Birmingham, a community of 700 persons, there were six participants, and in Essex, a community of 150 members, there were nine participants. In Leicester, a community of 600 members, there were eight participants, and in Portsmouth, a community of 250 members, there were fifteen participants.

Peterborough has a community of 700 members, and the first informal meeting in December 2016 was attended by six participants invited by the initial coordinator. After that informal session, no sign-up of participants was successful for one year despite various efforts to promote sign-up within the community by the two initial coordinators and me. This situation lasted until the new coordinator took up the post in 2018, and the discussion group of five participants was finally established in March 2018.

In Stanmore, a community of 5000 congregation members, the green volunteer team began with ten community members who signed up in 2017 with a chairman following a green campaign promotion in the community. I introduced the research project to the group in

2017, and they agreed to participate as a discussion group for the research and selected a coordinator from among themselves. The group was initially set up as an email group for group discussion and communications, and later in 2018, a WhatsApp group was established for the members.

Setting up WhatsApp chat groups for the discussion groups

The WhatsApp groups were initially set up by most of the coordinators of the project groups to assist with their recruitment of project group members and facilitate scheduling group meetings and quick logistic communications, and update members. These WhatsApp groups were not envisaged at the outset to be a substitute for face-to-face meetings.

During the project, I began to find that scheduling face-to-face meetings of the discussion groups and getting confirmation of the dates was becoming a critical logistical constraint. In addition, coordinators had considerable difficulty scheduling face-to-face meetings of the group at their local mosque, and the attendance of the group participants began to vary considerably with the drop in numbers because of their commitments and availability.

The other key constraint was that there was insufficient time for discussions between members of the groups during face-to-face meetings. The participants had full-time occupations, and their community activities had to be slotted into their spare time in the evenings and weekends. This meant that their spare time was heavily rationed between community evening functions and meetings, family commitments and leisure activities. This deterred interested members from committing to the scheduling of evening or weekend meetings for this project.

As this issue began to emerge in terms of the logistics of agreeing on dates for and fixing in-person meetings, the groups instinctively and on their initiative began to use WhatsApp chats for online substantive discussions between members and as a convenient proxy for in-person meetings. This was a welcome, though not a specifically intended development, but it served as a good improvisation and provided me with substantive field data in the form of the text of WhatsApp chats.

I found the use of the WhatsApp platform a flexible modality to bring together the group participants to discuss the research issues with each other and give their inputs and to, generate data and complete my fieldwork. This platform also provided me with a regular briefing as to the discussions and views of participants. I was also able to use WhatsApp to inform the groups about what initiatives were taking place in the other groups and their outcomes.

Number of participants in faith community discussion groups

The PW (Portsmouth, Wessex) community has 350 members. The project discussion group in the PW community was formed in 2017 with 16 participants consisting of five women and eleven men. The participants who attended the three face-to-face meetings held from December 2016 to February 2018 ranged from nine to twelve persons. In the WhatsApp group of discussion group formed in 2017 and administered by the local coordinator, there were seventeen participants from the PW community, of which eight to ten persons regularly participated in the WhatsApp chat discussions.

The BM (Birmingham) community has 700 members. The project discussion group of four members of the BM community was established in February 2018. Four participants attended the one face-to-face meeting, which was held on 20 March 2018. The project WhatsApp

group was set up on 22 March 2018. This WhatsApp group then grew to 20 participants from the community and of which ten people regularly participated in WhatsApp chat discussions.

The ES (Essex) Community comprises 150 members. The project WhatsApp group of 11 members was set up on 23 December 2016. Three face-to-face meetings were held and attended by six members. In addition, five to six members regularly participated in the WhatsApp chat discussions.

The LE (Leicester) community has 600 members. The discussion group of nine participants (five men and four women) was formed in November 2017, and one face-to-face meeting was held in December 2017. In addition, three to four members regularly participated in WhatsApp chat discussions.

The PE (Peterborough) community has 750 members. The first informal meeting was held on 19 December 2016 and was attended by six participants (one woman and five men), but the project group could only be recruited and formed in 2018. The first project meeting held on 13 March 2018 was attended by five community members, one woman and four men. This WhatsApp group was first formed on 24 December 2016 to facilitate the identification and sign-up of potential participants. This WhatsApp was then continued after the setting up of the discussion group in 2018. Two or three persons regularly participated in the chat discussions.

The SH (Stanmore Hujjat) community has 5000 members. It initially began a self-signed green team to address the issue of plastic cutlery in the mosque. This green group of community members and volunteers of eight to ten persons was formed in April 2017. It was later introduced to my project in late 2017, and the group began to participate in it. The group met five times in face-to-face meetings. The group first operated as an email group, and then in 2018, a WhatsApp group of 20 persons was set up. Nine people regularly participated in the WhatsApp group.

My interactions and agency in the discussion groups

I initiated the groups and acted as a facilitator and moderator in the group discussions in the initial meetings. I introduced the key issues to be discussed in the groups. I attended and facilitated the meetings and discussions both face-to-face and online through WhatsApp groups with the participating groups drawn from the respective communities. I monitored the group WhatsApp discussions and steered them where necessary to discuss research questions and related emerging issues. The key issues addressed were the problematic environmental community practices and how to improve and change them.

The meetings were the principal avenues for obtaining the participants' views and opinions and generating data through these face-to-face and WhatsApp discussions. The meetings were recorded digitally to maintain a record of participants' views and opinions. Two key modes of interaction and engagement with participants were utilised, namely face-to-face meetings and group discussions through WhatsApp groups. I also used a questionnaire to obtain the views of discussion group members on community environmental issues and practices and received responses from three of them.

Fieldwork activities

I started my fieldwork in November 2017 and concluded my fieldwork activities at the end of December 2019. I held informal meetings before the research project approval (given in August 2017) in the three initial faith communities of Inquiry, namely Peterborough,

Portsmouth and Essex communities. In holding these informal meetings, I wanted to get the experience of organising community discussion groups, appreciating the challenges and modalities of this task, and obtaining the feedback and response of community members to this *modus operandi* and the research project generally.

As September 2017 and October 2017 were busy periods in the Shia religious calendars of the faith communities because of Muharram religious commemorations, I started the project fieldwork in November 2017.

The key fieldwork activities undertaken by me are set out in Appendix 3, giving details of engagement in each community in tabular format for ease of reference.

Coding and data analysis

As regards my coding exercise for the fieldwork process and data analysis, Appendix 4 sets out the sixteen key codes I used in the coding. Appendix 5 sets out the themes emerging on first cycle coding.

The key codes included the following: the group recruitment process; the participants' enthusiasm and commitment to the research project; the evaluation of the community environment practices; obstacles to changing community practices; the physical and logistical constraints; the remedial measures and green initiatives considered; strategic planning and development plans; modalities and approach of change; attitude towards environment and change; the role of faith in motivating change; the impact of social media; demonstration effect of initiatives undertaken in other communities; collaboration with external organisations; the impact of EC representative's presence in discussion groups; evaluation of initiatives undertaken and the impact of Covid 19 lockdown on the communities.

As shown in the tables of fieldwork in Appendix 3 and the key themes in Appendix 5, the highlights of the fieldwork and themes emerging in the process were as follows:

(a) Group recruitment process: The community leadership clearance for the project was obtained quickly and without difficulties. Except in Peterborough, the recruitment of discussion groups was carried out smoothly and successfully with the help of the local coordinators. The situation in Peterborough was delayed for a year until 2018, as explained in this Chapter.

(b) Participants' enthusiasm and commitment: There was high enthusiasm and interest generally in the groups. There was a high level of active interaction in face-to-face meetings and on group WhatsApp discussion chats. However, in Peterborough, there was low enthusiasm for the project among the potential participants in the initial informal briefing meeting of December 2016. Eventually, after the delayed establishment of the Peterborough group in 2018, there was better and more helpful interaction and discussion in the face-to-face meetings and WhatsApp chat.

(c) Evaluation of community practices: As regards the community perceptions about the environment, across all the discussion groups, there was a strong and passionate acknowledgement of the duty to preserve the environment by the group participants. In the Peterborough group also, there was an acknowledgement of the duty to preserve the environment by the signed-up group participants. But in the community, the general attitude was taking the environment for granted and not thinking about the environment.

(d) Community awareness: In terms of the extent of community awareness, this varied from low level to considerable and high level of understanding of the ongoing discussion, information, messages and programmes about environmental degeneration and pollution taking place on mainstream TV and social media. This heightened awareness was the case, especially among the younger generation of the age group of 25 to 40. On the other hand, among the seniors and elderly of 60 years and above, there was little awareness of environmental concerns.

(e) Identification of problematic practices: Concerning the Identification of eco-unfriendly practices in the community, at the start, the extensive use of throwaway plastic cutlery in community food events, use of disposable, throwaway plastic water bottles brought and donated to the mosque and the high amount of community food waste in terms of left-over food thrown and binned were seen as priority issues by all the discussion groups. Later during subsequent discussions, other underlying issues such as high meat consumption in the communities (Birmingham and Stanmore Hujjat), reduction of mosque-generated waste disposal (Essex) and high energy and water utilisation (Leicester and Stanmore) at the centres emerged as matters to be discussed and addressed in the group discussions.

(f) Faith and religious teachings: In terms of faith and religious teachings on the environment, there was a general acceptance among the groups of the need to publicise and fully understand and appreciate faith teachings on the environment and to implement them. There was a feeling in the groups that the community members were not aware or sufficiently cognizant of these teachings and that there was a need to make all community members more aware of these faith teachings.

(g) Obstacles and impediments to change: Many obstacles to changing community practices were identified. The practice of using plastic cutlery dating from at least four to five decades since the migration of the communities to the UK was firmly entrenched. It was a core part of the community system of serving food and hot and cold drinks and was accepted by community members and the serving volunteers as the quick, well tried and effective way for servicing the food events in all the faith communities.

This problem was compounded by the availability of ample, cheap and affordable plastic cutlery in the UK and the open market. The eco-friendly alternatives to plastics were three to four times more expensive. Plastics were very convenient since the volunteers did not have to wash these disposable cutleries, and they were simply binned as garbage waste to be collected by local councils.

There was a lack of facilities in the mosque to wash reusable cutlery. The limited space in most of the centres and the mosque kitchens and the lack of sufficient cutlery washing facilities for gents and ladies were major constraints to switching to reusable cutlery, which would need to be washed onsite for reuse. Moreover, some of the communities had ongoing reconstruction and refurbishment projects for their mosques. Essex was using hired community halls as their temporary venue since the community had sold its old premises in 2010 to construct a purpose-built centre, and this work was ongoing during the fieldwork period and project duration. Birmingham was in the process of planning the deconstructing and rebuilding of its existing centre. Peterborough similarly had an ongoing building project of extending the mosque and providing more space and facilities for members. These constraints prevented long-term solutions such as dishwasher facilities from being considered.

The inconvenience of taking back soiled reusable cutlery home to wash was a big deterrent. This affected the acceptance of the groups' BYO cutlery campaigns in some centres. Despite the inconvenience factor in the small Essex community, the BYO campaign was relatively well received in Ramadan 2018 and 2019, with most of the regular member families bringing their own reusable cutlery from home. The statistics for Ramadan 2018 for Essex showed that from the usual number of about 2000 plastic plates, the number dropped to about 700. Similarly, in Birmingham, some members, particularly women (mothers and children), brought their own reusable cutlery from home as part of the BYO initiative. In some centres such as Portsmouth, washing up of the reusable cutlery at the centre was introduced and worked well because of the small numbers of the congregation (not exceeding 150 persons) and the presence of washing facilities, including a small dishwasher at the centre.

The volunteers were accustomed to the long-established system of using and disposing of plastic cutlery. This factor required lead time, patience, and persuasion to change the ongoing systems established and used by volunteers. While no change was attempted in Peterborough, the leadership in Portsmouth made a prompt decision in 2018 to change the practice and stop plastic cutlery immediately after consulting community members and volunteers.

The higher cost of biodegradables was seen as a disincentive. The differential in the cost of biodegradables which was in the order of up to 4 times that for plastics, affected the decision not to opt to switch to biodegradables by leadership in most communities. This was also seen to be the case even after the availability of joint discounted bulk buying arrangements for biodegradables negotiated by the COEJ for member communities in the UK. The cost factor deterred Stanmore from switching permanently to biodegradables after its one-month trial of switching from plastic to biodegradables.

There was a lack of awareness of global environmental degradation and plastic pollution concerns. A general lack of awareness of eco degradation and pollution among grassroots community members was present.

There was no sufficient motivation to make a change in the communities. Many factors affected the motivation to change, including the temporary nature of the mosque venue being used, the planned and ongoing reconstruction and extension of mosque premises, the financial costs and lack of awareness of global environmental damage and the faith teachings on the environment.

The inability to compost biodegradables (an external factor beyond the control of the communities since local authorities did not offer this service) to achieve complete green gains led to the general perception among community members that the extra funds, if spent on biodegradables would be a waste of community funds.

There were physical and logistical constraints. These comprised the in-progress and planned mosque reconstruction and extension works, the lack of sufficient washing facilities for BYO cutlery, the space constraints and limitations in existing mosque premises and the lack of sufficient space or plumbing for dedicated industrial dishwasher facilities in most of the centres.

(h) Approaches to making a change: The approaches for making change used by the groups were (a) the faith approach (highlighting the responsibility of stewardship and obligation of

humanity to the Creator) and (b) the science approach highlighting the scientific findings available in mainstream TV and social media on the impact of the problematic practices on the physical world and natural environment. The modality was to raise awareness of community members and leadership and introduce green initiatives to demonstrate their do-ability and lobby for change in the communities. The third approach was to interact with external organisations. In Birmingham, the community interacted extensively with various external faith bodies and academic and other research organisations to explore various ways to make a change in the practices.

(i) Measures considered and discussed: Various environmental improvement measures were discussed, explored and initiated. These measures included community awareness building through community talks and announcements, showing YouTube clips on environmental damage, BYO cutlery campaigns in the mosques, selling reusable cutlery to the community at subsidized cost to encourage and facilitate their use in the mosque, introducing alternatives to plastic cutlery like reusable cutlery such as metal cutlery in Peterborough and biodegradable and porcelain cutlery in Portsmouth and biodegradables in Stanmore.

Other measures considered were reducing mosque waste being dumped as rubbish; arranging with the local council to use food waste for energy generation. Some measures discussed but left for future implementation were the community group transport for community members to the mosque, recycling of mosque plastic and other waste at facilities to be set up in future by community bodies and reducing meat dishes in mosque food menus offered by the communities. The measures in terms of strategic and long-term planning, such as the baseline environmental audit of mosques and strategies for measuring carbon footprint and decarbonization of community activities, long-term environmental plan, and strategy, were discussed and recommended for future implementation.

(j) Measures undertaken by the groups: As regards initiatives within the Birmingham community, these included steps taken by mosque volunteers to stop the use of plastic serving spoons and small plastic wrapping bags for distributing “fateha” (blessed snacks), “bring your own reusable cutlery” drives for food events, selling and giving reusable cutlery for use in the mosque, offering incentives such as prizes for bringing reusable cutlery from home for use in the mosque, reducing Styrofoam cutlery utilization and food waste (in terms of uneaten leftover food and collecting inedible food waste for collection in council food waste bins where such waste can be burnt for energy generation), reducing Styrofoam cutlery utilization and reduction of general waste and reducing the number of rubbish bags used to throw general waste by tight stacking of plates and cups, discouragement of use and donation of throwaway plastic bottled water.

In Stanmore, the green measures initiated in Ramadan 2018 in the community with approval from EC included a “bring your own reusable cutlery” drive and sale of a set of reusable cups, plates, and bottles in 2018; a switch to biodegradable cutlery for iftar food events in Ramadan 2018. The measures also included reducing and collecting food waste to be taken by the local council for energy generation; the stacking of plates and cutlery to reduce the number of rubbish bags used to throw as garbage.

In Stanmore, in September 2018, the leadership installed a water fountain in the courtyard of the mosque to encourage members to bring reusable water bottles and fill up from the fountain. The other green initiatives proposed were the installation of a large industrial dishwasher at the Centre to wash porcelain and ceramic or metal cutlery, the sale of reusable cutlery, a resolution at the AGM of the community to stop using plastic and

Styrofoam cutlery, a voluntary 10 pence cup levy and a long term five-year strategy plan to deliver education and awareness both on eco science and faith teachings to all community institutions and gradual steps to move towards reduction of the carbon footprint of community activities.

In some groups, there were extensive discussions on the pros and cons of various options, namely reusable cutlery or biodegradable cutlery or recyclable cutlery in the mosque and a pilot scheme to use stainless steel cutlery for small groups events in the community was introduced. The idea of developing a five-year environmental plan under regular review for the communities, as well as the consideration of the installation of an industrial dishwasher to facilitate the use of reusable cutlery, was taking hold within the groups.

(k) Age and gender factor: As regards the age and gender factor, there was more enthusiasm and concern about eco pollution and thinking about making a change in community practices among youths and younger adults than senior members. The women were passionate about ecological concerns and happy to drive environmental initiatives in most of the communities.

(l) Faith as a motivating factor: The perceived role of faith, religious beliefs and traditions in motivating change was seen as important, and a critical central role was seen for the faith teachings in driving the change. The modalities to harness faith as a motivation in the communities ranged from mosque lectures, sermons and awareness raising and eco-theological preaching by community preachers; highlighting individual personal responsibility for safeguarding the environment; organising debates among youths, students and parents of community madrassah and members of the community, using occasions such as Earth Hour, World Environment Day, the faith belief about Dahwul Ardh (spreading of earth mass from the centre point of Kaaba) according to Muslim traditions to raise awareness among community congregation; and teaching children at nursery school about nature, plants and flowers and nurturing environment and faith and engaging in planting activities;

(m) Impact of social media: The immediate impact of social and mainstream media and clips on plastic pollution on raising community awareness was seen. There was a considerable impact of showing You tube clips on environmental and plastic pollution, harm to birds, fish and marine life in the oceans, videos, documentaries, and other materials on mainstream and social media on the project groups and community members.

(n) sensitization and awareness building within the community: The discussions and green initiatives trialled by the various groups in the communities during 2017-2019 related to promoting and undertaking sensitization and awareness building within the community. This involved showing during community functions YouTube clips on the damage done to the earth by climate change, global warming, high carbon footprint and plastic pollution on land and in oceans. Concerning eco-theology, talks and sermons on faith teachings on environmental protection and preservation were promoted and organized by groups. Other awareness-building methods included a youths' debate on environmental issues in Leicester. Following the engagement of Birmingham Group with the Encompass project of Birmingham University and their partner Earth Watch, an activity by Earthwatch was organised in Birmingham to teach community children of the age group 6-11 about the natural world and discovering planet earth and nature-loving activities.

(o) Demonstration effect of other communities: There was also a demonstration effect of other project communities or Khoja communities switching from plastics and initiating green

measures. The impact of green measures initiated and implemented by the other Khoja communities in the UK and other western countries was strong. These green measures included initiatives to use reusable cutlery in Haydery mosque in South London and Portsmouth, Stanmore, Paris and Toronto, Canada. The impact of the Portsmouth community going plastic free in Ramadan May 2018 and the Stanmore community trialling a switch to biodegradables from plastic during Ramadan 2018 was strong, and the Canadian Toronto community's experience with reusables machine-washed at the centre was presented and evident and seen in the group discussions and the communities.

(p) liaison with external organizations: One community began to collaborate and have liaisons with external bodies and organisations on green matters. This was seen in the Birmingham community. This collaboration began with the community group inviting a research group from Birmingham University's Encompass project. This project was on engaging with communities on plastic pollution by the University with its partner Earth watch project and was undertaken and led by Dr Carl Stevenson, Geology lecturer, Geosystems research group, earth sciences, at the School of Geography, Earth and Environmental sciences of Birmingham University. Two researchers, including Dr Stevenson from the Encompass project, attended the first in-person project group meeting in Birmingham. Thereafter the Birmingham discussion group continued a broad range of collaboration and interaction activities with various external bodies and organisations.

These included workshops and seminars, an environment sensitisation programme, "tread lightly on this Earth", held in the local Hindu temple and an eco-conference on climate emergency and the role of faith communities in climate emergency with various outside communities and organizations in Birmingham. These organisations were Sultan Bahu Trust and Paigham-e- Islam Trust, Eco volunteers from IFEES and Eco Islam, local Mandir Hindu Centre, Birmingham Council of Faiths and Birmingham's Footsteps organization. In addition, the group participated in green street iftar, Christmas hot lunch for needy homeless people and organized mosque clean-ups and litter pickups locally. The group also undertook a litter clean-up programme in the premises and courtyard areas of Birmingham Mosque with community children and volunteers and litter pickups in the nearby local areas. It attended meetings of Zero Carbon House to learn about attaining zero carbon activities.

There was a collaboration with Earth watch on nature for the community children and interaction and green activities with neighbouring community organisations and mosques. There was also a collaboration with bodies such as Plastic free Mosely, friends of Earth, and Birmingham footprints. The group became involved in the promotion of climate emergency declaration in Birmingham. It participated in the cleaner air for Birmingham initiative by the Birmingham council, in plastic-free iftar in Ramadan with neighbouring mosques organised by Sultan Bahu Trust in Birmingham.

The group's activities included site cleaning and practical environmental activities for kids carried out at the Birmingham Mosque, planting of biodegradable pencils containing seeds for madrassa and nursery children, participating in a neighbourhood mosque project to set up a family community garden in the Balsall Heath area to encourage families to participate in nature-loving activities with children and grow vegetables and fruits. It included participation in a tree planting drive initiated by the "who is Hussein (an international community organisation led by youths to commemorate the supreme Shia Martyr for the Shia communities and the grandson of the Holy Prophet) " There were also other ongoing initiatives by the Birmingham community nursery to promote planting vegetables and fruits activities among community nursery kids, to teach nursery children simple and practical

science experiments and to promote recycling of paper and plastics activities among the children.

(q) impact of EC presence in the groups: The impact of EC presence in the discussion group through an EC representative and the support and buy-in of community leadership for the group and its activities was immense. The presence and participation of EC representatives in group discussion meetings were important to obtain endorsement and facilitation of the planned green initiatives to be undertaken in the community events. The close involvement of the EC representative in community discussion group meetings enabled the EC to make its views and suggestions known to the group members. It helped the group to negotiate and agree on the green interventions with the EC. In some groups, the coordinator was also an EC member, and other group meetings were also attended by other EC members and office bearers.

(r) Impact of Covid lockdown: The Covid lockdown and restrictions had immediate, severe and adverse impacts on all the communities in 2020. From March 2020, the mosques were shut down, and no in-person programmes, prayers and food events could be held in the centres. Some prayers were conducted online as permitted under religious laws. The community resorted to online majlises and lectures on Zoom, Microsoft Teams and other online digital platforms. The community green groups stopped functioning totally during the lockdown period. The community schools went online as well. Community funerals took place with highly restricted numbers of close family members only.

The community focus shifted totally from environmental and green matters to priority areas of servicing essential community needs like welfare and funerals. In Ramadan 2020, in some communities, iftar in takeaway containers was delivered by community volunteers to a limited number of needy members at their homes who had signed up for this service. People could not meet each other in their homes or outside their homes. It seemed that communities throughout the UK had just shut down during this lockdown.

Details of engagement in the communities and project discussion groups

From the project start, Birmingham, Portsmouth, Essex, Leicester, and Stanmore actively participated in the project. As indicated earlier, Peterborough's participation was delayed by the difficulties of signing up group members.

In Appendix 3, in respect of each of these communities of inquiry (listed in alphabetic order), I have highlighted the process of seeking clearance from the faith communities, the formation of the discussion groups and the discussions held in the group, and the positions taken by the groups. The impact of these discussions within and outside the community, the various green initiatives undertaken by the groups in their communities and the outcome of those initiatives. This seeks to show the cycle of change that each discussion group and faith community went through in this process because of this research project.

A brief history of the establishment of the UK Khoja Shia Communities is set out in Appendix 2. As indicated earlier, the highlights of the fieldwork and engagement with the faith communities are shown in Appendix 3 (Tables A1 to A6) in tabular format in respect of each community.

Experience and storyline revealed by this research in the faith communities

The different experiences and storylines, and outcomes demonstrated by the collaborative inquiry in each faith community, as shown by Appendix 3, were fascinating features and discoveries for me.

Birmingham community and group demonstrated their willingness and enthusiasm to interact and collaborate with various bodies and agencies such as Birmingham University and faith communities, and eco bodies outside the community. They took the initiative to indicate their interest in becoming part of my research project and were very supportive of the research. Unfortunately, the range of green initiatives they could implement within the centre was limited by the space constraints at the existing mosque premises. Still, they undertook a wide range of small doable steps to improve the environmental practices at the centre. The planned deconstruction and reconstruction of the purpose-built centre at the present location was also a constraining factor for any longer-term planning.

Essex community was without their centre premises and was making do with hiring the halls at the Galleywood Heritage Centre for all their functions for the duration of the fieldwork. Notwithstanding this constraint and despite being a small community, the group and leadership were most enthusiastic and willing to participate in the research project and change their problematic practices. They undertook a wide range of green initiatives to improve community practices. When their new purpose-built, much larger centre was completed and ready for use in 2022, the community was willing to incorporate many of the eco-friendly features discussed by the group in the new premises.

The Leicester community showed interest and enthusiasm for the research project. They had their centre, which had some eco-friendly features already incorporated. They, however, had some entrenched practices that needed improvements, such as the use of plastics and Styrofoam. The group and community undertook a range of small steps and sought to raise members' awareness to make the change.

When the discussion group became dormant and inactive for some six months, and there was a feeling of disconnect between the group, the research project and leadership, the new coordinator, who was an EC member in the new leadership, was able to revive the group's enthusiasm by presenting a set of new proposals for improving environmental practices to the new EC which responded positively and favourably to these initiatives.

The Peterborough community and leadership initially showed little active interest in the research project, and even the group signup was delayed for a year. However, when a new coordinator (a new arrival to the community and city) took up the challenge and had discussions with the EC, he was instrumental in promoting significant improvements to stop the utilisation of plastic and Styrofoam in some of the community's food events in consultation with the EC. He was able to achieve these improvements with EC endorsement in some food events in the switch from plastic to reusable cutlery. He engaged with Peterborough EcoFaiths Networks meeting to participate in and discuss the engagement of faith communities with environmental issues in Peterborough. During the fieldwork, the community leadership was fully engaged in the undertaking and completing the extension and refurbishment of the centre premises. When these works were completed, the community incorporated many eco-friendly features in the extended new premises, and the new leadership became enthusiastic about making eco-friendly improvements.

The Portsmouth community, at the research project commencement, had a new centre with larger space and garden area facilities. Some eco-friendly features were already incorporated into the premises. The leadership supported being eco-friendly and promoted gardening and nature activities at the centre premises. The group addressed the lingering

problematic practice of using plastic and Styrofoam in food events with the support of EC leadership. The prompt, decisive, and impactful switch from plastic to reusables was made by the leadership with the support of the group and members. The group, community and leadership are committed and supportive of further improvements to their practices.

Stanmore Hujjat was the community where some members had, before the project onset, started a BYO cup campaign to stop the use of plastic cups for tea. This was the largest Khoja Shia community in the UK community. It had a very large congregation (the biggest in the UK). It had major space constraints at its centre and the mosque, which constrained the implementation of some initiatives, such as using big industrial dishwashers to enable reusable cutlery for food events. The green group was very enthusiastic about changing the problematic community practices.

Several green initiatives were discussed, and many were implemented. The proposal to stop the use of plastics was even brought to the Annual General Meeting of Jamaat members for endorsement and resolution. This resolution was extensively discussed and debated at the meeting, but as requested by the members and the EC, it was not put to the vote and was withdrawn by the green group. The EC undertook at the meeting to address the use of plastics and seek to arrive at a doable solution in consultation with the green team.

The group's subsequent initiatives included the voluntary plastic cup levy of 10 pence in the food events. This move was, however, opposed vehemently by some members and had to be withdrawn by the leadership in the face of the sharp reaction and objection to the disappointment of the group members. This cancellation of the initiative resulted in some rupture of the relationship between leadership and some group members. With a new and young EC now in place, the good working relationship between the group and EC has been restored. The community has recently purchased a large property as its new centre. There is ample space in the new premises to incorporate the green measures, and the continued support of the new EC promises to support the green group in making eco changes and implementing key initiatives in the new premises.

Conclusion

The fieldwork activities in the groups and the communities were greatly facilitated by the local coordinators and the participants of the discussion groups. The leadership in these communities enabled the research to take place. The Birmingham, Portsmouth and Essex communities showed great enthusiasm for this research undertaking. The Peterborough leadership were not initially very enthusiastic about this research but, as it progressed towards the project's conclusion, became much more supportive. The new leadership in Leicester and Peterborough were very supportive of the project. In the Stanmore community, this project has been a significant influence and landmark.

The impact of using the WhatsApp platform for linking the group participants online was most helpful for the project's successful continuation and productive outcome. It is indeed most fortunate that I could complete the meetings and the fieldwork activities by December 2019 before the advent of Covid 19. For two years after that, the Covid restrictions placed a hold on all community activities.

Chapter 5 - Key themes and findings

Introduction

I now discuss in this chapter the key findings that have emerged from the research work in this project. Firstly, I would like to reiterate that the purpose of my research project was to contribute to the overall process of change in the environmental practices in faith communities. My aim was to make a difference in their environmental practices and assist in bringing about change in their current problematic practices.

Key themes and findings

Several key findings emerge and stand out clearly from the research work. Some findings were common to all six discussion groups, and other findings related to some of the groups.

The key themes that emerged from the research and engagement with the communities are set out in detail in tabular format in Appendix 4 and 5. I am setting out a summary list of the key themes and sub-themes in table A below for easy reference.

Table A

Table A on the key themes emerging in the engagement with communities

Key themes	Sub-themes
A. Group recruitment process	Community leadership clearance for the project
	The recruitment process
B. Participants' enthusiasm and commitment	Group enthusiasm for the project
	Interaction within the groups
C. Evaluation of Community environment practices	Community perceptions of the environment
	The extent of community awareness
	Identification of eco-unfriendly practices in the community
	Faith and religious teachings on the environment
	Extensive utilisation of plastic cutlery and plastic material in the mosques
D. Obstacles to changing community practices	Entrenched practice
	Convenient, cheap and affordable
	Lack of facilities in the mosques to wash reusable cutlery
	the inconvenience of bringing own cutlery and taking back soiled reusable cutlery home to wash
	Volunteers' long-established system of using and disposing of plastic cutlery
	the inconvenience of staying late at the mosque to wash soiled reusable cutlery in the mosque
	The higher financial cost of biodegradables
	Lack of awareness of environmental degradation and the impact of plastic pollution
	No sufficient motivation to make a change
E. physical and logistic constraints	In progress and planned mosque reconstruction and extension works
	Lack of sufficient washing facilities for BYO cutlery
	Space constraints and limitations in mosque premises
	Not sufficient space or plumbing facility for a dedicated industrial dishwasher facility
F. Environmental Improvement measures discussed and explored	Community awareness building
	BYO cutlery campaigns in the mosque
	Alternatives to plastic cutlery
	Selling reusable cutlery with the mosque logo as part of BYO

	Reviewing and improving Community food waste and other waste disposal practices
	Environmental audit of the mosque
	Arranging group transport for members to the mosque
	Recycling of mosque plastic and other waste
	Reducing meat consumption in food events
G. strategic planning and development plan	Baseline environmental audit
	Long-term plan and strategy
	Modalities of change that work in the community
	Securing buy-in from all key groups of community members
	Generational and age group factors
	Gender factor
H. faith as change agent and driver	The role perceived by community members for faith in making change
	Modalities of faith motivation in the community
I. impact of social media on awareness building	YouTube clips on environmental and plastic pollution
	The effect of Greta Thunberg movement and Sir David Attenborough documentary series on planet earth
J. Demonstration effect of green initiatives of other communities	Impact of various communities initiating and implementing green initiatives
	Impact of communities going plastic free
	Impact of communities switching to eco-friendly alternatives to plastic
	Initiatives from regional Federal Khoja Shia bodies
k. Collaboration and liaison with external bodies and organisations	Interaction with external environmental research bodies
	Collaboration with environmental initiatives of Universities and eco-promoting organisations
	Joining with neighbouring community organisations and local council to participate in their eco-initiatives
L. impact of EC support and presence in discussion groups	Support and buy- in of community leadership to green initiatives of the groups
	Participation of EC representatives in discussion group meetings
M. Evaluation of green measures trialled	The extent of acceptance of green initiatives implemented in the communities
	Use of sports events to promote going plastic-free initiative undertaken by ladies at the Annual ladies' sports event
	Waste disposal of mosque-generated waste and use of a local waste disposal company that assured

	that all waste was either recycled or decomposed and re-used
	Use of raffle tickets scheme to monitor and motivate members bringing BYO and giving an incentive of prizes
	Incentive scheme for children and adults bringing their own cutlery with prizes
N. Impact of COVID lockdown	Mosques shut down in Covid 19 lockdown period from 2020 to 2021
	No face-to-face events permitted in communities
	Niyaz distributed through home-to-home delivery of take-away containers
	Online majlises and lectures given on Zoom, Teams and other digital platforms

Table B below sets out a summary of the current state of green initiatives in the faith communities. The Table sets out a summary of the efforts made and being made by the communities, the changing attitudes changed in the communities, and the work still to be done in the communities.

Table B

Summary of the current state of the green initiatives in the community green practices

January 2023

Efforts being made in the faith communities to change environmental practices	Key Focus areas	Measures taken and discussed comprised
	Switching from plastic cutlery and materials utilisation	- undertaking campaigns on BYO cutlery, promoting and selling reusable, collapsible and foldable silicon tea cups and mugs in the mosques, - switching to biodegradables cutlery, -using metal cutlery for food programmes, using wooden spoons in place of plastic spoons, -stopping the use of small plastic wrapping bags for distributing “fateha” (blessed snacks) -switching from plastic to reusable porcelain cutlery washed in the mosque in the community dishwasher -purchase of industrial dishwashers for large congregations.
	Reducing mosque waste	-reducing mosque food waste in food events, reducing other mosque waste dumped as rubbish, -reviewing current mosque-generated plastic and other waste disposal procedures to ensure the recycling of waste to the extent possible, -arranging with the local council to use food waste to generate energy -reducing the number of rubbish bags used to throw general waste by tight stacking of plates and cups,
	promoting and undertaking sensitization and awareness building within the community and awareness building measures	-community religious majlises and Friday sermons and community lectures and talks and announcements. -talks and sermons on faith teachings on environmental protection and preservation and eco-theology -showing YouTube clips on environmental damage and plastic pollution, and harm to marine life - making community members aware of and thinking about faith teachings on environmental protection and eco-theology. -providing incentives to children and adults to bring their own

		reusable cutlery through raffle prizes - promoting plastic-free sports events, - holding youths' debates on environmental issues - a collaboration with Earthwatch to teach young community children about the natural world and discovering planet earth and nature-loving activities.
	Measures taken to influence leadership and key stakeholders of communities	-Proposal to stop utilisation of plastic cutlery and materials within a defined period brought to community annual general meeting (AGM) for discussion and adoption; -proposal to have a voluntary 10 pence cup levy per every plastic cup used; - discouraging members from the use and donation of throwaway single-use plastic bottled mineral water.
Attitudes changed in leadership and members of the faith communities		
	Mindset change in leadership and volunteers and members	now more attuned to and receptive to reducing the carbon footprint of community activities and developing long-term environmental policy and strategy and specific plans and measures to achieve carbon reduction and decarbonization
	liaison with external organizations	-Engagement with University research groups and eco organisations on plastic pollution and environmental matters -Collaboration with local faith and other eco-promoting organisations on workshops and seminars and environment sensitisation programmes - involvement in the promotion of climate emergency declaration and the cleaner air for Birmingham initiative by the Birmingham council
		-participation in a tree planting drive initiated by the "who is Hussein (an international community organisation led by youths to commemorate the supreme Shia Martyr for the Shia communities and the grandson of the Holy Prophet) -promoting in community nursery school recycling of paper and plastics activities
	The demonstration effect of green initiatives of Khoja and other communities in the UK and other western countries	Notably, Portsmouth, Stanmore, Paris and Toronto, Canada

	Facilitation given by leadership in trialling and implementing green measures	-New mosques in the Khoja communities constructed, e.g. in the Essex community, have incorporated eco-friendly features -Leadership positive and enthusiastic about further environmental initiatives
Work still to be done in the faith communities		-a long term five-year strategy plan to deliver education and awareness both on eco science and faith teachings to all community institutions -periodic Environmental audits - gradual steps to move towards reduction of the carbon footprint of community activities. - developing a five-year environmental plan for the communities, - installation of an industrial dishwasher to facilitate the use of reusable cutlery in communities.
		-the development of global community environmental guidelines on the faith teachings and understandings and integrating it with the emerging body of scientific findings on ecological issues - formulating a programme of doable practical steps to implement these understandings and conclusions as an integral part of the global community practices.
		- establishment at the World Federation level and regional federation levels of an environment archive, data bank and resource centre on environmental developments and initiatives to provide data and resources to the global community.

More details of the above themes and developments can be found in Appendix 3, setting out the fieldwork and in Appendices 4 and 5, setting out the coding exercise and the themes arising in this research.

Findings common to all discussion groups

As regards the process of change, it was not easy. The process of improving long-standing, entrenched practices was complex and difficult in all the communities.

The constraints faced by the faith communities in changing their practices were internal and external. There were internal institutional and organisational constraints and physical constraints relating to premises and facilities within the existing centres, and there were external constraints faced by the communities in changing problematic practices.

The internal barriers concerned obtaining buy-in to the changes from the community members and leadership and the additional financial cost factor. The lack of physical facilities to wash reusable cutlery in most centres constrained the campaign's success to

bring your own cutlery from home. That also prevented the initiative in Stanmore to install appropriate industrial dishwashers at the centre to facilitate utilising reusable cutlery. Over the past several decades, the entrenched practice of using plastic and Styrofoam in place in the communities and the established and accepted procedures developed by volunteers for serving food to congregations based on the entrenched practices were significant impediments to change and challenging to shift.

The external barriers varied between the faith communities. In some communities, namely Stanmore and Birmingham, these external barriers were related to the way the local authorities dealt with plastic, biodegradable and other waste. There was the need to compost biodegradables to retain the green-gain of the utilization of biodegradables. The local authorities were not able to compost biodegradable waste generated by the centres and provide this facility.

The leadership and members in most of the communities favoured a gradual slow transition period to make a change in the practice.

The other barriers faced by some of the communities related to works planned or in the process of being undertaken in the centre premises. These works included ongoing planning for the new mosque construction and undertaking extension and refurbishment work in the community. This was the case in Birmingham, Peterborough and Essex.

The institution and instrumentality of the discussion groups and the process and modality of identifying problematic practices and trialling some green initiatives to address them in the respective communities in consultation with community leadership did produce considerable awareness in the communities and some change in the communities' practices.

As regards the approach for motivating change, the combination of the faith approach (highlighting the faith teachings, including the responsibility of stewardship and obligation of humanity to the Creator); and (b) the science approach highlighting the scientific findings available in mainstream internet, TV, and social media on the impact of the problematic practices on the physical world and natural environment and the harm to fish, birds, other marine creation. This helped to motivate change in the mindset of the groups and the community members and leaders and enabled the trialling of green initiatives in the communities.

The action sequence of trial and error of small practical ideas to trial in the respective community enabled the groups to discover the initiatives that were accepted in the community and those which were not accepted, and those that worked and those that did not work. It led to further discussion within the groups and with leadership and measures of awareness building and sensitisation, and trialling of further initiatives among community members.

The presence of an EC member in the project groups facilitated consultations with the EC leadership. It enabled the groups to obtain views of the leadership and understand the stance and position taken by the leadership concerning the proposed green initiatives.

The consultative process facilitated the formulation of new initiatives by the early adopters and innovators among the groups, which were then brought to the leadership of the community to discuss and agree to the trial. The logistics of implementation of the new ideas had to be negotiated and worked on with the leadership and the volunteers.

Through this trial-and-error modality, the processes and tools were tested and organically accepted or prompted discussion of what might be doable on a larger scale. All communities

were slowly working their way towards a community environmental plan. The small initiatives helped drive it to some extent and facilitated the scaling up of the initiatives.

The group procedure and technique demonstrated how the new ideas and suggestions of participants were introduced and discussed within the group and how the group members reacted and responded to these ideas. It also led to identifying the barriers to making change and seeking ways to address these barriers that emerged within and outside the community to make the change.

The process demonstrated how the early adopters and innovators led the way, with the middle layer following general trends and guidance. There were also the resistors who posed challenges to the change and the late adopters in the communities who eventually moved to change.

As regards the approach of different community leadership, the project demonstrated different approaches of the leadership to the change initiatives. The overarching principle adopted by leadership varied from a determined top-down approach to change, such as in the Portsmouth community, to a slow incremental, small-steps, gradual approach to change, such as in the Leicester community. The leadership in most communities, such as Essex, Leicester and Birmingham, preferred an incremental, gradual approach to change.

Leadership in most communities favoured gradual awareness building and sensitization of community members to obtain their buy-in and seek a gradual non-disruptive transition to the improvement of practice.

As regards the type of approach, namely the bottom-up or top-down approach for bringing about change in the community, the research showed that it is difficult for the bottom-up approach on its own to drive change. Regular and extensive awareness building was carried out in the communities at the grassroots level, and it made the community more aware of environmental pollution and issues. However, in itself, it was not sufficient to make the change in the practices. Thus the top-down driver was needed in tandem to complement the bottom-up approach.

The gender factor in the community and the role of women as change drivers became very prominent and significant in most communities. Women in the faith communities, both as members of the discussion groups and as active volunteers in the community, emerged as enthusiastic and willing to be dynamic change agents and to play an important role in driving the process of improving community practices in relation to the environment. The discussion and initiative, and enthusiasm for green improvements were led and driven mostly by women members of the community groups.

The phenomenon of locating strategic power through service and volunteering was striking and revealing. The research demonstrated the exercise of strategic power through service and volunteering by the community volunteers, both ladies and gents. The data highlighted the key influence of the volunteers in decision-making on matters and in areas affecting their services.

In terms of moving hearts and minds and the role of faith or science, the research showed that in addition to faith teachings, several key factors, including science and current knowledge findings on environment degeneration and pollution and destruction of marine life and climate change and global warming were needed to provide the requisite motivational impetus to making the change in community mindsets.

In the Stanmore Hujjat community at the leadership level, the issues of the extra financial cost of change and the logistics of changing established volunteer serving procedures were seen as key barriers in shifting the community from plastic and Styrofoam cutlery to biodegradables. In addition, the internal obstacles concerned obtaining buy-in from the community members and leadership and financial cost factor (the higher cost of switching to biodegradables or reusable cutlery). There was a clear unwillingness of leadership in some communities to make the change without strongly demonstrated buy-in from the volunteers and the members of the community.

As indicated earlier, the external barriers concerned the process of local authorities in dealing with plastic, biodegradable and other waste and the need to compost biodegradables to retain green gain from the utilization of biodegradables. Stanmore did trial a pilot scheme to switch to biodegradables for one month in Ramadan May 2018, but this was not sustained, and the community reverted to plastic and Styrofoam.

The prompt top-down leadership approach demonstrated in Portsmouth was effective. In the Portsmouth community, the leadership took the prompt top-down approach and went for an immediate top-down change after a brief consultation session with the community members and switched from plastics to reusable cutlery in May Ramadan 2018. The reusable cutlery was donated by members and was stored and washed in the mosque.

The reaching out to external organisations shown by Birmingham was striking and most significant. This approach of Birmingham to reach out to external organisations and interfaith communities, both Muslim and non-Muslims, to bring about greater awareness and sensitisation and discover ways of promoting change in Birmingham and other communities and participating in the activities of the wider communities was exciting and remarkable. It also tried out some small green steps to reduce plastic utilisation in community food events. So their approach was a combination of some small green steps to reduce plastic utilisation combined with working with external agencies and organisations, both faith and academic and eco bodies, and identifying and discovering how to raise awareness and make a change in their own community.

Conclusions

The group discussions identified the problematic practices within the communities and sought to address and improve them. The sequence of the trial-and-error method enabled the formulation and trialling of various green initiatives in the communities. It helped to identify those initiatives that worked and those that did not.

The modality and consultation process of the discussion groups with group members and EC representatives as liaison persons in these groups provided an effective tool of communication and conduit for two-way feedback between the groups and the leadership.

Some communities that could not achieve much improvement within their community because of physical constraints relating to premises reached out to external Muslim, interfaith and environmental and academic organisations to become part of the dialogue and process of bringing change to deal with global warming and climate change in other communities.

The gradual, incremental approach to making change emerged as a favoured way to proceed for most community leadership. Both faith teachings and science findings operating in tandem emerged as effective motivating factors in making change. Both bottom-up and top-down approaches were needed for sustainable change.

The research highlighted the importance of the gender factor and the role of women in communities as acting as eco champions and change drivers in their families and in the communities. The phenomenon of the location and exercise of the strategic power of volunteers in the community affecting decision-making and making a change to practices through volunteering and the provision of the primary critical services to members was clearly manifested in the communities.

Chapter 6 - Analysis of research findings and their Impact on practice

Introduction

In this chapter, I will analyze my research findings and discuss their implications and what these findings mean in the context of my research project and the faith communities covered in this project. I will also highlight what impact these findings have and could have on practice.

Summary of the key findings

The key findings related to the process of change, constraints faced by the communities in making change, the approach and involvement of the community leaders in the change process, the effectiveness of modality of trial and error in trialling the green initiatives in the communities, the motivating factors to drive the change, the approach used for securing community buy-in for the change, the role of the discussion groups in the change process, the consultative process within the groups and with community leadership, the gender factor, the positionality of volunteers as strategic stakeholder section in the communities and the place of faith and science in driving change in the communities.

Detailed analysis of findings

As regards the process of change, the research has shown that it is a complex and challenging endeavour to change and improve longstanding and entrenched practices in the communities. Where do the complexity and difficulty arise from? They arise from many factors. These include the community mindset and its perception and outlook towards environmental issues and the lack of awareness, understanding and realization as to the extensive harm done by the problematic eco practices to planet earth and its human and non-human inhabitants.

The gap in appreciating and understanding the real and full impact of current eco-science findings on climate change and global warming, pollution and the harm done to marine life and other creatures and how they are linked and connected to local community practices was a significant impediment. Likewise, the knowledge gap regarding the faith teachings and understanding the full implications of the faith teachings on the practices in place within the communities was an important factor.

The research sought to explore how to bring about change in the community mindset and perception through the instrumentality of the community discussion groups and through engagement within the discussion groups and with the community members and the community leadership. The community discussion groups identified the key problematic practices to be improved and discussed the possible ways of making the improvements. These solutions were discussed with the community leadership, and green initiatives to be undertaken in the communities were formulated in consultation with leadership and trialled in the community. The key barriers to the implementation and acceptance by the community to change were discovered in the process of these trials, and further possible solutions were discussed to deal with or negotiate around these barriers.

As regards the barriers to change, there were internal and organizational constraints and external constraints encountered in the process of change-making.

The internal constraints included the lack of physical space and facilities in the centres. The lack of facilities to wash reusable cutlery in many of the centres constrained the success of the campaign to bring “your own cutlery” from home. There were also ongoing plans for

new mosque construction, extension, refurbishment, and the works in progress in the community centre. This was being undertaken in Birmingham, Peterborough, and Essex.

In the Essex community, the fact that the community did not have its own centre and was in the process of building a purpose-built centre meant that it had to use local halls as a temporary venue until the construction of its own centre was done. It had sold its small mosque and was in the midst of constructing a new purpose-built mosque and centre with sufficient facilities for the increased membership of 150 persons. This situation constrained them from trialling some permanent green initiatives.

Similarly, In the Birmingham community, the planned demolition and rebuilding of the current centre also posed a constraint to planning long-term initiatives. In the Stanmore Hujjat community, the space constraints of existing premises did not facilitate the planning of long-term solutions, such as a large industrial dishwasher for the community and its implementation.

The organizational constraints were the unwillingness of leadership in some communities to start spearheading change-making without first seeing demonstrated strong buy-in from the volunteers and community members. Because of the entrenched practice and systemic procedures of using plastic and Styrofoam in the communities over the past several decades, a long lead time was needed to change the mindset of the leadership, volunteers and community members. No urgency was demonstrated by the leadership and members in most communities to make an immediate change in the practice. In the Stanmore Hujjat community at the leadership level, the issue of the extra financial cost of change and the logistics of changing established volunteer serving procedures and protocols was a barrier in shifting the community from plastic and Styrofoam cutlery to biodegradables.

The external barriers related to the process of dealing with plastic, biodegradables and other waste by local authorities and the need to compost biodegradables to retain green gain of the utilization of biodegradables, which facility in the latter case, was not available. In some areas like Birmingham, plastic waste was incinerated. The lack of composting facilities in local councils for the treatment and recycling of used biodegradables was a key impediment to gaining acceptance of using biodegradables. The higher financial cost of switching to eco-friendly alternatives such as biodegradables or reusable cutlery was a further disincentive.

The Stanmore discussion group lobbied for a mini-pilot scheme as a trial to initiate this shift from plastics during Ramadan food events in 2018 in the community. It raised the necessary funding for the extra cost of this pilot trial by raising private donations from members of the community. The leadership wanted to see a demonstration of support from the general membership for this trial. The project green team obtained the extra funding from community members directly through crowdfunding, short talks making appeals to the community and individual approaches to donors themselves, and the switch was trialled and implemented in the month of Ramadan 2017. However, this pilot scheme to switch to biodegradables lasted only one month. It was not sustained, and the community reverted to plastic and Styrofoam.

When it came to the question of continuing to use biodegradables all year round as proposed by the green team, the lack of green gain because of the non-composting of the disposed of used biodegradable cutlery by the local council and its treatment as non-recyclables and general waste together with the extra cost of biodegradables was raised as a key issue in some communities. Thus the absence of composting services by the local authority became a major external barrier. This led to the general perception among the community members

that the extra cost of biodegradable amounting to ten thousand pounds per annum was a waste of community funds if the biodegradable cutlery could not be composted and the budgetary approval for such expenditure from the community in its general meeting was not obtained.

The result was that the biodegradable solution trial was discredited in the Hujjat community's general viewpoint and seen as a failure. In light of this outcome, the community leadership reverted to the previous practice of using plastic cutlery for its food events. This showed that some of the above constraints heavily impacted leadership decision-making and the prioritization of measures and practices in most communities.

The role of discussion groups in community change-making was pivotal. The discussion groups played a crucial role in the community change-making process. The discussion groups began their discussions by identifying problematic community practices affecting the environment and began an action sequence of trial and error of small practical ideas to trial in the respective community to make the change. The project groups discussed and agreed on these initiatives. After the formulation of the initiatives, the project groups lobbied the leadership in the communities to agree to try out these practical ideas and initiatives in the community.

This process was facilitated by the presence of an EC member in most of the project groups. Thus the early adopters and innovators among the groups suggested new initiatives and changes to the practices. These ideas and initiatives were brought to the leadership of the community to discuss and agree to the trial. The process and logistics of the new ideas had to be negotiated and worked on with the leadership and volunteers.

This process was repeated in the various communities, with several initiatives trialled on a small scale. These initiatives included bringing your own cups, cutlery, and plates, washing up facilities and donating reusable plates or cups (e.g. the Portsmouth community donated reusable, sustainable tableware but on a smaller scale). In addition, where the donated reusable cutlery was not enough for the community, it was supplemented by biodegradable cutlery provided by the mosque.

The other ideas trialled were recycling waste, separating food waste and composting. Through this trial-and-error modality, the processes and tools were tested and organically accepted or prompted discussion of what might be doable on a larger scale. All communities were slowly working their way towards some kind of community environmental plan. The small initiatives helped drive it to some extent and facilitated the scaling up of the initiatives.

The procedure and technique demonstrated how the new ideas and suggestions of participants were discussed and tested within the group and how the group members reacted and responded to these ideas. It also led to identifying the barriers to changing the practices and seeking ways to address these barriers that emerged within and outside the community.

The process demonstrated how the early adopters and innovators led the way, with the middle layer following general trends and guidance. There were also the resisters who posed challenges to the change and the late adopters in the communities who eventually moved to change in the end.

The trial-and-error process within the discussion groups led to a gradual progression from trying small steps and practical ideas to make initial changes within the communities to

thinking of higher-level strategies for the communities. The small initial steps helped to drive the upward moves and facilitated the scaling up of the initiatives.

The availability of the lines of communication and consultation with the EC leadership through the presence of their representative and liaison person in the discussion groups provided the essential avenues for receiving quick EC feedback on the discussion group's thinking and proposals which helped the groups to moderate their proposals to what was acceptable to the leadership.

The approach of leadership was a significant determinant. The project demonstrated different approaches of leadership to change initiatives. The overarching principle adopted by leadership varied from a determined top-down approach in Portsmouth to change to a cautious, slow incremental small steps gradual approach to change in other communities.

There was a preference for securing buy-in from community members by introducing a sustainable and incremental programme of initiatives, eventually ending up with the holistic solution of an industrial dishwasher. There was the conscious acknowledgement of the leadership of risk avoidance and avoiding community resistance at the grassroots level and ensuring their acceptance and buy-in in the incremental programme.

Being an institution subject to a regular periodic community election process maintaining the general support of the members for the leadership community plans was a vital objective of the leadership. Accordingly, the grassroots level support for any changes in the practices was of utmost importance to the leadership. The impact of this approach for most communities was that any major change in practice would need to factor in the lead time for securing buy-in from members and would therefore be a slow incremental process.

As an exception to the general change approach of leadership outlined above, the top-down approach was tried and implemented by the leadership in the small community in Portsmouth. It was accepted by the volunteers and the community members there. It should be noted that community leadership took this step after extensive discussions on switching from plastics had taken place in the discussion group meetings in which representatives of the EC had participated.

The leadership in Portsmouth went for an immediate top-down change after a brief consultation session with the community members present in a mosque function on immediately switching from plastics to reusable cutlery from May Ramadan 2018. The members present agreed to the initiative and were requested to bring their own ceramic cutlery from home that would be stored and washed in the mosque. The community was supportive of this measure, and it was implemented smoothly.

In Stanmore, the top-down approach was tried in respect of two specific initiatives. The first one was the trial of a pilot scheme of switching to biodegradable during Ramadan in 2018. This was an instance of a top-down initiative at the request of the discussion group. This measure worked well and was accepted during the month of the pilot trial. It, however, hit the hurdle of lack of composting of the biodegradables by the local council and higher costs and was discredited as a waste of community funds in the eyes of the community members, and the community reverted to plastic cutlery.

The second one was an introduction in the community by EC of a voluntary cup levy of 10p proposed by the discussion group (green team) in August 2019 for the community. This was agreed upon by EC and announced promptly to the community in a Friday sermon without prior consultation with the community members. Some members accepted this measure,

but it was met with sharp resistance from some prominent members and was immediately withdrawn by the leadership.

In a subsequent attempt by the Hujjat discussion group to get a community resolution to stop using plastics after a transition period of six months at a community Annual General Meeting of members (AGM) held in June 2019, issues were raised by the volunteers and members about the community not having practicable workable alternatives to plastics. In the face of a lack of support from the membership present, the resolution was withdrawn as suggested by the EC on the understanding that EC would work with the discussion group (green team) to agree on workable solutions to stop plastics. EC did attempt to develop a large-scale biodegradable cutlery solution, but that was not accepted by the discussion group. It now wished to move from disposables such as biodegradables to reusables with an industrial dishwashing machine solution.

The dishwasher option was not viable previously because of space constraints in existing premises. There is now a planned extension and refurbishment building work to the existing mosque premises, which, when completed, will make the dishwasher option feasible and workable.

By contrast, in a smaller community in Peterborough, the discussion group coordinator lobbied for and proposed an AGM resolution for purchase by the community of a small industrial-size dishwasher costing £1500 to wash reusable cutlery at the centre, which was passed and approved by the membership present at that meeting.

These instances show how the different communities reacted differently to the top-down and bottom-up approaches based on the circumstances of the communities.

The leadership in many communities, such as Essex and Birmingham, preferred an incremental, gradual approach to change. In the Leicester community, the leadership considered but refused to implement the cup levy as an option. In its words, it was not going to go for the 'slam dunk' on this proposed initiative considering the expected negative attitude and resistance of the community to this measure. It wanted to go for a holistic but sustainable and incremental programme of initiatives ranging from stopping disposables, using reusable cutlery and eventually going for the industrial dishwasher solution for the community.

In the Essex community, as it was using a temporary local community hall facility as its temporary centre, it confined itself to small doable measures such as BYO, reducing food waste and general waste and reducing the use of disposable plastic cutlery.

In the Birmingham community, it had similar constraints. Its planned mosque reconstruction project involved demolishing its existing centre and rebuilding on the same land a bigger purpose-built mosque and centre. So, it confined itself to measures such as BYO and awareness-building measures and engaging with mosques and organizations outside the community.

In the Peterborough community, there were ongoing extension works to the centre during the fieldwork period. The extension works project (Al Qayim project) continued during the 2020 lockdown period and is now completed and ready for use. The new building incorporates several good environmental features in the new building to minimize its carbon footprint. These features include eco-friendly and natural lighting, insulation of the premises

The new Peterborough leadership elected into office in September 2019 was quite positive and enthusiastic about further environmental initiatives. It had plans to introduce several environmental measures during its term. These included growing trees and greenery, setting up a team to formulate a strategy for stopping the use of plastic cutlery, looking into the plan to purchase and install an eco-friendly industrial washing machine in the mosque, and serving healthy nyaz with less meat and more vegetarian/vegan meals.

The discussion group in Peterborough did achieve leadership approval to switch from plastic cutlery to stainless steel cutlery for early morning prayers and the youth Baligha group food events under the previous leadership. In September 2019, the local coordinator of the green team was able to gain community support through a general meeting resolution of community members in an AGM to approve the purchase and installation of an industrial dishwasher and its budgeted cost.

In all of these communities, one major driving factor was the mindset of the leadership. When elections resulted in a new Executive Committee comprising younger members put in office with fresh ideas and vision for the community, this resulted in a supportive approach to environmental issues, as shown in Leicester and Peterborough communities. Also, the presence of young women in the leadership committees resulted in a proactive and facilitative role in green initiatives, as demonstrated in the Birmingham community.

In a large community with many diverse stakeholders within the community structure as in the case of Stanmore, the leadership was more risk-averse and reluctant to support fast major changes that would upset the majority of the membership and tended to support more awareness building and incremental, gradual approach. This was the case despite the presence of young professionals and women in the Executive Committee. The distinguishing factor here was the approach and attitude of the leadership to environmental matters and the prioritization between green initiatives in comparison to urgent, immediate communal matters and concerns facing it.

What was the learning as regards the type of approach to be used for securing community buy-in, whether it should be a bottom-up or top-down approach, was an interesting learning point for me.

In terms of the approach to bringing about change in the community, the research showed that it was difficult to use the bottom-up approach on its own to drive the change. Regular and extensive awareness building was carried out in the communities at the grassroots level, and it made the community more aware of environmental pollution and green issues. However, it was not sufficient by itself to make the change. The top-down approach was also needed to make change happen.

One instance indicating the inability of the grassroots bottom-up approach to make quantum change was seen when in the Stanmore community, the green team proposed a resolution for discussion and adoption in the community's constitutional Annual General Meeting AGM to stop the use of plastics in the community within a transition period of six months. The attendees at the AGM represented the microcosm of the community, and many issues were raised at the meeting about practicable and workable alternatives to the use of plastic cutlery by volunteers and other members. It was not clear in the face of the evident lack of support that the resolution would, in fact, pass.

Therefore, at the request of the EC, the proposed resolution was withdrawn on the understanding that the EC would work with the green team to find workable solutions to the environmental concern resulting from the use of plastic cutlery. The proposed resolution

at Stanmore AGM to stop plastic cutlery created intense discussions on the logistics of moving from plastic to reusable among community members. Whilst the resolution was withdrawn, on the positive side, the discussion at the general meeting gave impetus to some volunteers to help the green team and to suggest proposals in the discussion group for a dishwasher and reusables as well as alternatives for or washing reusables in the mosque on site and washing off-site using hired personnel.

By contrast, in a much smaller community in Peterborough (with 750 members) where the green team coordinator lobbied for and proposed a resolution for purchase by the community of a small size industrial dishwasher costing £1500, it was accepted and passed by the membership and the budget for its purchase was approved in annual general meeting in September 2019.

The experience of an imposed voluntary plastic cup levy in the Stanmore Hujjat community showed different reactions to the news announced in the mosque. Some members of the community were quite happy to hear an announcement in the mosque that a voluntary levy of 10 pence per plastic cutlery would be imposed for the use of plastic cutlery in the mosque from a specified date. Others were opposed to it and resisted the move.

As regards the extent of support of community members at the grassroots level to some green initiatives, this could be assessed in the effect and impact of the “bring your own cutlery (BYO)” initiative introduced in several communities during Ramadan daily iftar events. In the Stanmore Hujjat community, with an average daily congregation of up to 1200 persons, there was limited buy-in among the gents (less than 10) and higher buy-in among ladies and children (up to 40 to 50) in daily Ramadan iftar events. In the Essex community, with a daily up to 100-person congregation, there was a buy-in of 40 persons. In Birmingham, with a daily average attendance of 500 people, the buy-in was about 40. Many persons purchased the reusable cutleries that were on sale by the green teams in the communities, but the majority kept them at home and did not bring them to the mosque for iftar.

I will now talk about what the research did demonstrate about the motivational factors for driving change, i.e. how to move hearts and minds and what the role of faith or science was in this process.

All the communities in my research project were faith communities. They were Khoja Shia Ithnaashery communities and shared common beliefs of the Shia Muslim religious group. Shared faith beliefs were a common denominator in the communities. All shared the view that Islam was a comprehensive religion covering all aspects of our lives.

Accordingly, the fact that Islam has teachings covering environmental concerns and issues facing the global society today was also part of the professed faith beliefs. Therefore, the issue that could have arisen for members was to know and understand what these teachings were precisely and to realize what they meant in today’s world, how they should be interpreted in modern living lifestyle conditions and how they should be applied in the communal faith practices.

My initial thought was that commonly held faith beliefs could be a sufficient motivator to change the environmental practice in our faith communities. I started with the assumption that if these faith teachings were fully explained and understood, the faith community would feel motivated to follow them in practice.

I found in my research that this notion of faith teachings on the environment was a catalyst to getting the green discussion started and the group members being interested in this subject area in the first instance. This was demonstrated in the establishment of the

discussion groups in the research communities and the enthusiasm among participants to learn more about the faith teachings and considerations. In addition, the notion of faith in creation did arouse a lot of passion and enthusiasm in the groups.

However, when it came to changing entrenched practices in the communities, the discussion groups found, and the research showed that the faith consideration was insufficient in itself to overcome the resistance to change and the practical barriers in the process of change-making among the general members of the community.

Firstly, members had differing levels of knowledge and understanding of the faith aspects of the environment. The problems of entrenched mindset and inertia to change in status quo, extra financial costs, logistics of dealing with alternatives to existing plastic cutlery utilization, and the “wicked problem” ramifications to any solutions sought and found were creating considerable practical and systemic barriers to change. The practicality of implementing the envisioned changes created tension and resistance in the communities. Those who appreciated the faith aspects better felt that the challenges of improving environmental practices had to be addressed holistically and systemically.

The research showed that members in discussion groups resorted to science and current knowledge findings on environment degeneration and pollution and destruction of marine life and climate change, and global warming to provide further and stronger motivation to make the change in community mindsets. Thus, the altruistic consideration of faith in doing good for Allah’s creation of the environment had to be strengthened by the motivation of harm to the human race and non-human beings. Thus, both these factors, faith and science, were used in tandem jointly to motivate the change. Both the concepts of becoming eco champions and being good Muslim practitioners of faith beliefs were harnessed as change agents.

Religious belief provided different levels of motivation to different people depending on how much active practice of faith was generally present in their lives. Some participants used religious ideas to prompt change (e.g., in Islam, the faith communities believe in general that it takes 40 days of repeated action to become a habit and ultimately a trait, and organise a campaign around this concept). On the other hand, some participants did not make this direct link and desired to adopt more environmentally sound practices prompted more immediately by non-religious issues and ethical considerations (e.g. Sir David Attenborough’s speech). But all these motivation levels faced the common problem and obstacle of funding, logistics and resistance to change.

Being a faith community, faith and religious beliefs were key anchors binding the communities. Discussing and knowing about faith teachings on the environment was a clear catalyst and spur for catching the interest and attention of group members and many community members. However, when it came to changing community practices, faith consideration was not by itself able to overcome resistance to change and overcome the practical and logistical barriers to the change. The members of the groups relied increasingly on science and current knowledge findings on environment degeneration, climate change and global warming and pollution and harm and destruction of marine and human life to motivate change.

Some community members did not find it easy to link their practices at the local level to the global phenomenon of the destruction of the environment and harm to global society at large. Awareness-raising measures were needed to use both faith and science, giving clarity of science linkages to the members and faith teachings on environmental obligations and responsibilities of the faithful.

The gender factor in the community at play and the role of women as change drivers were most noteworthy and interesting to observe. The ladies in the communities already played an active and key role in community activities and providing community services. These services include arranging ladies' religious programmes, teaching and volunteering in communal daily evening or weekend schools, participating in the last rites of female deceased in washing and shrouding of bodies, arrangements of weddings ceremonies, lady reciters of majlis and lectures, organizing matchmaking in the communities.

They demonstrated readiness to take on the role of eco champions and eco supporters in the discussion groups and as community volunteers. The research showed that the discussion, initiative, and enthusiasm for green improvements were, in many instances, led and driven by women as mothers with their children and as community volunteers and members. They thus acted as essential stakeholders and dynamic change agents in the communities.

This was the role the ladies in the community had played in East Africa, and they continued to play this role upon the migration of the communities to the UK and the west. This could explain the reason for the ready adoption by ladies of the new role of eco champions and eco supporters in the UK communities.

From the data, it emerged that women in the faith communities, both as members of the discussion groups and as active volunteers in the community, played an important role in driving the process of improving community practices in relation to the environment. The ladies' members of the green teams were able to promote and drive some green initiatives on the ladies' side, which did not involve major changes requiring EC funding approval.

This research showed that overall, the discussion and initiative and enthusiasm for green improvements was, to a large extent, led and driven by women members of the community groups. They were young women and professionals, including teachers in the community nursery and madrasahs and members of the executive committee in the communities. In the Birmingham community, they participated in interfaith activities with neighbouring mosques and interfaith organisations and local universities in the subject area of environmental protection and safeguarding.

Locating strategic power through service and volunteering was another interesting phenomenon to uncover and discover. The research demonstrated the critical position of community volunteers as exercising tacit de facto power and influence in the community functions and activities by serving, helping, volunteering in the wide range of activities of the community and doing things hands-on for community members in its functions. They were strategic stakeholders upon whom the leadership and the community totally relied for the effective and smooth operations and functioning of the communities.

The volunteers had a recognized special status in the community. A unique uniform identified and distinguished them. In addition, they had their own organizational management structure with the head of volunteers and several sub-heads of different activities spheres under the head. This organizational structure was replicated in the ladies' section also.

This phenomenon raised the interesting notion of distributed power within the community. Where did power in the community lie? By helping, volunteering, and doing things in the community, the volunteers were exercising tacit de facto power. This was truly visible and evident power through service, which was demonstrated in every function of the mosque in the community.

The research highlighted the critical influence of the volunteers. The leadership in the Stanmore community kept on reminding and advising the green team to keep in touch with the community volunteers, particularly the kitchen and main hall volunteers both in the ladies' section and gents' section and to secure their acceptance and buy-in on the green initiatives being discussed and to be tried out in the community.

This was also the stance and approach of the leadership in the other communities. The green team in Stanmore, therefore, coopted, included and brought in three key representative volunteers into the green WhatsApp discussions group as it was very difficult to schedule and hold structured face-to-face meetings with the entire volunteering team. This helped to inform the green team of the views and sentiments of the volunteers and explain the logistical issues that need to be considered and taken into account.

I shall now turn to the implication of the findings and the question of what worked and what did not work and why?

There is now more awareness in the faith communities of the environmental impact of the community practices among the discussion groups, the leadership, the volunteers and the members. This resulted from conducting this collaborative inquiry in the communities and the discussions and various awareness-raising measures and green initiatives trialled by the community project groups.

The easy access to audio-visual and digital information on plastic pollution, climate change and global warming available generally on the internet in the mainstream and social media and in the public domain, together with a better and deeper understanding and appreciation of the faith teachings on the environment has facilitated the awareness building process in the communities.

There is a deeper appreciation of the moral obligations and responsibilities derived from the faith teachings and traditions for safeguarding the environment and minimizing the adverse environmental impact of community practices. Various sermons from the pulpit by community Imams promoted and facilitated by the discussion groups and the leadership have helped this process of understanding.

There was, however, no immediate urgency felt by the communities at large at the grassroots level of the need to comply with and be faithful to the Islamic traditions on environmental protection in terms of personal faith and moral obligations and to therefore change and cease eco-unfriendly practices in terms of community practices at a personal level.

Many factors affected the attitude of the community members at the grassroots and executive decision-making levels. These included the financial cost of change, the inconvenience factor of the proposed change, and the necessity to carry on activities with status quo modality since the proposed change was seen as too difficult to implement, especially by the community volunteers servicing the community functions.

At the leadership level, there was, in most communities, an evident reluctance to exercise executive decision-making power by the leadership to impose change without securing active buy-in from the community volunteers and community members for fear of alienating them and causing resistance to the change. The evolved procedures and protocols for managing and running the faith communities made such top-down imposition impractical. There was recognition that the community volunteers needed to be closely involved and engaged in the change process for the change to be sustainable and work in practice.

Conclusion

The context and location of the research project located within the Khoja faith communities with special characteristics presented an interesting phenomenon. These included the provision of regular sacred food offerings, the role of women in the communities, the strategic position of volunteers in the community and the nurturing role of the community in relation to its members. These were exciting dimensions to understand and narrate and reflect on.

The consensual decision-making process and the symbiotic relationship of leadership and members were compelling features of the community to observe and see working in practice. Providing the communities through this research project and the instrumentality of discussion groups an effective catalyst to consider and express the enthusiastic and passionate flood of ideas and practical suggestions to deal with and improve community practices was a great learning process for me. I found analysing the gender factor in the form of women as change drivers a fascinating discovery of social agency working in the community.

The key issue for me was how we move the hearts and minds, and souls of the communities. Would faith suffice, or do we need to understand the problems in the context of science and present-day knowledge as well to harness faith to move the hearts and souls of people?

The end learning for me was that faith remains in the heart and soul but science or knowledge scientific technologies acting through the mind opens the doors of operationalising the practice of faith teachings in modern living.

The discussion groups in the five communities were carrying on working enthusiastically and continuing to operate and were seeking to make a change in the practices of the communities. They have understood and accepted that longer lead times will be necessary for inducing change, and change will take place incrementally in small steps over time. There was now growing recognition that it is difficult to change quickly entrenched practices within the faith communities at the grassroots level and a strategic change process has to be adopted. Until 2020 the covid lockdown restrictions and closure of mosques have created a hiatus in all the green activities in the faith communities.

The research showed that a two-prong hybrid approach was needed to make a change in the faith communities. There was a need for both a bottom-up approach coupled with a top-down approach for change-making within the communities.

External pressures from international environmental organisations and governmental regulatory and executive measures in many countries have helped this process of change. These measures, including the banning of plastic bags and the proposed governmental steps to ban plastic cutlery and promote eco-friendly steps in the UK, have helped to provide further additional stimulus to make the communities think seriously about transitioning to plastic-free community practices and developing their environmental outlook and mindset and improving their practices.

Chapter 7 - Conclusions

Introduction

Reflecting on the mindset and thinking of the faith communities and evaluating and analysing their practices as an insider researcher as well as an outsider researcher was a fascinating introspective, and enlightening research journey for me. This was so especially because the communities were ones I belonged to. There were many features and characteristics of the communities that I had not previously given much thought to and had really taken for granted as part of everyday Khoja community life and organisation, having been brought up and raised in the community from childhood to adulthood. This research gave me the space and juxtaposition to see and perceive these features with insight and clarity and to reflect on them.

My learning in this research project

Engaging in collaborative inquiry in the communities was an immense learning experience for me and led to a better and deeper understanding of my own communities. It gave me a better understanding of how the community functions, social and communal change process actually works in real-life situations and what challenges it presents to the researcher, both insider and outsider, the participants, the members and the leadership of communities. I saw first-hand the impact of gender participation and gender response to the change process. I saw the critical positionality of the volunteers as key stakeholders and influencers in the community.

The learning in this collaborative inquiry was quite distinct from the learning I had obtained earlier from the Heythrop project. The collaborative inquiry complemented the insights I had gained earlier in the Heythrop project on possible approaches to addressing the emerging issues of concern in modern society, such as how we regard faith and creation in our lives and can bring faith into our decision-making matrix. Through this collaborative inquiry, I gained more new insights and saw and experienced and lived through the real-life situations of change-making in the faith communities.

I began to appreciate the complexity of the engagement process and how it required patience, facilitation, negotiation, peace-making, conflict solving and nurturing at times and instances of encountering hurdles, difficulties, bottlenecks and disagreements between various players involved. I went through the tensions and anxieties of modalities of ensuring that the project aims do remain in focus and on track in the midst of these challenges. I began to understand how power positionality and power play affect the process of change in the communities. I understood the extent of the role and impact of faith and the role of science as motivational factors and drivers in the community change process.

The key issue for me was how we move the hearts and minds, and souls of the communities. Would faith suffice, or do we need to understand the problems in the context of science and present-day knowledge to harness faith to move the hearts and souls of people? The end result for me was that faith remains in the heart and soul, but science or knowledge of scientific technologies acting through the mind opens the doors of operationalizing the practice of faith teachings in modern living.

The specific area of learning for me in this research project included examining the role of faith as a motivator. My starting premise in this project, which turned out to be a rather simplistic notion, was that faith alone in itself was a sufficient motivator for inducing and driving change in the faith communities. I thought that once the members had better understood what the faith teachings expected them to do in terms of safeguarding the

environment, the members would adjust their practices accordingly in synchronisation with the faith teachings. I, therefore, regarded education and explanation of faith teachings to be an important driving force to bring about change. But I found out that though faith teachings were acknowledged as very integral and important in the belief system, they were not sufficient in themselves without further enabling facilitation to move hearts and minds to make the change.

Among the various motivating factors that might have driven the change process, namely faith, profit or harm to oneself or purely altruistic considerations, it seemed clear that in making a choice between maintaining current lifestyles or making immediate sacrifices by changing lifestyles for the sake of environment the former consideration of maintaining status quo and self-interest prevailed strongly.

I discovered that it was a complex matter to change entrenched practices. I found that it was not simple to change an entrenched practice such as stopping the use of Styrofoam and plastic cutlery in community food events. Entrenched practices developed over a long period of time, and the established systems of delivery of community services developed on the basis of the entrenched practice that normalised, accepted and tolerated the production of plastic waste in the food events on the grounds of convenience and speed of delivery of services were not easy to change.

I discovered that improving community environmental practices was a complex and multi-faceted problem. It required a deep understanding of how the community works and functions and makes decisions about sustainable change in community practices. It required educating, sensitisation and awareness building in the community of the reasons for making change and the harm caused by continuing the problematic practices. It involved mobilising and articulating faith and science-based justification for seeking the changes.

I found that any attempt to impose change by top-down decree by community leaders was not sustainable and was strongly resisted by many of the membership (e.g. the imposition of a 10 pence cup levy to deter people from using plastic cups announced in a Friday sermon to the community caused adverse negative reaction and anger among some in one community).

In the case of stopping the utilisation of plastic cutlery, the change in the practice in the communities was turning out to be like a wicked problem where each solution identified and formulated raised a further issue to be addressed and solved. One example of this was the alternative of using higher-cost compostable, biodegradable cutlery to replace single-use plastic cutlery. Since the local councils did not have facilities or resources to compost this biodegradable cutlery and they incinerated such waste together with plastic waste to produce energy for the national grid, it was not easy to secure buy-in for the switch to more expensive biodegradables in the communities. To many members, the switch did not make sense and seemed to be a waste of money since nature was not being served better using biodegradables, and no green gains were being made.

I discovered the constraints and impediments in trying to make the change. The higher costs and disruption of established service delivery systems posed considerable barriers. When it became clear that holistic solutions like installing large dishwashers and using reusable cutlery would solve the problem of throwaway plastic and biodegradable cutlery waste at that stage, other issues such as logistic space constraints at the centres emerged to block and prevent pursuing this holistic solution immediately.

I developed a holistic understanding of eco concerns at the communal and global levels. The community members initially did not link the production and generation of plastic waste with damage to oceans and harm to marine life and pollution because they did not know or think about and think through the entire chain of the waste disposal system cycle. When the mainstream and social media showed the consequences of plastic pollution in documentaries, films, and YouTube clips, the linkage of the use of throwaway plastic with environmental degradation became evident and clearer to many in the communities. Then the issues which arose then revolved around what difference would any action at the local community level make to the global problem, what alternatives were feasible, what would be the cost and service delivery timing implications of the change and would the extra cost be acceptable to the community.

Achieving the aims of the research project

My aim in this research was to make a difference in the environmental practices of the Khoja Shia Ithnaashery faith communities and to assist in initiating and bringing about change in their practices. Considering the project outcomes arising out of this research project, I feel I have achieved the research aims in terms of both my own personal learning and community learning and initiating the change process of improving environmental practices in the communities.

The mindset of the community leaders and volunteers and the members are now more attuned to and receptive to reducing the carbon footprint of community activities and developing long-term environmental policy and strategy and specific plans and measures to achieve carbon reduction and decarbonization and responding to global warming and climate change within community context as compared to the mindset at the start of the project. As explained earlier, many improvements in community practices have been effected in the communities in the course of this project.

I sought to understand and discover a workable formula for change in the communities. I found that several factors were vital to making change. These were scientific knowledge and findings, public awareness building in communities, engagement with leadership and volunteers, engagement within discussion groups, the strategy of many cycles of trials of green initiatives and learning from their outcomes. These were important and key to the process of community engagement.

The formulae of change I have drawn from this research are as follows. The elements of the formulae comprised (a) the change agents being drawn from the faith community concerned, (b) the involvement of the community leaders and volunteers in the change-making process, (c) securing buy-in from the donors of the community, (d) awareness building and education and information on scientific studies linking the problematic practices to environmental harm locally and globally (e) seeking motivation from both science and faith teachings and using both bottom-up consensus building approach and top-down policy forming approach namely a hybrid approach. This approach could be utilized in and exported to other similarly structured Khoja Shia faith communities.

Conclusion

There were many positive outcomes of the research. The research did help influence change in the mindsets, perspectives and attitudes towards nature, the physical environment and animals and birds and fish and other creatures, sea life and oceans. The faith teachings helped to inculcate perceiving the environment as a bounty from the Lord Creator and empathy towards nature's nurturing activities, e.g., growing food and gardening. The

volunteers and women in the faith communities played a key role as change agents as members of the discussion groups and in seeking to facilitate the green initiatives trialled by the discussion groups in the faith communities.

The establishment of permanent environmental boards, as recommended by me, within the communities to assist leadership in further developing the ecological agenda and formulating environmental policy and assisting in their implementation in the communities would facilitate the process of improvements of practices.

These environmental boards could further explore and consider whether the preparation and availability of communal guidelines on better understanding the faith teachings and formulating doable practical steps to implementing the faith teachings taking due account of the emerging body of scientific findings on environmental issues, would assist in raising greater awareness at the grassroots level on both the eco science and eco-theology of environmental issues.

In my view, this process of change-making in the communities undertaken in this research project needs long lead times and is a continuing process. It will require ongoing reiterative cycles of trialling green initiatives and arriving at workable solutions. For the process to be deep, transformational, and sustainable, it requires sustained efforts of awareness raising at grassroots and leadership levels and reiterative cycles of formulating and trialling green pilot initiatives in the communities to discover and arrive at acceptable and workable solutions.

This should lead to the generation of further knowledge and experience in addressing environmental concerns within the communities.

I have set out in chapter 8 (recommendations) my suggestions and recommendations for further study, research work and efforts in this area to be undertaken in the Khoja faith communities. This will assist the communities in developing more profound knowledge about eco science and eco-theology and sharing their various experiences of dealing with community mindsets and developing different ways of addressing environmental concerns both within the Khoja Shia global communal network and with other communities worldwide and enhancing the environmental agenda in the Khoja faith communities.

I have highlighted the importance of eco faith and eco science in this thesis. As stated earlier, the answer for me is that both are needed together, working in tandem. For me, faith remains in the heart and soul, but science or knowledge of scientific technologies acting through the mind opens the doors of operationalizing the practice of faith teachings in modern living. This is also borne out by several injunctions in Holy Quran that state that beliefs should be accompanied by good deeds.

Further follow-up work planned by me

To me, this research study, thesis work and DProf research are truly major milestones and accomplishments. I see it also as leading to further work in making the change in Khoja faith communities. As I have mentioned in this Chapter, one of the follow-up works I would like to plan after the completion of this doctoral programme is the write-up and publication of a book for the wider audience of my research experience in the faith communities. This would further analyse and elaborate on how the modality of the collaborative inquiry with the community groups worked to initiate and introduce change in the faith communities, the role of faith and science as key influencing factors in the change process and the implications of the project group discussions and their voices and views and the outcomes of the research for the global Khoja faith community.

I would also like to discuss and explore in my book how this collaborative inquiry modality could be tailored for use by the global Khoja Shia communities and the Khoja regional and world communal organizations to evaluate their activities and programmes, and practices in various other areas and make a change in those areas.

Chapter 8 - Recommendations

Introduction

The thinking of the community leaders and members is now more attuned to and receptive to reducing the carbon footprint of community activities and developing long-term environmental policy and strategy and specific plans and measures to achieve carbon reduction and respond to climate change within the community context. This is significant compared to the mindset at the start of the project. As explained earlier, many improvements in the practices have been adopted by the communities during this project.

However, in my view, this process of change-making in the communities needs long lead times and is a continuing process. For the process to be deep, transformational and sustainable, it requires sustained efforts of awareness raising at grassroots levels and reiterative cycles of formulating and trialling green pilot initiatives in the communities to discover and arrive at acceptable and workable solutions.

I have set out in this Chapter some suggestions and recommendations for further work and efforts in this area to be undertaken in the Khoja faith communities. This will assist the communities in sharing knowledge about eco science and eco-theology and their various experiences of addressing environmental concerns within the Khoja Shia global communal network and also with other communities.

As regards the envisaged impacts on the practice of the communities, I would like to see my research project having specific long-term impacts on the thinking and practice of Khoja Shia faith communities worldwide. These are (a) to make the faith communities more aware of the adverse effects of modern lifestyles on the physical environment and the need to conserve, preserve and protect the environment and to persuade them to factor in environmental considerations in their practice and decision-making in daily life; (b) to bring about change in the attitude of the faith communities towards environmental issues and promote more environment-friendly thinking and practice in the communities; (c) to highlight to the faith communities the benefits of the Islamic faith perspective integrated with the scientific approach and provide a higher level of motivation to engage in measures to protect and conserve the environment.

Recommendations

Based on the experience of this research and learning from the outcome of this collaborative inquiry in the six faith communities, I would recommend the following measures to be taken by the communities. These recommendations and suggestions are aimed at the different levels of the community hierarchy, namely the individual community leadership level and the community regional and world level organizations and leadership level.

At the community regional and world level organizations and leadership level, the regional and global umbrella organizations, namely the World Federation and COEJ, should, in conjunction with their member faith communities, initiate the development of environmental guidelines setting out the global community's shared understanding of the faith teachings and integrating it with the emerging body of scientific findings on ecological issues and based on these faith understandings and science findings formulating a programme of doable practical steps to implement these understandings and conclusions as an integral part of the global community practices.

The regional and world level bodies should establish at the World Federation level or regional federation levels an environment archive, data bank and resource centre on

environmental developments and initiatives taken by their member communities and provide data and resources to the community. They should promote the building up of expertise and competence in the key strategic and technical areas of the environment, such as the recycling and waste disposal options for their members and consider the feasibility of establishing community plastic and other recycling plants at suitable locations. They should encourage the network of member communities' leadership to develop holistic environmental policies and strategic plans for their respective communities. They should facilitate and coordinate meetings of representatives of ecological boards of member communities to exchange information, discuss, hold seminars and brainstorm on environmental issues.

At the individual community leadership level, the communities should establish permanent environmental or ecological boards within the communities to assist their leadership in developing the environmental agenda and formulating environmental policy and plans and improvements in the community practices and helping in their actualization and implementation in the communities.

The communities should carry out periodic holistic environmental audits of their centres regarding carbon footprint, decarbonization studies, water and energy conservation, insulation, etc., arising from community functions and activities. They should develop holistic environmental policies and strategic plans for their communities. The community leadership should encourage religious scholars at their centres to give sermons and lectures highlighting religious and spiritual dimensions of good and sound environmental practices to motivate change in the membership.

The communities should encourage their community institutions such as Montessori and nursery schools, Madrassah, senior citizen bodies and community sports bodies to promote good environmental practices in their activities. The communities should hold green plastic-free food events (including the Iftar event in Ramadan with innovative short talks on the environment); discourage and reduce utilization of plastics and Styrofoam in the centre; provide reusable cutlery for use by members in food and tea events. They should establish industrial dishwasher facilities in the centre, stop food Asraf and food waste in centres in their food functions, and provide filtered drinking water outlets and facilities where members can refill their reusable drinking water bottles.

The communities should consider encouraging initiatives to stitch and sell cloth bags (prepared by members of the community) in the community centre to help the switch from the use of plastic to cloth bags. The communities should incorporate in their governing documents, and communal mission statements a commitment to environmental policy, such as "a commitment to a green and eco-friendly approach to all its activities."

I intend to continue to further research and study ways of bringing about change in the environmental mindset and practices of the entire network of the Khoja communities in the post-Covid period. In addition, I intend to develop a programme of research on the impact of faith teachings and scientific findings on community practices and how the gap between belief and practice could be addressed. On the basis of this further research programme, I intend to put my thoughts and views and findings by publishing articles and, eventually, a book on this subject.

I would like to share insights gained based on my research experience and develop ideas on the utilization of the modality of collaborative inquiry in faith communities with the community groups of potential change agents in the faith communities and evaluate further how such a research approach could be tailored to evaluate work being done in the various other areas in the communities. This could include the evaluation and improvement of key

activities and services being provided by the communities at the regional and world organizational level.

Conclusion

Action at both the individual community level, as well as the regional and World Federation level leadership in pursuing the above environmental agenda and programme, would, in my view, assist greatly in making a difference in the mindset and thinking of the communities and in bringing about a sustained and transformational change in the environmental practices.

Makbul Rahim

5 January 2023

Appendices to the Thesis

Appendices to Thesis

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Appendix 1

Mind Map of the knowledge landscape

Appendix 1

Mind Map of the knowledge landscape

Complex Knowledge Landscape



Several different domains of knowledge



Environmental issues - global and local initiatives - religious considerations - political and national interests and considerations

Environmental issues



Global concerns on climate change and eco damage - local and global impacts of problematic local practices

Global and local initiatives



initiatives taken at global level - initiatives taken at local communities level - science perspectives - moral and ethical perspectives - linkage of local practices and global effect and impact

Local eco practices and religious considerations



Problematic eco practices in local faith communities - Moral and ethical dimensions - faith teachings on environment - impact of faith teachings in faith communities

Epistemic roots



Science - global politics - national interest - faith - institutional structure and practices - organisational change - process and outcome of making changes -

Environmental Issues



Science findings and studies
Global concerns on climate change and eco damage and pollution
Global politics and local initiatives



Global politics
National interests
Impact on economy
Initiatives taken at global level



Moral and ethical dimensions
Religious considerations
Faith teachings
Faith communities
impact of faith teachings in faith communities
Institutional organisational structure and practices
Problematic practices of faith communities
Initiatives taken at local faith communities level
Process and outcome of making changes

Appendix 2

A brief history of the UK Khoja Shia Communities

Brief history of Birmingham Community (BM)

The establishment of the KSIMC Community in Birmingham: There were hardly any known Khoja families settled in Birmingham before 1970. After the exodus of Asians from Uganda in August 1972, many families who were brought to the UK were accommodated in temporary camps in England and various permanent resettlement arrangements were coordinated from there. Most Khoja families took it upon themselves to make their own resettlement inquiries and to decide where to live. Amongst the principal areas favoured for settlement were cities such as London, Birmingham and Peterborough because of good work prospects and the presence of diverse ethnic communities there. Several Khoja families came to live in Birmingham from the end of 1972 onwards.

At first, the religious gatherings in Birmingham were held at people's houses. The religious ceremonies and functions for the Muslim holy months of Muharram, Safar and Ramadan were conducted by the experienced and knowledgeable laypersons in the Khoja community. They conducted religious sermons (majlis, nawhas, marthiyas), recitations, prayers, and supplications in these gatherings. There has been a long-standing tradition of lay priests (called zakir or muallim) in the Khoja community. These were persons who learnt religious recitations from their childhood and youth days from their elders and carried out the sermons and recitations in the absence of seminary (hawza) qualified priests during the migration of the Khoja community from India to Zanzibar and other locations in East Africa. The presence of such zakirs has meant that the community has always had some experienced lay persons at hand to carry out these religious functions as needed.

With the number of Khoja families in Birmingham increasing, the community members could no longer be accommodated in people's homes for these religious functions. So, in 1973 a house in Chesterton Road was rented to serve as a centre for about two years and was mainly used for gents' gatherings, whereas the ladies still gathered in homes of some prominent members in Birmingham with ample sitting and living room spaces in their houses.

Those were the early days of the birth of a community and Jamaat and are still remembered by many older people with nostalgia and cherished memories. In 1975, with a further increase in community members, a bigger property was purchased for the community to serve as its centre. This bigger property on Forest Road was a detached house, with the upstairs section used for ladies' gatherings and the downstairs portion used for the gents. This centre served well until 1980. On Sundays and weekdays, this centre was also used as a Madrasah for teaching mainly Qur'an and religious knowledge, principles and beliefs (Diniyat).

During the major religious days and events when the Forest Road property could not accommodate the large congregation, various halls in Birmingham were hired for the gatherings. In 1977, the community had grown large enough that a purpose-built centre was being seriously considered. The present Clifton Road

property construction then started in 1980.

In October 1981, the Imambarghah (halls) buildings were completed. At the same time, the foundation stone for the mosque was laid. The construction of the Mosque was finished in June 1982. Work was also started for the construction of the flats and offices on top of the Imambarghah. These would accommodate the caretaker, transit visitors and also the Jamaat offices. The work finished in June 1982. There was then an interlude break of about five years before further works necessitated due to the growing demands of the Jamaat were carried out. This included an extension of the ladies' Imambarghah and a hall for the nursery undertaken in Nov 1987, with the foundation stone laid. This was completed in June 1988.

There then followed a period of the purchases of properties around Clifton Road as part of the overall long-term planning for the provision of the community infrastructure and investment purposes. In 1989 a property on Moseley Road was purchased, which now houses the Abbasi Flats. In 1992, the land at the rear of the KSIMC centre, the Cave building, was acquired.

The building on Runcord Road, which attaches to the Syeda Zainab complex, was purchased in 1995. The KSIM (Cave) building itself which was immediately opposite the present centre, was bought in 1996. The Syeda Zainab construction project began in Oct 1986, and the opening ceremony occurred in March 1998.

Engagement with the community

The Birmingham community, under the name the KSIMC Community of Birmingham, comprises about 700 members. The community leadership requested to be included in this project. I set up a discussion group for the community with the help of a local coordinator (and member of the Executive Committee) drawn from the community. The group also established a WhatsApp group of discussion group members administered by the local group coordinator.

I held my first meeting with the group with six participants from the community on 20 March 2018. The response of the group was positive, and they were willing to be change agents to improve community environmental practices. This meeting was also attended by two external observers and invitees, namely two geologist researchers from the University of Birmingham who were also interested in engaging with the Birmingham community on environmental matters as part of the University's "Encompass project".

This engagement of the Birmingham community with Birmingham University led to my meeting on 17 July 2018 and subsequent interactions with the University to discuss and facilitate their Encompass project to engage with local communities on environmental and earth issues. This interaction also led to the Birmingham community engaging with Birmingham University's partner Earthwatch Institute to promote and deliver learning about sustainable development and organise outdoor activities for community children aged 6-11 years. The focus of these activities was to learn about the natural world and discover planet earth and the actions to protect it. I facilitated the Earthwatch outdoor activities by

introducing these activities to the Birmingham discussion group and the community institutions, especially the community madrassa.

I gave a talk to the seniors' ladies and gents in the Birmingham community in 2018, which was organised by the discussion group in collaboration with the seniors. I spoke on my research project and the various green initiatives being considered by the discussion group for their information and suggested ways in which the community seniors could support the Birmingham group's green activities.

The green measures initiated in Ramadan 2018 by the community included sensitisation and awareness talks and a "bring your own reusable cutlery" drive for food events. In January 2019, the seniors' section members were given reusable plates and cups to use for their food and drink events. It was found that the seniors did not actually use this reusable cutlery because of the difficulty of washing it in the mosque. There were insufficient washing facilities in the main halls, and the issue of crowding and congestion near the kitchen serving area where the few sinks and washing taps were located. The eventual plan was to install a dishwasher in the newly constructed mosque.

Since 2018 the community has been seeking to develop a major project to reconstruct a new purpose-built Mosque and centre on the existing property. As of December 2020, the construction of the ritual washing facility for deceased persons had been completed. Accordingly, the various main buildings, such as the main meeting halls for ladies and gents, the prayer room and the kitchen and serving areas, were still in use for the various mosque activities.

The discussion group had extensive interactions with various outside communities on environmental matters. These included the participation of the Birmingham community in an intrafaith day-long workshop and seminar to explore Islam and environment issues with neighbouring interfaith communities such as Sultan Bahu Trust and Paigham-e- Islam Trust in Birmingham on 29 September 2018 and networking with Eco volunteers from IFEEES and Eco Islam on environmental issues. There was an ongoing engagement between the Birmingham group and Sultan Bahu Trust's environmental projects. There was engagement with IFEEES, which produced a guide and leaflet as to how to organise a plastic-free and eco-friendly iftar.

The Birmingham community had, before 2017, established a committee of social responsibility (CRS), a sub-committee of the Jamaat Executive Committee that engaged well with the discussion group to help it to promote green initiatives in the mosque and interaction with external environmental and interfaith bodies.

There were extensive discussions within CRS on the pros and cons of various options, namely reusable cutlery or biodegradable cutlery or recyclable cutlery in the mosque. There were regular campaigns in the mosque to ask community members to "bring your own reusable cutlery" during Ramadan and Muharram 2018 and 2019. This included giving prizes to children who brought their own plates and mugs to the mosque and raffle tickets with prizes to all who brought their own spoons to food events in the mosque.

There were also some small steps taken by mosque volunteers to stop the use of plastic serving spoons and small plastic wrapping bags for distributing “fateha” (blessed snacks) after religious prayer programmes. A litter clean-up programme in the premises and courtyard areas of Birmingham community mosque with community children and volunteers was undertaken in Birmingham in August 2018.

The discussion group has been vibrant with an enthusiastic discussion about green measures, and there is a lot of interaction of the discussion group with external environmental bodies and interfaith communities to develop green measures in the mosques. The discussion group has now been adopted within the Jamaat structure and re-named “CSR group” by the Executive committee.

The Essex MSI community

Brief history

The Essex Khoja Shia faith community is the MSI (Muslim Shia Ithnaashery) Jamaat of Essex. Jamaat is an Urdu word for community. The community started as a small group of Khoja and Pakistani families living in and around several towns in Essex, such as Chelmsford, Romford, Basildon, and Southend. Some of these families were owners of businesses and professionals working in and around Essex, like pharmacists and doctors, and others who worked in the professional and services fields had offices in London and used to commute regularly to London.

The proximity of London and the railway and road transport facilities and availability of affordable and more spacious residential properties, and the scenic rural green belt setting of Essex made it quite an attractive place for the community members to choose to live in. There was no religious centre in Essex. The residing Shia families had to travel over an hour to London (to the Khoja centre in Hammersmith in West London or to the Pakistani centre in Balham in South London, where the Shia communities had established religious centres for their religious programmes and to perform religious worship and rituals.

Following the example of Haydery South London and Hujjat Stanmore communities, In 1978, the families living in Essex also sought to facilitate the community meeting locally for religious programmes as it was not always convenient to travel to the Hammersmith centre in London. They first set up an informal arrangement to meet in turns in each other’s homes for religious functions. Then as members in Essex grew, the community began to hire a local hall in 1989 for the events and eventually decided to purchase a building to serve as their centre and place of worship in Chelmsford town centre. This centre was formally opened in 1990.

This new centre which was rather small, was found to be no longer sufficient for the various needs of the growing community. Therefore in 2010, the Essex Jamaat decided to sell the existing centre and instead construct a purpose-built larger centre on land which was available and on sale not far from the old centre but still near the town centre and railway and bus station. This project which has taken over ten years to materialise was completed in the last quarter of 2021.

During this long period, pending the completion of the new centre, the community has been meeting in hired halls and rooms in the Galleywood Heritage Centre in Ghallywood outside Chelmsford, and they held all their social and religious programmes there.

This new centre has been named the Ali Reza Islamic centre (after the eighth holy Shia Imam) and provides four times more floor place, more and better prayer and ablution facilities for ladies and gents and a spacious purpose-built hall for an onsite madrassah for the community students and children.

There are also a lift and other facilities for the elderly and disabled and a well-equipped kitchen with a full range of heavy-duty facilities and appliances, and a Ghusal Khana, a place for the washing and shrouding rites facilities for the deceased. It also has spacious accommodation for the resident priest and guest scholars and lecturers, full conference facilities with the latest AV facilities and most importantly, more car parking facilities.

This project was supported by the World Federation and COEJ, which has been helping the fundraising effort among their member communities to raise funding for the £600,000 capital construction project. However, the building project was delayed beyond the 2020 target date due to the emergence of Covid 19 epidemic issues, but it has now been completed and is in use.

The composition of this community is not exclusively Khoja members from East Africa. It consists of Khoja Shia from East Africa and many non-Khoja Shia members from India and Pakistan who are fully integrated with the community. Some Khoja members who started in Essex in the early days of the 1980s have, in due course, eventually moved to live in London in Stanmore due to work-related or community and family-related reasons.

Engagement with community

The Essex community known as the Muslim Shia IthnaaAshery (MSI) Jamaat of Essex comprises 150 members. The Essex environment discussion group began with nine participants (five men and four women), and it formed a WhatsApp group of participants run by a local coordinator from the community. I held an informal meeting on 11 February 2017, attended by six persons, and a meeting on 10 March 2018, attended by seven participants. The feedback and response of the attendees were enthusiastic and positive, and there was a good discussion of community environmental practices. The attendees were willing to be change agents and try to improve environmental practices. They signed up for the discussion group.

The Community had a small centre in the commercial area of Chelmsford. As that centre was insufficient for its projected needs, the community decided to sell that property and construct a new purpose-built centre in the same commercial area on more extensive land acquired in the area, and the existing Centre was sold in 2016. The Community has since been undertaking this new mosque project for the past four years. The new Mosque has now been completed and has been in use by the community since September 2021. It has space and facilities in the new building to install an industrial dishwasher to enable the use and washing of reusable cutlery in its food events.

Previously it was holding all its functions and programmes at a temporary location hired to the Community by the local authority in the Galleywood Heritage Centre. The temporary location had constituted a significant constraint on the introduction of some of the key green initiatives, such as the installation of a dishwasher at the venue or sufficient kitchen facilities for washing reusable cutlery. However, notwithstanding these constraints posed by the temporary place, some green measures were initiated in the community.

The feedback and response of the group continued to be enthusiastic and positive, and the members of the group were willing to be change agents and improve environmental practices. The key problematic practices identified for improvement were the extensive use of Styrofoam and plastic cutlery and the generation and throwing of food waste in the garbage during community food events. There was regular discussion on the WhatsApp group on green issues. In Chelmsford, the main food events were held during the month of holy Ramadan and some major commemorations in the month of Muharram and some religious and social ceremonies during other months. Otherwise, during the weekly Thursday evening prayers, only tea and snacks were served.

The green measures initiated in Ramadan (May) 2018 by the group and community leaders comprised a “bring your own reusable cutlery” drive (encouraging members to bring their own reusable cutlery that would be taken back home and washed there), reducing food waste (in terms of uneaten left over food and collecting inedible food waste for collection in local council food waste bins where such waste is burnt for energy generation), reducing Styrofoam cutlery utilisation and reduction of general waste and reducing the number of rubbish bags used to throw general trash by staking of plates and cups. The community encouraged members to bring their own reusable cutlery that would be taken back home and washed there. Members were also regularly reminded to reduce food wastage in terms of uneaten left-over food.

I held one meeting on 20 June 2019 with the group and community members (attended by about 12 persons) to discuss the various green initiatives that had been introduced in Essex and the other faith communities covered by the project and feedback from the community members. I also took that opportunity to highlight the various eco-friendly facilities similar to those found in Portsmouth Al Mahdi Centre and the Cambridge green mosque that could be considered for the new centre being constructed.

One further initiative that I suggested to the group in December 2019 was to consider thinking about and making a five-year environmental plan for the community similar to the plan being developed by the green team in the Stanmore community. This idea was welcomed by the group. The main issue being considered is how to formulate and tailor the plan according to the specific needs and achievable outcomes in the smaller Chelmsford community over the five years.

There has been ongoing intermittent discussion on environmental issues between members of the group WhatsApp forum, which is continuing. I suggested to the group that the community EC should consider setting up the group as a permanent environment group within the community administration structure to further the environmental concerns and improve community practices.

Leicester Khoja Shia Community

Brief history

The Leicester Community, a registered charity in the UK, is named the Muslim Khoja Shia Ithnaashery community (MKSIC), Leicester. The community started with the arrival of a few families from Dar-es-salaam, Tanzania, in 1965. The community grew with the arrival of nine to ten more Khoja Shia Ithnaashery families from Tanzania in 1971 and after August 1972 with the expulsion of Indians from Uganda and their eventual settlement in Leicester.

Until 1974 the community did not have a mosque or centre, and religious events and functions were held in the residences of several families taking turns to host the religious ceremonies at their homes. Digital modes such as pre-recorded audio and video tapes by religious scholars were used and played for the lectures and to perform religious functions as the community did not have a resident priest.

In 1974 one property in Leicester was rented by the community to commemorate Muharram and religious ceremonies. In that year, the families decided to buy a property for community use as an Imambargah (literally a house of Imam but also meaning community centre) and a property was purchased in 1974. With that purchase, the Leicester community Jamaat was then formally formed.

During 1974 - 1982 regular events and functions were held at the community centre. The first resident priest qualified from the religious seminaries in Iraq was appointed for the community, and the community madressa was started to teach religious education to community youths and children.

With the growth of the membership in the Jamaat during 1983 - 1998, a larger property was needed. The property named 'Husseini Mosque' was then purchased with the funding raised locally and from World Federation and other Khoja Jamaats and organisations. In 1990 a property was also bought to serve as accommodation for the resident priest.

In order to cater for a growing community, the Leicester Jamaat, in 1998, decided to purchase land to build a larger purpose-built mosque. The Husseini Building Project, under a dedicated Building Committee of the community, was put into action. In September 2005, the site of the present community mosque was purchased, and the construction of the Masjid and Imambargah, named 'Masjid-Al-Husayn', commenced. This new mosque, called 'Masjid-Al-Husayn' was officially opened on 14th January 2007.

During 2007 - 2013 the Jamaat continued to grow and currently has about 150 families attending the Masjid and Imambargah regularly. The Al Zahra Building has been renovated to provide ritual washing and shrouding facilities for the deceased, and there are two halls capable of accommodating more than 200 people.

Masjid Al Husayn has hosted various conferences for World Federation and COEJ and continues to be the preferred venue for future community conferences primarily due to the 'state-of-the-art' AV facilities, including live streaming and visual aids. The Jamaat more recently introduced an Induction Loop Hearing Aid System, which caters to members who are hard of hearing.

During 2013 - 2015 as the Jamaat grew, its EC upgraded the use of Information Technology in the community administration. The Jamaat has computerised records, a regularly updated website and an online portal for members to log in to for information, including a members directory.

Recently the Jamaat has purchased two (2) properties for “buy to let” purposes. The Jamaat’s objective over the coming years is to increase its property portfolio and continue making investments, ultimately allowing the Jamaat to become self-sufficient.

Engagement with the community

The community under the name of the Muslim Khoja Shia Ithnaashery community (MKSIC) of Leicester comprises 600 members. I had intended the Leicester community to be my pilot project and to hold my first meeting there, but for logistic reasons, I was not able to arrange a meeting with the Leicester community representatives until 15 December 2017. I held one meeting of two hours on 15 December 2017, attended by eight participants, including a visitor from the Birmingham community. The visitor was instrumental in the interest of Birmingham leadership and community to be part of the research project. The response of the group was positive, and there was a willingness to initiate measures to change the practice and thinking of the community members.

The group under the name Environmental Health group has 10 participants (six men and four women), and it formed a WhatsApp group of participants run by the local coordinator from the community.

The key initiative selected was to reduce the use of Styrofoam and plastic cutlery in the community centre. The green measures initiated in Ramadan 2018 by the community at the instance of the discussion group comprised a “bring your own reusable cutlery” drive in the mosque for all tea and food events. There was one debate on environmental issues organised by the community in the mosque during Ramadan in May 2018. The feedback from these initiatives was that it was taking some time to gain support among members for green measures, and there was a need for continuing efforts by the discussion group to sensitise the community members.

Regular discussions on environmental issues between members on the group WhatsApp forum were held until August 2019. However, in October 2019, when I realised that the interaction had reduced to almost nil and the group interest was ebbing, I reminded the group of the vital role of the group as an essential body in the research process and as change agents in the community. I also had a one-to-one telephone and WhatsApp conversations with the local coordinator and some participants.

I was told that the local coordinator was no longer the secretary in the newly elected EC (though the assistant secretary in the new EC was still a member of the group), and there was no direct communication between the group coordinator and EC. There was a feeling among discussion group members of a complete disconnect between the group members and the EC and a considerable lack of clarity about the status and role of the group and its relationship with the EC.

I, therefore, spoke to the new vice president of the community in November 2019 and, as requested by him, sent him a briefing note for the new EC on the research project, the purpose of the discussion group and its role in the DProf research project and the importance of environmental issues and the opportunity for the community and discussion group to develop green initiatives and strategies.

In November 2019, I sent the group the proposal for a dishwasher developed in the Stanmore group and a draft preliminary five-year plan being developed by the Stanmore green team. These ideas had the effect of re-motivating the group, and the feedback from the group was positive. The group was excited by these new ideas, and, at the request of the coordinator, the group members started suggesting various ideas and began developing proposals to put to EC on green measures. These ideas were consolidated by the EC member within the group (who started to act as coordinator and were sent by him in December 2019 to the EC, which was meeting during that week.

The proposals sent by the group to the EC comprised the following: 1) to look into steel plates and an industrial dishwasher; (2) Makbul Rahim should be invited to deliver a lecture on his DProf research findings, with the topic being “challenges facing humanity on the environmental crisis and how Islam can provide solutions to environmental issues”; (3) to consider the possibility of imposing fifty pence cup and plate levy, as part of a “bring your own cutlery” drive (4) to sell sets of reusable cutlery to community members to bring to the mosque; (5) to institute awareness classes on the environment in community madrasa in collaboration with the Public and Community Engagement Team of the community; (6) to institute an education programme to all sections of the community to raise awareness on climate change and environmental protection.

The new EC considered these proposals and responded positively as follows:

It affirmed that the Leicester Community recognises the importance of Environmental Health and it sees it as “our social and religious responsibility” to promote this area positively. It has a plan to improve our Environmental Health footprint, but it saw that plan as being a “phased approach and not “slam dunk”” with the implementation of “paitive” (sic palliative or palatable steps) that will deliver more strategic and sustainable adoption across the community.

As regards proposal (1), it affirmed that having reusable cups/plates and a dishwasher is its objective. It had looked into the cost (of the machine and logistics of housing it) and needed to determine a budget and plan for 2020. In the immediate term, it stated that it is considering taking action to move to paper, which is a step forward from plastic. It affirmed that it would also continue to promote “bring your own” and provide facilities/incentives to encourage adoption (in its view, the current uptake on BYO was low). It was looking into and purchasing suitable recyclable cups from the supplier. The previously ordered recyclable ones for the mosque were found to be too thin, so the single cup would get hot and scald the fingers and so needed to be doubled up, which increased the cost.

As regards proposal (3), regarding my talk to the community, it was approved. It stated that “The Management Committee would like to support the Environmental Health Leicester group to promote and encourage attendance to

this event, which is an excellent form of tabligh, and our gratitude to Makbul Rahim for agreeing to visit us and deliver the talk and discussion to raise awareness in this area.” It stated that all the community stakeholders, including Ladies subcommittee, little angels, Behloul, and Madrasah should be asked to support this event when it is scheduled. This talk which was being scheduled for April 2020 around or before Ramadan, was shelved in view of Covid restrictions.

As regards the levy idea, the EC regarded that idea as controversial. Instead, it indicated its support to the Environmental Health Leicester group to work on and coordinate a Raffle system with prizes for raffle winners for those bringing their own cutlery to trial during Shahr (month) Ramadhan 2020, which would be the next occasion and opportunity of regular food events being held in the mosque. It approved the organising of classes by the Leicester group for an Education program for all sections of the community in liaison with PACE (Public and Community Engagement Team) and Madrasah directly.

Its overall position and sentiments were that “these proposals are a testament of Islamic values and principles. An excellent form of tabligh and inshaAllah as a collective community we can move forward towards a greater environmental community. We praise the Environmental Health Leicester group and want to further support these activities. We look forward to supporting it through the approved items inshaAllah.”

The above positive response manifested a tremendous commitment and buy-in by the top decision-making body of the community into the project and a possible blueprint for future environmental initiatives in the Leicester community. This was a newly elected EC who took office in mid-2019. The response of the new EC to the proposals indicated that the Leicester Community had recognised the importance of environmental health and the Group, and it saw it as its social and religious responsibility to promote this area positively.

It also indicates that the EC had, since taking office been deliberating on the approach and strategy to bring about improvements in the community. It stated that it “has a plan to improve our Environmental Health footprint” but it saw that plan as being “phased approach” and not “slam dunk” with implementation of “paitive” (palliative or palatable steps) that will deliver more strategic and sustainable adoption across the community. This suggests to me that the discussions in the environment group since December 2017 and its attempts to sensitise the community to the need to be environmentally conscious and improve its practices during 2018-2019 have had an impact on the thinking of the community and the decision-makers in it.

It also highlighted the faith perspective's role in helping drive this change. It also pointed to the effectiveness of the combined use of both a bottom-up grassroots approach and a top-down approach in bringing about change. The presence of two EC members in the discussion group, including the local coordinator, who was also the secretary of the EC during 2017-2019, was an important factor that helped this change process.

Peterborough community

Brief history of the community

The Peterborough Muslim Hussein Khoja Shia Ithnaashery faith community comprises 750 members. Peterborough, originally a small market town, changed to an industrial centre with the railway line opening from London to York, which passed through the Peterborough railway terminal. The UK Government designated the town for development as a new Town in 1967. This designation led to the city's growth and the availability of new rental and owner-occupied housing, access to attractive housing schemes and jobs, shopping centres and public facilities. Private services sector companies from London and other cities were also encouraged to relocate to Peterborough.

The community, many of whom came from Uganda after the expulsion of Asians by its president Iddi Amin in 1972, were encouraged by Government to settle in Peterborough and move from major congested cities like London and Birmingham. The community members found it easy to get jobs in the industries and factories producing industrial machinery established in the city. For example, during 1975-1985, a substantial number of the community members worked in Perkins Engines, which manufactured Perkin diesel engines.

Community religious functions were initially held in the homes of the few families who had settled in the city. As the community grew larger with the influx of more members from London and other cities in 1975, the community leaders purchased and established the community religious centre on farmland. The community religious functions were held in the small barn and horses' stables, the only usable brick building on the land. In 1978 the first purpose-built mosque for the Khoja Shia community in Europe was constructed in Peterborough on the same land.

By 1980 the community had grown to over 100 families settled in the city. As the community continued to increase in numbers, the space in the mosque and community centre was found to be insufficient. As a result, the community initiated a Hussein building project in 1989/90 to enlarge and extend the old community halls to provide more sitting and praying space. This project also included constructing a new washing room (Ghusal Khana, a purpose-built room with adequate plumbing and drainage and shower facilities) for the ritual washing of deceased bodies and ablution and washroom facilities for members.

During 1991-1992 further construction work was carried out. The further construction plan included the completion of work in the Mosque, the extension and renovation of the Community meeting hall (Imambargha) and the completion of the first-floor extension to accommodate twelve Madrasah classrooms, a playgroup, a library, an activity group for youths and overflow for the main halls.

However, the community continued to grow, leading to a growing call for more space for community members during all major functions and for more Madrasah classrooms and facilities. The community, therefore, decided to purchase several plots of land around and adjacent to the mosque and community centre to provide more facilities and potential for further growth. This latest construction project was named the Al-Qaaem Project, and extensive planning and fundraising were carried out. (<http://mksipeterborough.org/about-us/history/>).

Al-Qaaem Project aims to look to the future for the whole community, focusing on the younger and future generations whilst at the same time being cognizant of the needs of the elderly. The project's vision is to create a centre to serve the

needs of our community over the next 50 years, providing the environment and facilities to sustain the faith of our members. The construction project was completed in 2021.

Engaging with the community

The community under the name Muslim Husseini Khoja Shia Ithnaashery community comprises 750 members. One major constraining factor for the community has been that the community has, during the past eight years, been in the midst of a mosque extension/construction project with serious time overruns and performance issues that have been quite disruptive for carrying out regular mosque functions, and this matter has been taking up all the attention of the EC, the elected voluntary governing body.

With the help of my contacts in the community, I organised and held one informal meeting on 19 December 2016, coordinated by a young professional (and my relative) in Peterborough. This meeting was attended by six persons (one woman and five men). During that meeting, I briefed the potential participants on the project and the proposed modus operandi of meetings of the discussion group and the participants' inputs envisaged by me for the project.

Following this meeting, I found that it was very difficult to interest and recruit participants to the discussion group or to hold another informal discussion meeting with potential participants. In addition, one attendee at the December 2016 meeting stated that she felt that the WhatsApp forum for online discussions for a prolonged period would be burdensome for her.

After several attempts and having given a talk on the project and green issues at the main community event finally, a small discussion group of five members (one of whom was a member of the EC committee of the community) was set up in March 2018 by the new local coordinator (two previous coordinators having left the position due to work commitments). The group formed a WhatsApp group of participants run by the local coordinator, and we held one meeting with five recruited participants on 13 March 2018.

When finally, the discussion group was established in the Peterborough community under a new local coordinator who was a professional person (teacher) who had newly settled in Peterborough, one began to see evidence of change in thinking taking place in some sections of the community. His persistence in championing green trial measures in the Sunday Fajr prayers and Baligha club (club for female youths of the community) events and his initiative to purchase stainless steel cutlery with private donations for the events had a dramatic demonstration effect in the community.

In April 2018, the group discussed a BYO cutlery campaign using reusable mugs brought from home by the members and stopping using Styrofoam cups in the mosque. The proposal was submitted in May 2018 to EC for consideration, but the EC did not implement the idea.

The community has not introduced any green measures in the main congregation so far. Some discussions have taken place in a meeting of the governing admin committee (EC) to draw their attention to the need for green initiatives in the centre. The community still uses plastic and Styrofoam as its default cutlery in the centre.

At my suggestion, the discussion group coordinator attended the Ecofaith Networks meeting for faith communities as an observer in Peterborough held on 10 July 2018. The meeting discussed the environmental issues and plans for Peterborough. The conversation was quite technical, buildings related, and the group coordinator raised the question of how Mosques could help in engaging in environmental issues. The attendees took this point positively. On 2 June 2019, I posted on the group a memo on the religious arguments and the theological and faith, and moral aspects of our duty towards the environment. I also posted a memo on the plastic waste scientific arguments prepared by a Stanmore green team member.

On 6 June 2019, the coordinator proposed a trial measure to reduce plastic waste in the community by using 20 stainless steel plates and cups at the cost of £50-£75 for use in regular weekly sessions of the community Baligha club and early morning fajr breakfast on Sundays.

The group coordinator liaised with the organisers of the Baligha Club for the next club session on 7 July 2019. As the youths attending the Baligha Club were 30 girls, the group coordinator obtained 20 more stainless steel plates and offered to wash the used plates at the end of the sessions. In the July Baligha club session, a mixture of metal plates and some paper plates for kids who wanted to take away food home were utilised, and some metal plates were used for serving the food. All were washed by the club organisers and kept in the mosque kitchen. In that session, no polystyrene or plastic plates were used, and the initiative saved 38 throwaway plastic plates.

As regards the Fajr prayer on Sunday held on 14 July 2019, except for the cups, the session was plastic-free with reusable cutlery comprising seventy plates and three serving bowls being used. The group was looking into sourcing suitable teacups.

The coordinator posted the following message relating to the event “As an update today we tried the bowls (picture below), and we are now nearly plastic free in Fajr weekend (only pending item is cups because we need to source suitable ones and this is potentially the biggest area). Previously leftover food was being thrown away with plastic plates, but the new arrangements were that people are encouraged to finish “what you put in your plate or take responsibility for it”.

With the initiative's success in Fajr prayers, the coordinator of the group presented a proposal to extend the stainless-steel cutlery to weekly seniors' meetings. In terms of logistics, the seniors' program is attended by approximately 25 people, so there was a need for a larger number of plates. On 20 July 2019, the metal plates were trialled in the seniors' food event, and 25 plates were used on the day. The trial was a success with the seniors, and the group then considered sourcing up to 80 big plates and 20 small ones. The group began to explore the possibility of funding 1000 plates for a full main hall congregation food event.

On 10 August 2019, the group coordinator had a meeting with the EC, and the outcome was that “an official go-ahead has now been given on both Baligha club and Fajr programme.” Following the meeting, he submitted “a basic financial analysis to the MC for the full niyaz, which includes the investment in an

industrial dishwasher, which washes 540 plates per hour. The basic analysis confirmed that the investment would be self-paying in 2 years, and definitely was worthwhile for consideration and in the best interest of the Jamaat. Hurdles remain minor and can be overcome. The requirement for seniors programmes was approximately 80 plates, they were used successfully on both occasions. However, the MC did not come back with an official go-ahead.”

Although there has been some discussion at the EC level to consider further green measures, so far, the green actions undertaken regularly relate to Baligha club and Fajr prayers at weekends. Despite success in trialling metal plates in the seniors’ programme, EC has not given the go-ahead for that initiative nor for the purchase of an industrial dishwasher or extension of metal plates to a full main hall congregation food event requiring financial investment in a much larger number (about 900) of metal cutlery.

The group coordinator’s initiative to trial the metal plates in the seniors’ event also was a success. He was willing to extend the trial to the full congregation food event involving the purchase of 540 plates and an industrial dishwasher and would have gone ahead with that project if the EC had approved the scheme. However, the EC restricted their approval to the weekend Fajr prayer and Baligha club events and did not approve of the extension of the scheme to the seniors or the main congregation. The scheme had grassroots support but not the top-down support, and so it was restrained. The fact that the mosque construction project was still ongoing and there were related financial considerations related to the purchase of an industrial dishwasher may have been a constraining factor.

On 13 August 2019, I attended a seniors event for all UK seniors organisations and met the president of the community in Peterborough during the event. I spoke to him about possible eco measures that he should consider, and at his request, I sent him a list of possible ideas and eco initiatives for consideration of the community in the context of the community’s new mosque construction project. The list included an Industrial dishwasher in the centre and all requisite space and other facilities for same; plumbing facilities for the dishwasher; Ways of recycling, purifying and reuse of wudhu water; Solar panels to use and generate electricity; Sensors for lighting in the centre; Car permit system for each family to avoid multiple cars from the same household to reduce carbon imprint; Encouraging Carpooling in the community; Stopping purchase of Styrofoam and plastic cutlery for centre food events; Bring-your-own cutlery campaign; Switching to stainless steel or biodegradable cutlery; Planting trees and establishing gardens in the centre and in the wider community.

In the PE community, the ongoing extension works were a constraint to long-term solutions. However, the green team did achieve switching from plastic cutlery to stainless steel cutlery for early morning prayers food events and the youth Baligha group food events. In September 2019, the new local coordinator of the green team was able to gain community support through a general meeting resolution of community members in an AGM to approve the purchase and installation of an industrial dishwasher and the budget for the expense, which was a milestone for the community. The new leadership elected into office in September 2019 is positive and enthusiastic about further environmental initiatives.

The extension work project called Al Qayim building extension project had been continuing during the 2020 lockdown period to date and has now been completed and is in use by the community. The new building incorporates several environmental features in the new building to minimize its carbon footprint.

The eco features include LED lights that emit more light but absorb less electricity; LED lights that have been placed on dimmer switches so that they can be controlled in order to use less electricity; strategically placed skylights and windows so that every room has at least one skylight, and sufficient windows in order to maximise natural light within the room making it unnecessary to switch on the lights on during daylight hours; air conditioning and heating Units that have been designed to absorb less electricity and provide adequate cool or warm air thus reducing the need for radiators that run on mosque boilers; Low Wattage LED bulbs are used throughout the centre reducing energy utilisation; insulation of all walls, flooring and ceilings (where possible) to keep the heat in; control of lighting (and other electrical items such as televisions and screens) restricted to designated mosque volunteers who have been provided with an iPad.

The new PE president has plans to introduce further environmental measures during his term. These include (a) having flower pots around the courtyard of mosque premises that the community Nursery children and Madrasah students can take care of and look after, thus inculcating caring for greenery and nature; (b) planting small trees around the entrances of the mosque; (c) setting up of a youth team of eco volunteers to look into the solution to use of plastic cutlery namely use of bio-degradable utensils, use of reusable and washable utensils, promoting bring your own cutlery drive BYO; (d) look into the plan to purchase and install an eco-friendly industrial washing machine in the mosque; (e) serving healthy nyaz with less meat and more vegetarian/vegan meals.

In November 2019, I sent the group a draft preliminary five-year environment plan being developed by the Stanmore green team. I had discussed the proposal for the dishwasher developed in the Stanmore group with the Peterborough group earlier. The other recent ideas that I suggested to the group were a raffle ticket scheme for people who bring their own cup to use for tea in the mosque, with the top three prizes being given by a raffle draw done at prominent religious events.

I had envisaged one more meeting with the group during 2018-2019, but that was not possible. The WhatsApp group discussions are continuing intermittently.

Portsmouth Wessex Community

Brief history

The Portsmouth Wessex community, known as the Wessex Shia Ithna Asheri Jamaat (Wessex Jamaat), was formed in 1982 and became a registered charity in the United Kingdom (Registered Charity Number 1010076) on 25 March 1992. It is also a member of the Council of European Jamaats (COEJ).

Wessex Shia Ithna Asheri Jamaat (Wessex Jamaat) is a Shia Muslim organization based in the South of England whose membership extends from Brighton in the East to Weymouth in the West. It was formally formed in 1982 by a group of Shia Muslims settled in Portsmouth who had initially come to this area from Tanzania as students to study at the Portsmouth Polytechnic.

These students began to settle in the area in 1965 when the late J M Jaffer, a member of the Daressalaam Khoja community and a popular figure in Tanzania, emigrated to England and took residence in Portsmouth. His family was the one that had founded Mehfil-e-Khorassan, a popular mehfil (centre for mourning and commemoration ceremonies in remembrance of the Ahlul Bayt, the progeny of the holy Prophet) for the Khoja community in Zanzibar. The same family began to hold regular majlis (religious gatherings) at their residence in Portsmouth. These majalis (plural for majlis) were continued in Portsmouth by the members of the Jaffer and Versi families under the leadership of two pious and dedicated ladies from these families.

As the Shia Muslim population of students grew, they formed the Portsmouth Islamic Society in 1978 under the leadership of two successful and dedicated young professionals from the Khoja community. In 1982, the community decided to formalize its existence by forming the Wessex Shia Ithna Asheri Jamaat. With the formation of, Wessex Jamaat, a generous donor and Khoja member of the community, donated to the community a five-year lease for a flat in Portsmouth to be used as the community centre. In 1988 Wessex Jamaat appointed the late Mulla Bashir Rahim to be its first Resident Alim/Imam. He served the community until his demise in 1999.

In August 1992, Wessex Jamaat launched the AL MAHDI Project and, under the aegis of the World Federation of The Khoja Shia Ithna Asheri Muslim Communities, solicited financial assistance from members of the community throughout the world. This assistance was forthcoming and generously provided, and in due course, the community purchased a property in Fareham, Hampshire. Appropriately, the centre was named AL MAHDI (after the name of the 12th Shia Imam). The building was altered and renovated to provide facilities for a gents' hall, a ladies' hall, Madrasah classrooms and an Aalim's (resident priest's) flat. The official opening of AL MAHDI took place on the 12th of September 1993 (25th Rabi-ul- Awwal 1414 AH).

The Jamaat comprised over 75 families, and the tradition of holding regular Majalis continued. In addition, Wessex Jamaat has a well-organized Madrasah for 80 community children. The Ladies also hold classes to discuss fiqh (law and jurisprudence) and other related issues.

Several Resident Alims/Imams have served Wessex Jamaat over the past three decades and the current Resident Alim/Imam is from the Mombasa Khoja community.

In 2012 the community relocated to a new purpose-built centre in the Fontley locality, Fareham, Hampshire, about nine miles away from Portsmouth City. The Portsmouth Community currently comprises 350 members. This centre was completed eight years ago in 2012 and is now in use.

The community leadership introduced many eco-friendly features in the construction of the new community centre Al Mahdi. These features included a solar and geothermal system to harness the energy and pedal foot controls in the ablution sinks to minimise water wastage for ablutions and washing and enable better water conservation. The Centre also has a good size garden on the premises for growing fruit trees, plants, and vegetables.

The landscape is designed to encourage/ sustain the growth of bird species and other local habitats. This is being achieved with hedgerows surrounding the centre with fruits, herbs, trees and shrubs growing annually through planting schemes. The wastewater is recycled into the grounds. The water taps in the sinks for ablution for prayers (wudhu) are operated via foot pedals to minimise tap water wastage. The heat and power is generated through investment in ground-source heating system and solar panels. This supplies all heating, cooling and lighting requirements for the Centre without any external supplies, which could have been damaging to the environment.

For sustainability, families are encouraged to share transportation to the extent possible to attend the centre programmes, thereby seeking to reduce the impact of increased vehicular usage in the area and on the transport infrastructure.

Before purchase by the community, the five acres site had been granted industrial planning consent as its current use. This industrial use would have had a hugely damaging impact on the locality and its sustainability in protecting the environment. The purchase of the land for religious and social purposes has positively impacted the environment. The Centre's arrangements and schemes were designed to protect the environment, which was eco friendly for the future. Accordingly, the paddock grass and shrub area have been left to wild and natural growth to protect and proliferate the habitat in and around the 5 acres site. All lawn cuttings and shrub pruning are recycled back into the landscape. The planting of fruits and herbs organically is encouraged for healthy eating habits in self-sustainable ways. In addition, the centre has programmes through classes for teaching and encouraging landscape management in responsible ways to increase environmental awareness.

There was, therefore, already in the community leadership and community a pre-disposition towards nature and the environment. However, some lingering entrenched eco-unfriendly practices, such as the extensive plastic cutlery in community food events, needed to be changed. (almahdi.org.uk/almahdiproject).

Engagement with the Community

The community under the name the Wessex Shia Ithnaashery Jamaat (Wessex Jamaat) comprises around 250 members. The discussion group under the name "Wessex Environment Group" was formed on 13 December 2016 with 15 participants (five women and 10 men). The group formed a WhatsApp group of participants administered by a local coordinator drawn from the community on 14 January 2017. I held one informal meeting on 13 December 2016, attended by 12-15 persons.

There were two meetings held since, namely on 20 November 2017 and 12 February 2018. Nine participants, including two new participants, attended the February 2018 meeting. I had envisaged holding one more face-to-face meeting with the group during 2018-2019. The purpose of the meeting would have been to brief the group on my fieldwork findings to date. I could not hold the face-to-face meeting because of the non-availability of attendees. However, the WhatsApp group has continued to talk to each other on green matters, and there has also been regular sharing of information by me with the group on ideas

discussed and initiatives begun and undertaken in and by the other project community discussion groups.

The Centre's resident priest had initiated a regular celebration of the annual Earth Day on the day of Dahul Ardh (spreading of the Earth) when, according to our faith beliefs, God created and spread the earth for the habitation of human beings. This occasion was also utilised to sensitise the community members about the environment as a bounty from God to humanity. There was thus some previous discussion about the environment, although intermittently during the annual celebrations.

From the outset, during my discussions with the community discussion group members, I evidenced an enthusiastic response from the participants at the group meetings. Key representatives of the community executive committee participated in the discussion group meetings. The sessions were well organised and attended, and new members joined the group. One group member (a lady) suggested and volunteered to buy 150 stainless steel spoons (large, medium size and small teaspoons) for use in the mosque in place of plastic spoons in memory of her deceased relatives and suggested her young son give a short five-minute talk on the environment to the congregation. There was a suggestion that EC (Executive Committee) should take the lead in making environmental policy for the Centre and find alternatives to disposable plastic cutlery for use in the centre.

One outcome of the group discussions during 2018 was that key green measures were initiated by the community leaders in Ramadan (May) 2018. The measures included promoting a "Bring Your Own" cutlery drive, the switch from the utilisation of Styrofoam cutlery and dinnerware to biodegradable cutlery in community food events in Ramadan 2018 and the composting of used biodegradable cutlery in the community compost heap of in the community garden of the community and encouraging community children and adults to undertake to grow and nurture plants, vegetables and fruit trees in the nine-acre garden of the community centre.

These EC decisions in May 2018, including stopping using Styrofoam and plastic cutlery in community food events in Ramadan iftar (Ramadan breakfast) 2018, represented huge and momentous changes in community practices. The reusable cutlery own plates and mugs brought from home by members under the "bring your own cutlery" drive started in 2018 and donated to the mosque centre and washed and kept in the centre was a major improvement. The composting of used biodegradable cutlery in the community compost heap in the community garden was very impactful for the community.

The idea was to bring your own cutlery to the Centre or donate your own cutlery to the Centre and have them washed and kept there. In 2019 there was an uptake of over 50% in the community of people bringing their own cutlery. The Jamaat sold reusable plates with attached lids at 50P each to members. These plates with attached lids facilitated community members to bring them to the mosque and reduced the use of disposables further. Moreover, to facilitate those who either did not or could not for any reason bring their own plates and cutlery to the centre, disposable, biodegradable plates and cups were provided by the

Centre. The biodegradable cutlery was composted in the community garden's compost heap.

The latest initiative that I suggested to the group in December 2019 was for the community and EC to consider making a five-year environmental plan for the community similar to the plan being developed by the green team in Stanmore community. This idea was welcomed the group. The main issue now being considered is how to tailor the plan according to the needs and achievable outcomes in the small Portsmouth community over the five-year period.

Throughout the engagement with the community, there was regular ongoing discussion on environmental issues on the WhatsApp group of the discussion group.

Stanmore Hujjat community

Brief history

The Khoja Shia community in Greater London used to attend the religious centre in Hammersmith, London, which was purchased in 1973. The property was constructed and used as a Jewish synagogue, and modifications had to be made to it to provide separate halls for ladies and gents and more floor sitting space and a food dispensing kitchen to meet the needs of the community. This property was the first religious centre established by the Khoja Shia community in and around Greater London to enable the community to meet and jointly participate in religious ceremonies and social events.

Before the Hammersmith religious centre, the community was essentially started by the few Khoja Shia Ithnaashery students, mainly from East Africa, who had come to study in the UK in the 1950s and 1960s. They used to socially meet in private bedsits or hostel rooms of students to observe religious events. In 1957 these students formed an association of East African Khoja Shia students in London known as the East African Ithnaashery Union of the UK.

This small student body began the Khoja Shia community in London. They used to hire halls in East Africa House (a hostel in London) and the former Regents Park mosque for religious and social gatherings. This continued until 1973, when the Hammersmith centre was acquired by the designated trustees of the community in 1973 with funding from wealthy donors from the East African community in the UK and back home in East Africa.

With the arrival of Khoja Shia community members from Uganda and other parts of East Africa from 1973 onwards, the centre in Hammersmith was becoming too small for the rapidly growing community. In addition, despite its central location, for both the members living in North London areas around Harrow and Stanmore and the members living in South London south of Thames River, it was becoming too inconvenient to come to central London due to heavy traffic and congestion. Since the Hammersmith centre was on a residential street, there were perennial parking issues for community members in the area.

In 1983 the community living in and around South London acquired Haydery centre in Streatham Common to facilitate religious programmes locally. This purchase spurred the community to look for a place in North London, and a suitable location was found in Stanmore. The community sold its Hammersmith

property and purchased Warren House (a listed property) in Stanmore in 1984 to facilitate attendance by the members living in and around North London. This centre, known as Stanmore Hujjat Husseini Centre (Hujjat mosque), now serves a large community of three to five thousand Khoja members living in North London.

Engaging with the community

The community under the name the Khoja Shia Ithnaashery Muslim community, Stanmore, comprises about 5000 attending congregation (Khoja and non-Khoja) members with about 2000 Khoja subscribed members.

I facilitated the setting up of a discussion group, which was established in 2017 with a local coordinator from the community heading the group, and several signed-up members. The group had its first face to face meeting one meeting in 2017, where I introduced the research project to the signed-up persons. I have been participating as a member and facilitator in this group.

The group, called the Hujjat Green Initiative (HGI) initially operated as an online email group until 2018 and later, a WhatsApp group of members was set up in 2018 for easier and quicker communications and online discussions between group members. After my approach to the new community president to assist this project, the newly elected EC began to support the green group and assigned a liaison EC member for the green group (who would also attend the green team meetings) in February 2018. The group had four face-to-face meetings with Community representatives in 2018.

In 2017 a “bring your own reusable cutlery” drive supported by the sale of reusable mugs with HGI branding and the Hujjat community logo was launched and undertaken by the group during Ramadan 2017.

The green measures initiated in Ramadan 2018 in the community with approval from EC included a “bring your own reusable cutlery” drive and sale of a set of reusable cups, plates and bottles in 2018; a switch to biodegradable cutlery for iftar food events in Ramadan 2018. The measures also included reducing and collecting food waste to be taken by the local council for energy generation; the stacking of plates and cutlery to reduce the number of rubbish bags used to throw as garbage.

One key pilot initiative that the Group initiated with the approval of the EC was to switch to biodegradable cutlery during Ramadan 2018, given on the condition that the additional incremental costs would be funded by private individual donations from within the community. The impetus for this initiative was in part provided by the decision of the Portsmouth community to switch to biodegradable cutlery in Ramadan 2018, which had a positive demonstration effect on the Stanmore community.

A further initiative in September 2018 was the installation of a water fountain (at the cost of £1200, funded by a donation from a community member) in the courtyard of the mosque to encourage members to bring reusable water bottles and fill up from the fountain. The water fountain was symbolically located below the flag of our respected and revered saint (and brother of the third Shia Imam Hussein) Abul Fadhl Abbas, who was closely associated with the quencher of children's thirst in the tragedy Kerbala in 61 Hijrah.

The discussion group was vibrant, with regular discussions on WhatsApp group. It was not easy to organise a face-to-face meeting with the green team though it met four to five times in 2018-2019. As the meetings, when scheduled, could only be held in the mosque on the side-lines of the main religious function taking place in parallel on Thursdays, the meetings did not have sufficient time for fuller discussions before the mosque programme ended and the centre had to be closed.

There was immense enthusiasm and passion for eco measures among the active seven to ten discussion group members. The new green measures considered by the group included moving away from expensive biodegradable cutlery and introducing ceramic china or metal cutlery for the mosque, and installing a big size industrial dishwasher (costing 75-100K pounds) to wash the china and ceramic or metal cutlery at the centre thus obviating the need for anyone to bring their dinner cutlery to mosque from home and take it back home. However, the insufficient space in the centre premises posed a major constraint to this proposed initiative.

During Ramadan, May 2019, many green initiatives were undertaken by the Green Team. The green team introduced to the community orange colour (tea colour) collapsible silicon cups to drink tea, and these were sold for £2 each. There was good take-up in ladies' and gents' sections, and almost all cups were sold out. In the mosque premises, there were green desks set up by the green team manned by HGI (Hujjat Green Initiative) to talk to individual community members about green initiatives and environmental issues to sensitise the community, and environmental PP slides were put on the screens in the main halls of the centre.

Discussions were held with the Jamaat-appointed priest (Aalim) and Aalimah (lady priest) to help push the awareness of the environmental issues among men and women in the community through their talks and lectures. Environment awareness-raising posters were put up in ladies' and gents' sections of the centre. The HGI also prepared and submitted a proposed member's resolution (from three team members) to be tabled, discussed, and passed at the AGM in June 2019 to stop plastic cutlery in all community and private hire functions in the Stanmore centre.

The proposed resolution asked the community to reduce, cease to use, and not permit the use of plastic and polystyrene cutlery and plastic water bottles in all community and private functions and other food and tea events at the Hujjat centre within the next six months from the date of this resolution; and to implement within the six months suitable workable alternatives to plastic and polystyrene cutlery and plastic water bottles for use within the Hujjat Centre and not to permit any donations to the Hujjat centre of plastic water bottles or plastic and polystyrene cutlery.

The HGI view was that there was a need for awareness raising initiatives since, on one hand, community adult members generally did not show understanding and awareness of environmental issues facing the planet, and there was considerable resistance to spending more on biodegradables as substitutes for plastic among some influential members of the community and within the EC itself. The HGI team was uncertain if the proposed AGM resolution would be

voted for or voted down by the community at the AGM in June 2019 and whether the presentation of the case for stopping the use of plastics through this resolution route at the AGM would progress or compromise the green initiatives in the community. However, the consensus view among the green team was that “we should try anyway and see what support we get and what impact such motion will have on the thinking of members and desired change process.”

One outcome of this attempt by the Green Team to sensitise and mobilise community members to support the Annual General Meeting resolution by the green team (to require EC to stop using plastic and Styrofoam cutlery in the Stanmore community) in June 2019 was that there was extensive interest in and debate on the resolution at the AGM. It had a major impact in the AGM among the community stakeholders, such as the volunteers and donors and influential members of the community.

There was considerable discussion among community members about this resolution at the meeting. It was felt by some attendees that this was premature and that more sensitisation and awareness, and consultation with key stakeholders, such as the centre volunteers and the EC, as to what alternatives could reasonably be adopted as a substitute for plastic cutlery. Some argued that the HGI had not come up with workable alternatives to plastic. The issue of the higher cost involved in biodegradable cutlery was raised as well as the argument that even biodegradable cutlery, if not composted, would end up in the landfills and the oceans and therefore was a waste of community money and resources. On the other hand, there was some support for the resolution among some members.

The EC requested that the HGI withdraw this resolution so that it does not bind the hands of the EC in this respect without credible and workable solutions and alternatives. Many attendees at the meeting who did not wish to see the matter go to vote supported this request. Accordingly, the resolution was withdrawn by the green team at the request of EC in return for a clear undertaking by the EC to seek ways and means of stopping plastic and Styrofoam utilisation in the centre in consultation with HGI within a grace period of six months, i.e. by December 2019 in Stanmore.

At an HGI meeting held on 11 July 2019, the green team, among several other proposals for the month of Muharram falling in September 2019, proposed a cup levy/donation of 50 pence for using plastic cups for persons not bringing their reusable cups to drink tea. This proposal was submitted and presented in August 2019 in writing to the EC, and EC approved a cup levy of a lesser amount of 10 Pence. It was intended to be a voluntary levy by HGI. However, when the mosque announced the initiative, the congregation however understood it as a compulsory levy.

Even as a compulsory levy, it was welcomed by some community members but was opposed by some influential members. As a result, the president, who also was not present at the August EC meeting, decided to cancel the levy initiative unilaterally. This decision caused a major breakdown of relations and a disconnect and rift between the HGI team and the President and generally with the EC and negatively affected the morale of the HGI members.

I was informed that the president was considering the purchase of cheap, biodegradable cutlery from the Far East and China in large quantities in huge containers to substitute for the plastics. I informed the HGI about this proposed purchase. The HGI were not in agreement with this proposed solution as it would not solve the overall problem of throwaway waste generated by the centre.

HGI felt that the community should now move completely from creating any waste, whether plastic or biodegradable, and were in favour of the solution of using reusable cutlery and either having them washed by paid workers or by the installation of the industrial dishwasher in the centre rather than using large amounts of biodegradables.

One long-term initiative suggested by the resident Alim was to formulate a long-term (five-year) strategy covering the environmental practices working with all the Jamaat institutions to deliver education and awareness to community members using the youths, seniors, two Madrassas, Nursery, pulpit, EC, green team, volunteers, ladies committees, in conjunction and cooperation with each other and help one another deliver their respective mandates. The HGI had a meeting with two bodies under Jamaat to discuss the draft plans for all three bodies in August 2019.

There was immense enthusiasm and passion for eco-measures among the active ten discussion group members, and the WhatsApp group discussions were ongoing before the covid issues arose in the UK. The advent of Covid 19 and the closure of the mosque has, since March 2020, put all initiatives on hold in the community.

Appendix 3

Tabular Representation of fieldwork in the faith communities

Figures A1- A6

Figure A1
Field work in Birmingham Community

Date	Field work activity	Further details
January - February 2018	- Established contact with Birmingham KSIMC community leaders -Leadership agreed to the research project - leadership agreed to arrange the meeting with community members to discuss the research and DProf project and to set up the Birmingham discussion group -lead coordinator allocated by the Executive Committee.	
February- March 2018:	- discussion group of four interested members of the KSIMC community was established by local coordinator - The local coordinator was a young lady and a member of the Management committee - Coordinator set up a WhatsApp group on 22 March 2018. - WhatsApp group comprised 20 participants from the community	
20 March 2018	-held one face-to-face group meeting with four community participants on 20 March 2018 - briefed them on the research project and sought their views and ideas on the research questions. - KSIMC community had a particular interest in making the mosque green as they were undertaking and planning a mosque building project to reconstruct the existing mosque and centre. - The meeting was voice recorded and the voice file is saved as project data.	- the meeting was also attended two geologist researchers for the University of Birmingham as observers interested in the research. - They were interested in engaging with the community on environmental matters as part of their Encompass project.
17 April 2018	On 17 April 2018, I gave a talk on the environment and the research project to seniors of the community to sensitise the seniors on environmental issues.	
May 2018	The green measures initiated in Ramadan May 2018 by the discussion group and the community included sensitisation and awareness talks on environmental practices and the “bring your own cutlery” drive for community food events.	
July 2018	- The University of Birmingham as part of their Encompass project of their Geological Department wanted to engage with KSIMC	

	- Birmingham University with their They had an ongoing research on plastic pollution with their partner organisation Earthwatch were working on plastic usage and recycling aspects. - Birmingham University invited KSIMC discussion group to attend a meeting on 17 July 2018 to discuss Their project activities with their partners Earthwatch -I was invited by the University to take part in the discussions. - None of the discussion group could attend and the group requested me to attend the meeting. - I was briefed at the meeting on their plastic pollution projects and ongoing research activities. - I suggested to Earthwatch to undertake a nature awareness event for children of the community and put them in touch with KSIMC to facilitate a nature awareness event for community madrassah children.	
September 2018:	-The community engaged with Earthwatch and ISEEF environmental organisation based in Birmingham and with two local mosques on environmental issues. -One seminar organised Bahu Trust and ISEEF/ICO Islam was held on 29 September 2018 which the group attended.	
May- September 2018	-<u>Group's initiatives comprised</u> campaigns to bring your own reusable cutlery during Ramadan May 2018 and Muharram September 2018 - Some members began to bring their own cutlery to mosque food events. - <u>The community did not initially switch to biodegradable cutlery in the mosque.</u> - The discussion group on WhatsApp was vibrant with enthusiastic discussion about green measures - and there was considerable ongoing interaction with external environmental bodies and interfaith communities to develop green measures in the mosques.	
6 August 2018	- The initial coordinator who was in the EC retired from her position due to her commitments - her position was taken by another lady who was also in the Jamaat management committee. -The name of the group was changed from KSIMC going green	CSR got involved with the research discussion group project from the outset and provided liaison and a key communication channel between the EC and the discussion group.

	to KSIMCB CSR on 18 October 2018. - CSR is the subcommittee of the Jamaat responsible for community social responsibility including all green matters.	
29 September 2018	- The discussion group participated in a workshop on environment with three other local mosques in Balsall Heath area of Birmingham. - This event was organised by a neighbouring mosque Sultan Bahu Trust which in September 2018 was awarded the best green initiative award from the British Beacon Mosque awards	
October 2018	- There was enthusiastic discussion on the group on various options for reducing use of disposable plastic cutlery in the KSIMC mosque and how EC could be persuaded to buy into the reduction initiatives.	
November 2018	- The EC in consultation with the group completed and responded to a questionnaire on ecological policy and practices prepared by me for COEJ and issued by COEJ secretariat. - The EC began to consider reducing the use of disposable plastics and Styrofoam and how to switch to biodegradables in the community. - On 25 November 2018 EC approved using biodegradable cups in Jamaat food events. - COEJ secretariat arranged to secure discount on orders of biodegradables from member Jamaats from an eco materials supplier in the UK.	
December 2018	- One issue that arose in group discussions was that Birmingham city does not have composting facilities for biodegradables. If not composted their practice was to incinerate the non recyclable waste to produce energy. - It was felt by group that reusable cutlery would be the best solution but pending implementation of reusable cutlery the biodegradables would be an acceptable intermediate measure.	
December 2018 - January 2019	- On 10 December the group organised a social get together of its members and community members to meet each other and share ideas and discuss eco initiatives for community. - It was a success and further such get together events were planned for February and March 2019.	- On 10 January 2019 Biodegradable cups were ordered by the EC and these were expected to be in use by end of January 2019. - By 12 January 2019 the community seniors had been issued with reusable plates and cups to bring to and use in mosque.

	-The idea about recycling potatoe crisp packets and other plastic wrappers in the Aston University recycling centre was floated. -Other ideas discussed were using reusable cutlery kit of bottle, spoon and glass for use during pilgrimages to holy shrines in Middle East; -organising tree planting sessions for community children; -meeting the mosque main hall and kitchen volunteers to sensitise them on environmental issues and the green initiatives planned by the group. - There were regular announcements in mosque to encourage members to bring their own cutlery from home and more people were seen bringing their own cups for tea. -The issue that posed difficulty was that mosque had insufficient sink washing facilities in both ladies and gents side for people to even rinse used cutlery stained with food after eating. -The position of the kitchen serving door and sinks in the gents side posed safety issues for members with hot food being conveyed to the halls if crowds formed near the sinks.	-The feeling in the group was that BYO was the best solution with people wiping the plates with tissue and taking home in bags to wash. -With the reconstruction of mosque project it was expectation of the group and community that the EC would provide for industrial dishwashers and reusable plates for entire community. -On 26 January the possibility of a 20p levy on disposable cutlery was raised a possible awareness building measure. -There was discussion about what type of bags would be used to take used cutlery home to wash and whether this would stain the cloth and muslin bags if so used. -Other ideas floated were to cut down on meat meals in the mosque for Ramadan meals and have instead vegetarian meals; -using reusable bowls and plates with lids to facilitate taking the used cutlery home with out washing; -not washing plates but using issues to wipe plates and take them home in bags. - It was confirmed that EC was planning to have industrial dishwashers in the mosque after reconstruction had been completed.
February 2019	-Bahu trust prepared a guide on organising plastic free and eco friendly iftar in mosques -Action plan of various measures was discussed at group meeting on 11 February 2019 such as clean up of mosque, meeting with mosque volunteers and initiatives for Ramadan 2019.	
March 2019	-Idea floated for composting vegetable peelings from cooking preparation in mosque to be composted at garden centre in Birmingham. -	
April 2019	-Another idea put forward to have own branded mosque reusable cutlery for sale or distribution in mosque.	
April to August 2019	-There was ongoing discussion on group on eco initiatives to be introduced in mosque and sharing of experience of other Khoja Jamaats in green initiatives like in Vancouver, Portsmouth, Stanmore, South London.	
September 2019	-Collapsible silicon reusable cups were ordered for community in Ramadan 2019.	

	-A raffle ticket scheme to encourage BYO campaign was introduced in the mosque. -A new recycling educational programme for nursery children to sensitise them to reuse and recycling was started in the community mosque nursery. -I introduced the group to an intra net Jamaats green chat group for all Jamaats to share green ideas -It was clarified by a group member that the waste disposal company used by the mosque has assured them that no waste from mosque goes to landfill. It is either recycled or decomposed and used for brick building.	
October 2019	-The group planned to be participating in Birmingham's Footsteps conference on tread lightly to be held on 17 November 2019. -I shared my audio file of my eco talk on what faith communities can do to meet challenge of climate change given at Chichester Cathedral in October 2019.	
November 2019	I shared with the group the draft environmental five year plan developed by green team in Stanmore for comments and considerations of the group and EC. It has not yet been considered and commented on by the group or EC. -The group has been busy planning future green initiatives like tree planting drive and engagement with environmental groups on green issues for 2020.	

Figure A2
Field work in Essex faith Community

Date	Field work activity	Further details
23 December 2016	-On 23 December 2016 the local coordinator and EC member created a WhatsApp group of six persons which later increased to 11 participants administered by the coordinator. -I was added to the WhatsApp group on 9 January 2017.	
9 January 2017	-The coordinator asked group to think about environmental issues that would be relevant to discuss and indicate suitable dates for the first face to face group meeting.	The research questions raised with the group were (1) What environmental issues do you encounter in your daily life, at work and in your community? (2) What measures have you been able to take to deal with the environmental issue? (3) What are the individual and community practices that in your view are not environmentally friendly? (4) what are the practical ways in which we can bring about change in these individual and communal practices? (5) What are the ways in which we can use faith based perspectives, as distinct to the scientific perspective and the non-faith ethical values perspective, to assist in bringing about change in the communities' practice on environment? (6) How can we develop and prepare a clear shared understanding of the Islamic values and principles on the environment? (7) Would a specific training course or course manual reflecting the shared faith position and teaching good environmental practices within our community help in bringing about the change? (8) Would you be happy and willing to help prepare such faith position and environmental training course or manual for our community in a collaborative research project? (9) Would you be happy to be part of a community group to discuss these matters and help achieve these outcomes? (10) How can we provide a vital link between beliefs and practices on environment in our communities and persuade members to factor in environmental considerations in their practice and decision making in daily life?

		(11) what are the various practical ways in which this change can be brought about?
11 February 2017	- On 22 January 2017 I sent a questionnaire with key research questions on environmental issues and practices for the group to think about and discuss at the meeting which took place 11 February 2017. -This was circulated by coordinator to the group on WhatsApp on 25 January 2017 for their consideration and reactions. -On 11 February 2017 I held the first informal meeting with interested members. - meeting was attended by four men and three ladies seven persons.	-I explained and briefed the meeting on the DProf research project in the faith communities - -the following questions were raised by the attendees such as -Is faith a motivator to protect our environment? -How do you prioritize between natural resources - to get a resource can you waste another resource? -What impact will this project have in our Jamaats and in our lives? -How do our religious community practices damage the environment e.g. use of plastic cutlery as opposed to “bring your own cup and plate” to Mosque practice. - -How do we deal with food waste in our functions?
4 March 2017	-The coordinator circulated to the group for members’ information the GCSE notes on Islam and environment published by the World Federation to which I had contributed with my preliminary notes on the subject prepared earlier at request of WF. -The coordinator also circulated various points arising from the first informal meeting of the group on 11 February 2017 for information of the group.	
March 2017 to March 2018	- There was some discussion on the WhatsApp group on community environmental practices -no meeting of the group could be held during this period due to various work and study commitments of group members. - -A lot of online interaction was about trying to fix meeting dates and getting reactions from group members about their availabilities. -On 9 December 2017 the coordinator circulated a memo summarising the research project sent by me to him for information of the group. -I requested responses from the group members to key research questions sent to the group earlier. -I drew attention of group to then ongoing Cape Town South Africa extreme water crisis and shortage and its impact on the people there	

10 March 2018	-The coordinator tried to schedule a meeting of the group in December 2017 and January 2018 but these dates had to be postponed due to low numbers of available attendees. - The members of the group sent by email to me and the coordinator their responses to the questionnaire sent to them. -On 10 March 2018 I held the formal meeting attended by seven participants (four men and three women) -There was discussion about how to bring about change in the practices of the community through sermons and talks given by the community Aalim, madrassa and Jamaat leadership - - how to bring about awareness as to the faith traditions and guidelines on environmental conservation and protection and awareness raising initiatives in the community to be directed and focused on both the young and old members. -I suggested that the discussion group recruited for this DProf research could serve as the community green team beyond the life of the research project. - In relation to bringing more awareness as to food and cutlery waste generated by the community one participant's suggestion was that the community should ask members to share and take home rubbish out after programmes -this would make the people to come to know and experience first-hand the extent and amount of rubbish created by the community by the food and tea programmes.	-Among the general environmental issues raised by the participants the following were highlighted -electricity usage, carpooling, water waste, gas waste and clothes discarded and wasted due to changes in fashion and trends among the people. -In relation to plastic bags one suggestion made was to promote within the community cloth bags (stitched made by community members) and either provided to or sold to the members. -I asked the group to consider as to why was the Essex community still use Styrofoam which doesn't biodegrade and pollutes environment. -I was informed that in previous Ramadan 2017 the community had sought to conduct a recycling initiative to reduce the food and cutlery waste from five black bin bags to two bags. -The feeling expressed was that men in the community seemed to be less involved than women in environmental efforts.
12 March 2018	-I prompted and encouraged WhatsApp discussion with and mong group members as some members could not attend the 10 March 2018 meeting. - I posted that As some could not attend meeting and we ran out of time at meeting can members send me their experience of trying to make change at work, mosque or home and what worked and what did not work. -12/03/2018, 06:47 - one participant responded to me : At a high level.... 1. A deep dive to assess issues, and more importantly, the reasons behind issues.	

	2. A discussion with key stakeholders on solutions. 3. Implementation plan, with key milestones. 4. Ongoing oversight and monitoring. (e.g. Evaluation of the plan at each milestone to see if the plan needs adjustment). - Each step above usually needs a lot of work. And there is margin of trial and error too. Most common problem in bringing change is people's lack of desire to change. This needs to be very well dealt in the plan when starting out, for example, having role models (change champions) and thinking about how to embed change in the culture. - I raised the following questions - the Central Issue is why do people not want to change and what would make them change. -Is change externally driven or internally driven. If later what is the trigger for change for them. Is it necessity, faith and belief or fear of harm or desire for gain. The response from participant was that : - Human nature....we dont like change. what would make us change depends on each scenario. - Can be different to each individual. Some react to fear of harm, whilst other for greater good. A good plan will probably have agenda for all types of target audience. -It is all based on my humble opinions, derived from very limited life and organisational experiences. I am sure more experienced members will have more helpful answers. - Consider running some pilot change programmes Makbul bhai, and expand your research by also presenting findings on 'implementation of change'. - This could be a brilliant contribution to the Jamaat globally... -My response : So each implementation measure e g Styrofoam cups etc would be in effect a pilot change programme. -The change agent is and would be the focus group itself. Their results would be the findings of challenges faced and outcomes of implementation programme. - view of the participant Yep...or we can call the whole thing a pilot...for example from cups to electric to gas to whatever	
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	objectives we set out...easier said than implemented, and more importantly, recorded. My response :Yes that is so, so we start with some of these measures. Thanks for very useful discussion and contribution.	
March - April 2018	21 March 2018: I asked the coordinator for some statistics on how much Styrofoam and plastic cutlery is bought by the Jamaat per month and per annum during 2018 and 2017 and how much of such cutlery was being actually used per month and per annum during last two years and the costs involved. Response from coordinator : Jamaat doesn't keep such stats. Plastic cups and plates/cutlery is mostly donated. Doubt those figures can be calculated but maybe guesstimated. - I suggested that Jamaat keep a tab on how many boxes of plastic cutlery are there and how many fit per box to help get the stats of use - I provided info on prices on plastic cutlery obtained from Stanmore group as follows: Prices per box £16.75 - 600 plates £ 5.90 - 1000 spoons £ 12.80 - 600 bowls £ 18.60 - 3000 plastic cups £ 12.50 - 1000 tea cups + VAT - Coordinator advised that Essex community spends circa £500-600 each year on the plastic items per year. - I asked the group to consider the other impactful environmental practices of the community and give their views as follows: - Apart from plastics and organic food, car journeys, water wastage, energy wastage in your opinions what other environmental practices impact in our community and homes and work places?	
19/05/2018 Ramadan 2018	-The community leadership and the Essex green team began a drive to ask the community members to bring their own reusable plates and mugs for the food event Iftar during the month of Ramadan beginning on 19 May 2018. - The aim was that the members would bring their own cutlery which they would use for the food	-There was a great uptake of bring-your-own reusable plates and mugs campaign by the members. -The usage of single use disposable polystyrene plates and cups was down drastically and the daily waste generated was no more than one full black bin bag instead of the usual 6 or 7 bin bags.

	events in the centre and then take their used cutlery home to wash and bring again to centre for the next food event. -The green measures initiated were bring your own cutlery drive, reducing food wastage in terms of left over taken but uneaten edible food, -collecting inedible food waste for collection in council food waste bins for burning of such food waste for energy generation by the council, - reducing Styrofoam cutlery utilisation and reduction of general waste from the food activity, -staking of plates and cups used and binned and reducing number of rubbish bags filled and put out for council waste collection.	-In the discussion group meeting it was indicated by me that the ultimate solution could be the installation of an industrial dishwasher at the new centre when constructed and ready for use by the congregation. -As an example of cutlery usage in a month in the community 2000 plastic spoons were used in Ramadan 2018.
June 2018	-On 20 June 2018 The coordinator gave me a few quick stats for Ramadhan 2018. The community would normally use approx. 2000 polystyrene plates during the month of Ramadan. -During Ramadan 2018 the community used approx. 700. The lower uptake of polystyrene plates gives an indication of members bringing their own plates and mugs. -The black waste bin bags utilisation usage went down from 6-8 bags per day to an average of 1 bag every 2 days. This also indicated the tight staking of plates in the bins and the reduced number plastic cutlery used.	
17 January 2019	-One participant raised the question of cutting down on meat and red meat in addition to saving the planet by reducing plastic or recycling.	
11 May 2019	-The possibility of shifting from plastic to paper plates and cups was raised by a participant. -The issue with paper plates was the fact they were not suitable for curry and rice meals and the paper cup was difficult to use with hot tea.	
3 June 2019	-My paper on "How does Islamic Morals and religion guide us to our duties to environment" was shared with the group for its information. -Also a paper prepared on global plastic waste and pollution by a member of Stanmore Hujjat green	

	team member was shared with the group.	
11 June 2019	-The coordinator reported that: Due to the temporary venue of the community it has not been easy to keep exact tally of the numbers and details of attendees and general wastage or recycled bags. -But in 2019 the community introduced and promoted many more green measures than the previous year. -Before the month Ramadhan 2019, the community leadership announced many times over email and WhatsApp groups that the Jamaat would be requesting everyone to bring in own reusable plates, cutlery and cups from home. -This was very well received and responded to with most of our regular member families complying, -Following iftar, waste was separated out as food, polystyrene, plastic and general waste, all going into separate bags and disposed of appropriately. -Each night the community had around only 1 black bag of polystyrene plates and cups to dispose of, some nights half a bag. -The leadership encouraged attendees coming for iftar to break their fast to use own plates for dessert as well as dinner. -They encouraged everyone especially children not to waste food as well as water and juice. - Each evening water from half-drunk mineral water bottles were collected and collated together thus minimising wastage and maximising reuse of unspoilt drinking water. -All waste was cleared away from the hall each night, hall floor dusted clear, kitchen tidied, kitchen items, tables and chairs all packed away for use by other users of the community hall. -Some leftover food was donated to a local homeless charity.	
20 June 2019	At invite from group coordinator I visited the community in the evening and gave a small talk on the preliminary main findings of the research project based on the work done in the Chelmsford community - some insights from the experience of the other faith	

	communities covered by the project was also shared. This was well attended and was followed with an interactive question answer session with the attendees enabling the community members to make their comments and give their views and feedback and concerns.	
13 August 2019	- One group member suggested using the religious functions during Muharram to bring about awareness of cutting down on red meat and replacing red meat with chicken when arranging Niyaz food for the function. -I suggested that reducing beef and moderating between chicken and vegetarian menu for Niyaz would seem the way forward for our community based eco initiatives. -The reduction of methane in atmosphere from cows would also require global pressure on meat industry drivers. -Based on experience of other faith communities I suggested the following eco initiatives for consideration by the Essex community in the context of the new mosque construction: 1. Industrial dish washer in centre and all requisite space and other facilities for same. 2. plumbing facilities for dishwasher. 3. Ways of recycling purifying and reuse of wudhu water 4. Solar panels to use and generate electricity 5. Sensors for lighting in centre 6. Car permit system for each family to avoid multiple cars from same household to reduce carbon imprint 6A Encouraging Car pooling in community 7. Stopping purchase of Styrofoam and plastic cutlery for centre food events. 8. Bring your own cutlery campaign 9. Switching to stainless steel or biodegradable cutlery 10. Planting trees and establishing gardens in centre and in wider community. 11. Reduce food waste. - The response of the coordinator to the suggestions was that some of these suggestions were already in place and others will be considered in the new building.	

	-The suggestion to use solar panels to use and generate electricity has been deemed too expensive for the time being for our new building there are plans to incorporate the various suggestions in the new building.	
26 November 2019	-I shared with the Essex discussion group the draft five year environment plan being developed in Stanmore Hujjat Jamaat for information of Essex as well as for the community consider and adapt to its needs and capacities. - The feedback on this was positive.	
27 November 2019	-the local coordinator suggested converting the discussion group to a green permanent team under the brand name CKG (Core keen green team) of the Essex community a suggestion which I backed and encouraged. -Members of the present group were thanked. -Those members of the discussion group that wanted to leave and join the CKG were encouraged to do so.	

Figure A3
Field work in Leicester faith Community
Leicester Community

Leicester discussion group	Table of field work activity	
Date	Field work activity	Further details
November 2017	-I contacted the leadership of the Leicester community to seek their go-ahead for undertaking the DProf research project in the community and setting up a discussion group for the research activity and obtained their clearance - This process required several email and telephone communications with the EC to acquaint them with the research project and the envisaged project and to obtain their go ahead and organise the logistics of the meeting for the pilot project in the community -. I sent them a briefing note on the project and after putting the arrangements in place with the help of a local coordinator from the community, the meeting was eventually arranged to be held on Friday 15 December 2017 at the Leicester community mosque and centre.	-I had intended to hold discussions with the community group in Leicester as the first discussion group meeting and as a pilot as recommended by University and envisaged by me. -But I could not do so because of the logistics and community procedures involved in setting up the Leicester discussion group.
15 November 2017	-Leicester community discussion WhatsApp group was created by the local coordinator on 15 November 2017. -The WhatsApp group was formed with nine participants. -The WhatsApp group discussions took place on whatsapp on an ongoing basis intermittently.	
15 December 2017	-We had a two-hour face to face meeting and discussed some of the key research questions as a pilot project. There was not sufficient time to go through all the questions. I explained the terms of their participation as per the written consent form and obtained their agreement and written consent from the attendees to participate in this project -. The attendees of this meeting continue discussion of environmental issues on the WhatsApp group to	- I audio recorded the session discussion and have the data for my analysis. -There were a few members who could not attend because of the bitter cold weather and other commitments. -I had hoped to have one more meeting with the Leicester group to get further data from all including those who could not attend in the December 2017 meeting. -But such face to face meeting could not be arranged. In the event the ongoing whatsapp discussions provided me with the text of the group discussions .
Ramadan May 2018	-The green measures initiated in Ramadan 2018 by the group and community comprised: - a “bring your own reusable cutlery” drive in the mosque for all tea and food events;	

	- various small steps were taken to sensitise members on the impact of plastic and Styrofoam on environment. - There was one debate held in Ramadan May 2018 and organised by the community youths society called Bahlool society on environment issues - the motion was that “ a green community can save the environment” .	
30 August 2018	- the notices and announcements posted and issued by the community in the mosque stated *Save Waste and Money this Muharram!* Bring your own cup, plate and spoon for Tea & Niyaz at the Mosque. - If all of us do this together, we can save unnecessary waste & hundreds of pounds on disposables which could be used to help support others in need -NOTE: The Management Committee will not be accepting plastic water bottle donations. Plastic is not environmentally friendly and causes real damage to our planet. -Please watch the video below which shows the impact on the environment. A video on plastic pollution was then shown to attendees	
2 June 2019	-I shared a note on “How does Islamic Morals and religion guide us to our duties to environment? “ and Our responsibilities and duties under our faith and religion towards the environment on the group whatsapp	
26 November 2019	-Noticing the significant reduction of postings and discussion between members on the group I posted the following to remind the group as to the origin and purpose of the group.” -Makbul: Salaam all green team This team and discussion group was set up at my suggestion as part of my DProf research project to improve environmental practices in faith communities - As a group member is a member of Leicester MC you have a valuable link with the admin decision making management committee.- - The task of this group is to initiate and discuss eco ideas for	

	implementation by the Leicester committee and Jamaat. -There has not been much discussion in this group lately. Maybe the group should discuss ideas and further steps to rejuvenate this green team into active discussions and initiatives. -Any comments and ideas on this suggestion”	
26 November 2019	- I shared a draft five year environment development plan prepared by the green team in Stanmore for the information of and to motivate the group in Leicester. - Makbul: This is the draft plan which green team in a faith community is seeking to development. Please Feel free to comment discuss and improve upon it”. -I also spoke to community MC official who was also member of the group to suggest to him to take the ideas to the management committee for discussion and consideration.	
1 December 2019	-1/12/2019 - After discussions between group members , the group member took up task of being the new coordinator - -he prepared and submitted the following proposals for consideration by management committee which was meeting soon with a few days: -1. Look into steel plates and an industrial dishwasher. -2. On the cups side, stacking cups for storage would need more space than stacking plates. For this we think going for recyclable cups might be better. The cups that are used in coffee shops are not fully recyclable. -3. Makbul Rahim to deliver a lecture on his DProf research findings, with the topic being Challenges facing humanity on environmental crisis and how Islam can provide solutions to environmental issues. -4. Fifty pence cup and plate levy, as part of” bring your own cutlery” drive - Selling sets of reusable cutlery to members to bring to mosque. -5. Classes on environment in madrassa and Public and Community Engagement Team; Education programme to all sections of the community to raise	

	awareness on climate change and environmental protection.	
5 December 2019	- The following response on the proposals was received from the management committee and shared with group: -Leicester Community recognise the importance of Environmental Health and we see it as our social and religious responsibility to promote this areas positively. -We have a plan to improve our Environmental Health footprint. -We don't see this as a "slam dunk" but more a phased approach, implementing palliative (acceptable) steps that will deliver more strategic and sustainable adoption across the community. -1. Having reusable cups/plates and dishwasher is our objective. We have looked into cost (machine and housing it) and need to determine budget and plan in 2020. -In the immediate term we are taking actions to move to paper, which is a step forward from plastic. -Plus we will continue to promote "bring your own" and provide facilities/incentives to encourage adoption (current uptake is low) -2. arrangements are in process for purchasing recyclable cups from envirosip, the last ones we tried had the issue of being too thin, so hand would get hot and hurt and would have to double up increasing the cost. -3. Approved, the Management Committee would like to support the Environmental Health Leicester group to promote and encourage attendance to this event, which is an excellent form of tabligh, and our gratitude to Makbul Rahim for agreeing to do visit us an deliver the talk and discussion. -We await Makbul uncle to revert back to us when he can do the (20 mins) talk, followed by 10-15 discussion and questions, as part of the main programme to ensure good attendance and air time in raising awareness in this extremely important matter. - Side note: There were many stakeholders present, including Ladies subcommittee, little angels, Behloul, Madrasah and I have asked them to support by encouraging promotion and	

	attendance to this event. They will keep an eye out on the planner and encourage attendance. -4. Levy is controversial. Rather than the levy, we'd like to support the Environmental Health Leicester group to work on and coordinate a Raffle system, for those bringing their own cutlery, to trial during Shahr Ramadhan/ the next opportunity of regular niyaz. With prizes for raffle winners. -5. Go ahead with organising classes for an Education program to all sections of the community, please liaise with PACE (Public and Community Engagement Team) and Madrasah directly, -we will support to have these events booked in on the planner. Comments: -These proposals are a testament of Islamic values and principles. -An excellent form of tabligh and inshaAllah (God willing) as a collective community we can move forward towards a greater environmentally community. -We praise the Environmental Health Leicester group, and want to further support these activities. We look forward to supporting through the approved items inshaAllah. May Allah swt reward you for your efforts.	
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Figure A4
Field work in Peterborough faith Community
Peterborough Community

Peterborough discussion group	Table of field work activity	
Date	Field work activity	Further details
19 December 2016	-Held the first informal meeting with interested invitees. This was attended by six participants, one woman and five men. -The purpose of this informal meeting was to give me experience and familiarity of organising discussion group and its challenges and modalities and obtain the feedback and response of community members. -The meeting was set up with the help of a local coordinator an actuarial professional and my nephew active in the Peterborough community) . -I did not audio record this meeting but made my own notes on the meeting discussion and my presentation slides I	-I explained and briefed the meeting on the DProf research project and the faith communities it will cover. -I presented a detailed account of the nature of the research, the research questions, and the envisaged modalities of group meetings in the discussion group., - my estimation at that time was that several meetings of the group may be required during 12 months. -I explained that I envisaged the use of the modality of a whatsapp group to capture the discussions and data. - emphasised the commitment of time by participants that would be required for the discussions on the research questions and findings. -I also mentioned the preparation of an environmental training manual as a key outcome of the research project.
19 - 24 December 2016	-Feedback on the Pre research project approval meeting: - Following the informal meeting none of the invitees signed up to be participants. -The reaction at the meeting was not as enthusiastic as in Portsmouth among the participants. -The amount of detail I presented on the project and my estimation of several meetings may have been another factor in making this project sound complex and complicated. -One lady invitee a professional person indicated her reservations about using WhatsApp group to have online discussions between meetings. -She also was not certain about being able to give the time commitments sought by the research project. -I got the impression that the subject matter of research and community environmental practices were not seen as of particular of interest or priority for the participants generally. -Participants and the lead coordinator had busy work schedules.	-One factor lack of interest may have been the long period of engagement on the project estimated by me of up to two years with possible four to six meetings of the discussion group per year. -In my enthusiasm for the research project I did not fully appreciate the constraints such long time commitment would pose for participants. - In retrospect, I think I should have just aimed for one or two meetings maximum for data gathering and discussion group meeting in my presentation. -This also indicated lack of my experience with the voluntary nature of community collaborative inquiry research and appreciation of time constraints of participants on my part.

	-One view expressed by an invitee was that the subject of environment and nature was already being covered in theory in schools for the school children. -That they needed to be exposed to the visible impact of environmental pollution so that they appreciated problem better. -I mentioned that main stream TV and other social media was sensitising the viewers to effects of plastic pollution on the birds, fish and marine life and oceans. -The invitees did not see an active role for themselves in the process of sensitising the community members in relation to community practices on the environment. -This was being seen by them as a matter of the community leaders to look into and deal with.	
24 December 2016	-One invitee at the informal meeting IK showed interest in the project and subsequently helped to encourage participation in the project. -There was no sign up from the invitees of the 2016 meeting. - Recruitment of participants was becoming a key constraint. -It was difficult to recruit participants to constitute the discussion group and to hold a formal meeting envisaged by me after University approval for the research which was granted in August 2017.	A WhatsApp group called Focus group recruitment was set up by the coordinator on 24 December 2016 to facilitate identification and sign up of potential participants. -an attendee at the informal meeting and a solicitor by profession helped in this process. -Nine potential participants from the community including the president of the Peterborough faith community were identified as potential candidates by the coordinator assisted by the participant and included in the WhatsApp group.
9 January 2017	-On 9 January 2017 the local coordinator indicated that because of his work commitments and time constraints he was unable to help further in the project. -As his replacement coordinator he however suggested and arranged for the interested solicitor participant and attendee of the 2016 meeting and who had indicated interest in the project in the informal meeting take on the task of the local coordinator and helped in the recruitment drive of participants for the project.	The new coordinator agreed to be the coordinator and helped in launching a recruitment drive among community members in 2017. There was still no uptake from community members generally to come on board this project. The new coordinator IK took up post as the elected secretary in the managing committee of the Peterborough community in 2017.
June 2017	-At my request, the coordinator arranged for me to be given a slot to talk to the general community at the community mosque centre in a community religious event in June 2017. -Accordingly on Tuesday 20th June 2017 in the month of Ramadan I tried to kick-start the recruitment process for the group in the Peterborough community and to	One clear feedback that I got from a member of the community on my talk to community in 20 June 2017 that the community were more interested in learning the theoretical theological aspects rather than being part of the community change making activities.

	interest the community members directly through a general public talk from the podium at the Peterborough mosque on environmental issues and the DProf research project. -During that talk I gave a clear assurance that the time commitment for the project will only be for a one-off two hour meeting to discuss the research questions and give views of the participants. -However that direct approach and appeal to the mosque congregation did not still result in stimulating any immediate recruitment for the discussion group.	
August to November 2017	-After University approval in August 2017 I still had difficulties setting up a discussion group and in getting interested participants to join the discussion group and to hold a meeting with them. -This meant that the group could not be formally constituted and I could not hold a formal meeting. -I had earlier envisaged holding the first meeting in Peterborough in November 2017 to start off the group with interested persons who sign up on the project.	-I think the 2016 informal meeting may have put off some potential participants because of the fear of the level of commitment required in participating in the group -and in attending the number of meetings potentially involved, -and their inability or unwillingness to attend meetings due to their ongoing commitments.
December 2017	In December 2017 the coordinator indicated to me that in light of his heavy responsibilities as Jamaat secretary he was not able to continue to help in the capacity of local coordinator. -He suggested as his replacement as the coordinator and to help in the project a new member to the community and teacher who had moved recently to Peterborough in late 2017. I went through the process of familiarising the new coordinator on the DProf project and the aims and objectives of the project. The new coordinator was not initially certain about taking on this role -but after considerable questioning and probing into the origin and purpose of this project and after understanding the rationale of the undertaking he became enthusiastic about the project and was persuaded and accepted the role.	
January -February 2018	-In January to February 2018 with the aid and efforts of the new coordinator I initiated another new campaign through written leaflets	

	and briefing circulars for general circulation to recruit participants in the community in Peterborough. I also used my own contacts and assured participants of the requirement of only limited commitment to attend a one off meeting of two hours to discuss my research questions. -I emphasised that the maximum time commitment by participants would not extend over more than two to three months; -that the contribution from group members would be their ideas and views and opinions and information they already knew and that no specific extra research inputs or efforts from group members was envisaged.	
13 March 2018	-After much effort and further one to one contacts with members and relatives known to me to recruit participants, I was able to get six participants who were interested in the project and agreed to join the group. -So the group was finally formed in 2018. -I was able to schedule a meeting in Peterborough on 13 March 2018 which was attended by the five community members. -One of the five participants was an ordinary member of the community governing management committee (MC) and three members were my relatives interested in environment issues. -All the six members were keen enthusiasts in this matter of community environmental practices. -Throughout the period of engagement with the community and to date the original WhatsApp group formed in 2016 for recruiting participants continued to be used for the research project. -The name of the whatsapp group was changed to Peterborough environment focus group -and the group with the inclusion of interested persons and the addition of new participants continued to provide a platform for discussions and exchange of views among the group members. The WhatsApp discussion chats have been saved as project data.	-In my view, the increasing media publicity given to plastic waste in oceans and growing awareness of the environmental issues in the media and importance placed on environment by UK Government was a contributory factor in being able to recruit the discussion group of five community members and to hold the discussion group meeting on 13 March 2018. -The meeting was held in the mosque premises. Several ideas were discussed to improve community practices and there was enthusiasm and interest to bring about change in the community practices during the upcoming month of Ramadan in May- June 2018 at this meeting. - The meeting was voice recorded by me and is saved as part of the data. -At that time I envisaged one more meeting with the group during 2018-2019. -But the further meeting could not be arranged. However there have been ongoing interactions and discussions between group members on WhatsApp group on environmental matters and community practices during this period.
March to April 2018	-An effort was made in by the coordinator and some members of the group to	

	- (a) sensitise the community leaders and members on plastic and Styrofoam pollution -and (b) to persuade them to introduce campaigns in the community to bring their own reusable cutlery for iftar (breaking fast) -and to promote reusable cutlery during Ramadan 2018 (16 May to 16 June 2018). -My telephone conversations with the coordinator and member of the group who was also on the Management Committee as an ordinary member (without a specific portfolio) showed that there was not much by way of change achieved in Ramadan 2018. -In Peterborough the community they did not hold iftar meals every evening at the mosque in Ramadan but only on weekends namely Saturday and Sundays. -The environmental issues however were placed on the agenda for the consideration at Management Committee meetings.	
May 2018	-In May 2018 there were discussions on the WhatsApp chat among the group on a campaign to encourage members of the community to bring to mosque their own mug for having tea and take it back home and rinse the same at the mosque or at home. -The coordinator suggested that a meeting with Management Committee be fixed to discuss this and other green initiatives. - It was felt by the group that it would be easier to start with recyclable cups rather reusable cups initiative. - The group member who was on the EC submitted proposal for such meeting with EC but none was fixed. Thus no meeting took place then	
July 2018	-An important development in the environmental field in Peterborough was the support for the Peterborough Eco-faith Network by the Community Cohesion Officer in the Communities and Safety department of the Peterborough local authority. -The Churches Together in Central Peterborough (CTICP) body established the Peterborough Eco-Faith Network to promote environmental awareness and best practice within their churches, and to link with and support	-An invitation was given to the Peterborough faith community to attend a public meeting in July 2018 to promote awareness both in the Churches and in the wider community of issues around sustainability and ecology. - I was asked to attend meeting from London but I suggested that the group coordinator attend the meeting. -The Peterborough Khoja community discussion group coordinator attended this meeting to learn of what the churches and other communities attending this

	environmental action groups in the city. - The Peterborough Eco-Faith Network was a group of Christians who believed that issues of ecology and environmental sustainability needed to be at the heart of their witness of the gospel today.	meeting are doing in relation to environment and what environmental measures could be replicated and done in the Peterborough Muslim Khoja community.
10 July 2018	-On 10 July 2018 the group coordinator attended the environment meeting. -He felt that it was good to get involved as an observer and listener on the environmental issues and plans for Peterborough. -The agenda covered a wide range of sustainability areas including transport, buildings and green spaces and farming. -In his view the conversation was quite technical and buildings related in many respect, so he focused his views on item 30 of the agenda item that was on “local communities working together to make Peterborough a true environmental capital”. -He spoke on and received positive feedback from the meeting on how Mosques could help in engaging in such work. -His brief which was based on what the discussion group was seeking to do in order to sensitise the Peterborough Khoja faith community in improving its environmental practice in relation to utilisation of plastic cutlery in the community food and tea events was received positively by the meeting and the attendees -many of whom asked for his email contact and contact of the Khoja faith community to learn from these efforts.	
August 2018 to April 2019	- During these nine months there was no discussion on WhatsApp among the group and no developments in relation to environmental initiatives in Peterborough. -There was a complete hiatus on any movement or development on this project in the community for nine months.	
April 2019	-In April 2019 I requested a slot to give talk to the Peterborough community on the research findings so far and sent request to Jamaat secretariat but this could not be arranged by the secretariat.	

June 2019	-On 2 June 2019 I posted on the group a paper written by me on how Islamic morals and religion can guide us to our duties to the environment and on 3 June 2019 - I also posted a brief on plastic pollution prepared by a green team member in Stanmore Khoja faith community for the group in order to re-awaken their enthusiasm for green initiatives. - I also posted information on a resolution tabled for the annual general meeting in June 2019 by the members of the green team in Stanmore to phase out use of plastic cutlery in Stanmore community within six months by end of 2019 as an example of grass root-based initiative to stop plastic utilisation in the community.	
6 June 2019	-On 6 June 2019 the coordinator came up with the suggestion of introducing as trial project the stopping of use of plastic cutlery in the community Baligha youths club (attended by 30 girls) and during early morning prayers (attended by 15 senior persons) during Sundays at the mosque. -He envisaged sourcing 20 stainless steel plates and cups at the cost of £50 to £75 pounds. -The issues anticipated were washing the utensils in the mosque or at home and getting the participants of the club and Fajr prayers to bring their utensils for the events - but given the small numbers involved maximum 20 to 30 persons the coordinator felt that these two issues could be dealt with. -For the Baligha club the washing was done by the young lady in charge of the club. -The coordinator offered also to wash the used plates if needed. The club used a mixture of metal plates and paper plates for take away home by the kids. -The plates were stored at the home of coordinator. - I suggested a member of the Hujjat green team who had moved to Peterborough from Stanmore to help the coordinator with the initiatives. -The coordinator started off with purchase of 20 plates and incrementally increased by purchasing more cutlery namely to 80 big plates, 20 small plates and 3 bowls all funded by private donations.	

	-The management committee was not approached for funding since that involved some procedures and red tape to seek the Jamaat funding. - As at 7 July 2019 about 38 plastic plates had been saved by the club. -The Fajr prayer was plastic free as far as plates were concerned. -For tea they still used plastic cups. So the next move was to buy reusable cups to replace plastic disposable cups.	
July 2019	-In July 2019 the coordinator came up with the idea of extending the scheme of using metal plates on trial project to the weekly Seniors meetings in the mosque involving 25 persons in the gents side and similar number on ladies side -This was trialled on the gents side on 20 July 2019 with help of a seniors member and was used in the event in July 2019 successfully without any problems. Some seniors washed their own metal plates and very little food leftover food was binned. The seniors secretary was receptive to this idea. -On 21 July 2019 133 metal plates and six bowls were used in seniors event. -Encouraged by the success in the trial in seniors event the coordinator wanted to initiate the scheme in the seniors on permanent basis. -The coordinator sourced 30 extra plates and 3 further bowls sourced for trial to bring the total to 50 big and 20 small plates total 70. -He wanted to explore the possibility of funding one thousand pounds to buy 1000 metal plates to extend the scheme to the main hall food events. -This matter required discussions with the Executive committee.	
5 August 2019	-On 5 August 2019 the coordinator submitted a written brief to the MC to try to dispel misunderstandings about the green initiatives and the scheme among the members of the Management Committee and the community that he felt existed. - By way of background he reminded the MC of the background of the formation of the discussion group HIC Environment Team. -It was formed during the time of the previous Jamaat Secretariat, and the members of the group	

	included MC committee members and the President . -The group had not been active for two years, and he had been appointed as the coordinator of the environment group and was initiating the scheme after reviewing options and in consultation with and on behalf the group as an initial step. -He explained in the brief the initiative had resulted in unexpected and quick positive outcomes results in a few months time. -He explained in the brief that the scheme had been used in the Fajr program successfully without any disruption. -It had been used in ladies and gents senior program successfully without any disruption. It had been used in Baligha club successfully. -It had involved use of 80 big plates, 20 small plates and 3 bowls which had been sourced by private donors. -The result of the scheme was that 253 plastic plate have been saved, waste in the bins has been reduced and a positive step has been taken to save the planet. -He also explained that the scheme had been agreed with the discussion group Peterborough Environment group which had come to the view after considering various options that the stainless steel plates were the best option for the community and that it had been successful. -He outlined his proposal to request get MC to buy in to upscaling and funding the final stage of the scheme of acquiring 900 / 920 plates + bowls + tea cups. -He was amenable to discussions to find best solution with MC. ("I am still looking for the best option"). - He wanted to make the MC aware that he had considered the various options available and in his view the stainless steel was the most durable and long term solution following discussion with the Environment discussion group. -He was aware that washing of large volumes of metal cutlery was a challenge but he felt that that it could be overcome.	
8-13 August 2019	-The coordinator had a meeting with MC on 8 August 2019 and an official go ahead was given by the	-The MC did not approve the metal cutlery scheme for seniors events.

	MC on both Baligha club and Fajr programme. -The discussion group was thus successful in introducing stainless steel cutlery plate and cup for the Jamaats Fajr and Baligha clubs events. -On 10 August 2019: Following the meeting the coordinator submitted to the MC a basic financial analysis for extension of the scheme to the main hall food events (Niyaz) for the entire community. -This analysis and extension of the scheme covered the full Niyaz for some 500-750 persons and included the investment in an industrial dishwasher, which washes 540 plates per hour. -The basic analysis showed that the investment would be self sustaining in 2 years in terms of costs and savings on existing community expenditure, and was financially worthwhile for consideration, and in the best long term interest of the Jamaat and green considerations.	-The scheme for seniors was trialled on two occasions for gents and ladies sides of the seniors programme using 80 metal plates and was seen by the seniors participating and the coordinator as without any issues and successful. -The coordinator requested slot to speak at the seniors event to talk about the plates to give them a positive message on environment. -It would seem the MC was uncertain about the implications of the scheme and had mixed views about the scheme and this could not be organised. -Some of questions raised or implied by the leadership were questions such as was this initiative healthy or hygienic or was this initiative intended to stop tradition of customary religious food events in the mosque or what was the origin of this initiative and who was driving it -It would seem that in spite of my briefing to the community leadership at the start of the project in 2016 and 2017 and my talk to the community in 2017 and the various written campaigns to recruit participants for the discussion group the origin and nature of the project was not clear to the community or leadership. The regular two yearly elections and the consequent change of MC because of elections and the invisibility and low profile of the discussion group to the community could have been contributory factors to the leadership and community not being cognisant of the origin and purpose the research project. -There was also a concern as to whether the scheme would divide opinions among members of the community and create governance issues for the MC by bypassing the MC members. -Thus it would appear that there were mixed views about this scheme and there was no consensus on this matter. - Although the meeting between the coordinator and the MC helped to clarify these misconceptions it would appear that the MC nonetheless wishes to proceed incrementally and cautiously and did not want to extend the scheme to seniors food
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		event or the main community food events MC gave its approval for the Baligha club and Fajr prayers food events involving much smaller number of people of the community.
13 August 2019	-13 August 2019: during a visit to Peterborough on a holiday break I had occasion to meet in person the president of the community on 13 August 2019 in a seniors event organised by Peterborough where the new mosque construction project of Peterborough was being showcased and presented for support and finding. - I spoke to the president and suggested that the new mosque project consider a range of the eco initiatives in the medium to long term. I gave by way of examples the following measures namely -(a). Industrial dishwasher in centre and all requisite space and other facilities for same; -(b). plumbing facilities for dishwasher; -(c). Ways of recycling purifying and reuse of wudhu water; -(d). Solar panels to use and generate electricity; -(e). Sensors for lighting in centre; -(f). Car permit system for each family to avoid multiple cars from same household to reduce carbon imprint; -(g). Encouraging Car-pooling in community; -(h). Stopping purchase of Styrofoam and plastic cutlery for centre food events; -i) . Bring your own cutlery campaign; -(f). Switching to stainless steel or biodegradable cutlery;	-The reaction of the coordinator to my communication with the president was that this was too ambitious and not all of these initiatives could be achieved in the community. -He suggested that apart from the dishwasher (and stainless steel plates) which had been costed by him, further systematic research needs to be done incrementally on each item including financial analysis for each initiative (and the cost benefit for each item) which could be discussed further with in the discussion group.

	-g). Planting trees and establishing gardens in centre and in wider community; -h). Reducing beef and moderating between chicken and vegetarian menu for Niyaz for achieving reduction of methane in atmosphere and reduction of food waste. -I followed this conversation with a written note to the president for his reference and consideration.	
November 2019	-On 26/11/2019 I circulated on WhatsApp to the group a draft five year environment plan prepared by a young university educated religious priest in his thirties of Stanmore Khoja community in consultation with the members of the Stanmore community green team. -This was prepared for discussion and consideration and inputs by the stakeholder bodies and institutions operating in the Stanmore Khoja shia community. -This draft plan (still very much work in progress) was circulated by me to the Peterborough community group as a draft blueprint and template to make the community and the leadership think in terms of a long term sustainable environment plan for the community and to encourage it to develop a home grown development plan based on the circumstances and needs and requirements of the Peterborough community. - I intended through this draft to help spur the Peterborough discussion group and the Peterborough community MC to take long term view and develop green measures for the community. -My hope was that the leadership or some members of MC could be interested to change their thinking and develop long term environmental vision. -The informal reaction from some of the discussion group members was that this idea was very ambitious in the medium to short term.	
December 2019	-As at December 2019 I have not been informed of any feedback and reaction given by the Peterborough leadership to the draft environment plan. I do not know if	

	the draft plan was read, mentioned to or discussed by the Peterborough MC in their meetings to date. -There is no information to suggest that the idea of the environmental plan has so far been considered by the Peterborough community leadership.	
Next steps	-The next step envisaged by me is that once the environment plan is finalised and accepted by the stakeholders and leadership in Stanmore Khoja community I would like to recommend the finalised draft plan as a possible template to COEJ as a recommendation for consideration by its member communities arising from the research project.	
Final outcomes	-Apart from the adoption of stainless steel utensils for the Baligha youth club and Fajr (early morning) prayers food events the community has not introduced any green measure in the main events of the mosque so far. - Some discussions have taken place in a meeting of the MC to draw their attention to need for green initiatives in the centre. - However the community still uses plastic and Styrofoam cutlery as its default cheaper cutlery in the centre.	

Figure A5
Field work in Portsmouth faith Community
Portsmouth Community

Date of the activity	Description of activity	Further details
13 December 2016	-Held the first and informal meeting with interested invitees -14 persons attended six women and eight men - Meeting was set up with help of local coordinator and EC member from the Portsmouth community . - obtained views and feedback on the research project and this indicated interest in being recruited as participants of the discussion group to be formed - enthusiastic response and expression of keen interest in the research project from attendees - a number of questions were raised about the faith aspects and modalities of the project and the proposed methodology of the research. - the meeting was audio recorded and also the summary minutes were prepared by the local coordinator .	
14 January 2017	-The discussion group under the name Wessex Environment Group was formed by the coordinator on 14 January 2017 with 16 participants (five women and 11 men). -The group created a WhatsApp group of the participants and myself run by the local coordinator.	The group now has 17 participants including me (five women and 12 men). - A key member of EC and the community priest were added to the WhatsApp group. - On 30 January 2018 three more community members joined the discussion group and whatsapp Group.
31 January 2017	-I sent a draft questionnaire on 31 January to group for them - to familiarise themselves with the research questions -and to think about what they considered the existing problematic community environmental practices to be -and what steps should be taken -and their views on what would be the key motivators for making this change.	-For the group's general reading I suggested reading GCSE notes prepared by WF on environment and reading -and sharing of the news and information and developments from internet and social media among the group. -The group started to share on WhatsApp information, materials and news on environment which they came across.
August 2017	-Obtained University approval for the research. - I briefed the Portsmouth community leadership on the research project in writing - and obtained their clearance to proceed with fieldwork in the community.	-As September and October 2017 were busy periods for the community because of Muharram religious commemorations - I began project fieldwork in November 2017. -There was delay in arranging and setting up face to face meeting of the participants at the Al Mahdi Community Centre in Portsmouth because of community functions

		in our religious calendar eg Muharram and Ramadan and availability and various commitments of participants. -Group members included working mothers and professionals some commuting long distances from outside town to Portsmouth
20 November 2017	-Held first formal meeting - attended by eight participants three women and five men - including vice president of the Jamaat	-I circulated to them the consent letter for their information - and obtained their consent to participation in these discussion group meetings. -I discussed with the group my research questions indicated in the consent letter and obtained their views, comments and inputs during the discussion group meetings.
30 January 2018	-The second face to face group meeting was fixed for 12 February 2018 all were asked to review the research questions and send in their responses and views to the coordinator.	
12 February 2018	- Held second discussion group meeting -attended by nine participants including two new participants from the community -In February 2018 there group discussions on (a) what was actually being recycled by UK local authorities in the disposable waste thrown by populace and the need for more composting to be done of compostable waste (b) using religious functions at the Centre in Ayame Fatimiyya (held on three to five successive nights) to promote BYOM and plates and raise awareness and campaign in community gatherings again use of plastics at the centre (c) using five minutes slot every day during the functions to talk about protecting environment. - One group member a lady suggested and volunteered to buy 150 stainless steel spoons (including large medium size and small tea spoons) for use in Mosque in memory of her deceased relatives and suggested her young son to give a five minute talk on environment to congregation.	-The need for education programme to raise awareness of the young and old of the community and to liaise with EC to get their support and in implementation of these initiatives was highlighted. -There was suggestion that all kitchen waste including vegetables and tea bags should be composted to serve as fertilisers for the community fruit trees and herb plants in the centre's vegetable and fruit garden at the back of the centre. - There was suggestion that EC should take a lead in making environment policy for the centre and find alternative to disposable plastic cutlery at the centre. -One participant's suggestion to use reusable nappies for new born baby at home instead of throwaway plastic nappies in order to reduce waste and there was support from another participant who was already using reusable nappies who offered willingness to advice as to how to implement this idea in practice and make it doable. -There was discussion about getting advice to start with green measures at home, workplace and then mosque. -Info was shared about severe water shortage in Cape town South Africa.
March 2018	-In March 2018 one group member attended a local church environmental event and share his learning from that event namely that "one major pollutant is my own self and I need to change and see what active steps I can take to make a difference to the environment - that religion and faith was the only hope to fight against commercialism and consumer	

	markets for products and services to feed our life styles". -A proposal from participant was made on WhatsApp to introduce reusable plates, cups and cutlery to add to silver spoons already donated by another group member earlier and get volunteers to help with Washing up used reusable plates and cutlery in the mosque. -Other suggestions made were to reduce water and energy waste, to reduce optimise number of car journeys by community members to the centre and bring about awareness by involving community madrassa children in assemblies -and look at the practice of dumping and disposal of old clothes.	
April 2018	-In April 2018 there was more group discussion on WhatsApp about introducing green initiatives for the Ramadan 2018 at the Al Mahdi centre namely BYOP/M -and encouraging community members to refuse to eat in Styrofoam cutlery -to encourage eating stainless thali, talking to children to encourage them to adopt eco friendly ways to be their habit, teaching children to bring own reusable cutlery , -to talk to congregation about damage done by plastics and Styrofoam pollution and what alternative cutlery could be used instead of plastics.	
22 April 2018	-On 22 April 2018 a landmark speech was made by Vice president announcing Jamaat decision to stop using plastic cutlery in the mosque . -This was done in a consultative manner at the end of a regular programme at the centre - first by a talk highlighting primarily the faith reasons for seeking to persuade the community to take responsibility for damage to oceans and marine life -highlighting plastic congestion as manifested by current science -and to stop use of plastics and encouraging them to BYO cutlery from home and washing	This process demonstrated impact and success of top down approach from local influential community leader used with consultative persuasive modalities. -The next solution adopted was to switch to biodegradable cutlery. -For the Ramadan 2018 the community leadership decided to switch to biodegradable cutlery for the community breaking fast (Iftar) food events in Ramadan 2018 (16 May to 16 June 2018) and the composting of used biodegradable cutlery in Jamaat community centre garden compost heap.

	them at the centre using community volunteers. -Then in the talk the congregation was asked if they would agree to Jamaat decision to stop plastics. - The congregation agreed and the decision was then announced to stop using plastics and having biodegradables for those not bringing own cutlery from home.	
29 April 2018	- the community vice president and group member organised session for planting potatoes and vegetables in the community gardens one morning with the help of an experienced outside gardener - this session activity was filmed and videoed for community viewing. -This was the first planting of vegetables and potatoes in the community garden area -and is expected to yield 20 kilos of potatoes. -The group member is an avid gardener himself practising and encouraging organic planting methods in his home garden. - He grows vegetables in his own green house and then once grown transfers them to the centre's Al Mahdi garden.	-In April 2018 members were first asked to bring their extra porcelain and glass and metal cutlery from their homes and donate them to the mosque. Many community members donated their extra cutlery ware and brought to the centre to be stored there. -This donated cutlery was used in the community meals and tea events and washed in the centre's an industrial dishwasher by volunteers. -This was not sustainable because of lack of sufficient washing facilities in the centre.
May 2018 (Ramadan 2018)	-Jamaat leadership initiated and implemented green measure namely to completely stop the use of plastic and Styrofoam cutlery in the mosque. -This decision was taken by the Executive committee after consultation with members of the community.-2 May 2018 - there was discussion about disadvantages (cons) of using plastic cutlery even if reusable. -Portsmouth community EC decided not to use reusable plastics but went for reusable and sustainable dining ware and acquired for the community 200+ porcelain dinner plates and mugs and tumbler glassware through donations.	-The current practice is to promote and encourage 'bring you own utensils' initiative, whereby community members would bring their own plates and mugs for Iftaar and other food events. -in 2019 the proportion of people bringing their own utensils saw an uptake of over 50% across the community. -This has considerably reduced the waste that is generated in the centre. -To help with this initiative further, in 2019 the Jamaat purchased reusable containers (microwave/dishwasher/freezer safe!) with lids, which were made available to members for 50p. -The presence of a lid made more practical for people to carry to and from mosque and decreased our usage of disposables even further. -Also metal spoons were provided by centre For those who did not or were not able to bring their own plate or container, biodegradable single-use plates and cups were provided by the Centre.
29 May 2018 -	-Further green ideas discussed on the WhatsApp group	

	- in addition to plastics need to consider separating cardboard paper and plastic bottles dumped in general waste instead of recycling - need for holistic approach and separate different types of waste in different bins e.g. food waste, cardboard, plastic bottles at the community centre ourselves instead of relying local authority to separate these types of waste from the mixed waste general and recycling bins at the centre. -Currently all recyclable waste is placed in same bin at the centre - -but also need to consider additional cost of this separation at centre and increased workload for the mosque volunteers.	
17 June 2018	-Radio Talk on local radio channel about going green in Mehdi centre and switching from throw away plastics to reusable cutlery and biodegradables in the centre given by Wessex environment group local coordinator. - - Proposal by group member to invite group to take part in beach clean up in near Solent in Portsmouth organised by local school combined with a family picnic. -Similar idea for park clean up exercise suggested.	
2 October 2018	-current eco practices in Al Mehdi centre during Ramada 2018 included metal spoons provided by centre and good number of congregation bringing own cutlery for weekend iftar but the number dropped after Ramadan ended. -On 10 October 2018 the estimate by one lady group member was that that during last religious food event 60% to 70% ladies brought own cutlery -and the biodegradable cups and metal spoons provided by centre.	
2019 -2020	-I envisaged holding another meeting of the group but was not able to do so due to availability constraints. -However Group discussions with sharing of information, initiatives and views of	

	participants have continued on the whatsapp group. - Record of the WhatsApp group discussions from the outset have been stored and saved.	
26 November 2019	-I circulated to the Wessex group a draft five year environment plan which the green team in Stanmore had prepared - -I invited comments and feedback by the Wessex group and consideration of the community leadership. - this preliminary draft HGI five year road map and plan 2020-2025 was being developed by HGI in Stanmore On 31 December 2019 - I explained the origin of the draft HGI five year plan being tailored to meet needs and context of a big community like Stanmore. -It is a draft template and a possible structure and was derived from an environment plan template prepared for a local authority in England. - It needs to be tailored to specific needs of each of the community wishing to make such road map plan. -It was well received by the Wessex group and is being considered by the group and leadership as a possible framework and template to adapt to needs of the community. -On 30 December 2019 - feedback from local coordinator on road map that it is a good way to plan for the future and suggestion given that group members with community members should discuss and develop proposals for such road map -and five-year plan for consideration by the EC in Portsmouth.	

Figure A6
Field work in Stanmore Hujjat faith Community
Stanmore Hujjat Community

Date	Field work activity	Further details
April 2017	-In Stanmore the campaign for going green started in 2017 in the holy month of Ramadan. - I set up an impromptu group which was later known as Hujjat Green initiatives (HGI) comprising volunteers from the Stanmore community who signed up to help with environmental initiatives. -The signing up followed a short talk on plastic pollution given by me to the community in the mosque at the Ramadan lectures event to launch the drive to “bring your own cup for iftar tea” in mosque in Ramadan 2017. - The object of HGI became to develop green initiatives at Hujjat centre. - When my research project was finalised I decided to utilise this volunteer team as one of my research project discussion group and part of my field work. - I informed them of my research project and obtained their consent to participate in the research project.	
Ramadan April 2017	-In 2017 the group promoted BYO bring your own cutlery campaign and sale of mosque logo branded reusable cup for tea. -At that time the initiative introduced was to buy the reusable cup and bring your own reusable mug for drinking tea and water in order to stop using plastic and Styrofoam cups. -The initiative was more successful among ladies and children then the men side. - 250 mugs were purchased by community members and were sold out. -The outcome however was that while around 20 to 30 ladies and children brought the reusable cutlery from home every night to mosque for Ramadan iftar, -in the gents section hardly five persons did so.	
22 February 2018	-After Ramadan April 2017 the group became dormant and there were no significant developments on this front. -In order to revive the group activities, I suggested a meeting of the Hujjat green initiative	-After the election of new EC in 2018 the HGI had a meeting with the person in EC responsible for environmental matters. - I helped in facilitating this meeting by speaking to the new president and he suggested

	group on 22 Feb 2018 at Stanmore centre. - This was the first face to face meeting of group members to inform them of my research project and the environment initiatives that could be promoted in the community. -The group discussed the various environmental measures proposed by the group members and the conduct of an environment audit for the centre -At this meeting, the group appointed two coordinators for Ladies side and two for Gents side to help drive and implement the initiatives.	contacting the EC member responsible for environmental matters designated by the EC. - We agreed that we should meet as green group with group members and the EC representative to develop ideas for improvements which can be considered by EC. -The group selected its head and coordinator from among the community. I participated as a member and facilitator in this group. -The group initially operated as email group until 2018 - and later as a WhatsApp group of the members was set up in 2018. -The group held several meetings with EC representative in attendance from 2018.
Ramadan 2018	-In 2018 the Group initiatives introduced were to “bring your own reusable cutlery” drive and the group sale of set of reusable cup, plate and bottle; -A switch to bio degradable cutlery for iftar food events in Ramadan 2018; -reducing and collecting food waste to be taken by council for energy generation; - the stacking of plates and cutlery to reduce number of rubbish bags used to throw as garbage. -An initiative of EC in September 2018 was the installation of a water fountain in the courtyard of the mosque (at the cost of £1200) donated by a donor to encourage members to bring reusable water bottles and fill up from the fountain.	
April 2018	-The EC representative set up a meeting with EC for Group to discuss their ideas and strategy. -This included a feasibility study developed by a group member of installing an industrial dishwasher for washing reusable cutlery in the mosque. -Another idea was to switch to biodegradables for one Ramadan as pilot project. -Group met in April 2018. They were given go ahead to develop bio degradable option provided they could raise funds themselves from community donors for the incremental cost of the upgrade to biodegradables amounting to £4800 to pounds 5000 for the month of Ramadan.	

	-EC wanted the group to gauge the appetite of community members to switch to higher cost biodegradable option. - Group organised a talk to community with EC approval to explain the rationale behind the switch to biodegradables and seeking to raise money for the incremental cost. The fund raising by the group was successful and there was lots of enthusiasm for the switch and sufficient money was raised. -With this show of enthusiasm from community members the EC has decided to go for bio degradable for Ramadan May 2018 as a pilot and then consider dishwasher option for the following Ramadan 2019. - Other measures adopted were separating non edible food waste and having it collected by Local Council as food waste that is burnt for energy generation. -Another measure being considered in the long term was the switch to purchase of industrial dishwasher for the mosque so that proper porcelain and glass cutlery could be used and washed in the mosque	
January 2018	-On 17 January 2018, I gave talk on plastic waste to the seniors section members to sensitise them on environment issues in the Stanmore centre of our community in London.	
May 2019	-In Ramadan May 2019 more green initiatives were introduced in Stanmore mosque. -These were: -(a) Orange colour collapsible silicon cups for tea were sold for £2 each- good take up in ladies and gents sections and many cups were sold. -(b) green desks in the mosque courtyard manned by HGI were set up to talk to community members about green initiatives - and environmental issues and environmental slides were shown on the mosque screens and environment awareness raising posters were posted in ladies and gents sections -(c) liaison with the Jamaat Priest man and lady priest (Aalim and Aalimah) to help push awareness of the environmental issues	

	among men and women in the community- -(d) introduction of resolution in the coming AGM in June 2019 to stop use of plastic cutlery in all community and private hire functions in the Stanmore centre.	
June 2019	-In June 2019 the group attempted to sensitise and mobilise community members to support Annual General meeting resolution by green team to require EC to stop using plastic and Styrofoam cutlery in Stanmore community. -This resolution was tabled and discussed in the AGM by community members. -The Resolution was however withdrawn by green team at request of EC in return for undertaking to seek ways of stopping plastic and Styrofoam utilisation in the centre within a grace period of six months by December 2019 in Stanmore.	
July 2019	-At a HGI meeting held on 11 July 2019 the green team among several other proposals for the month of Muharram falling in September 2019 -The group proposed a cup levy/donation of 50 pence for persons not bringing their own reusable cups to drink tea in for using plastic cup. - This proposal was submitted and presented in August 2019 in writing to the EC and EC members present approved a cup levy of 10 Pence. - I attended the meeting with EC and presented the proposal as no other green team members were available to attend and present. -There was some confusion whether this would be a compulsory levy or a voluntary levy. -I presented it as a voluntary levy. However when the initiative was announced it came across and was understood by the congregation as a compulsory levy. - It was welcomed by some community members but it was resisted by other members. -The president decided to cancel the levy initiative in view of this resistance from some members.	
	-One initiative explored by some EC members was purchase of cheap biodegradable cutlery from Far East and China in large	

	quantities in huge container to substitute for the plastics. -The HGI were not in agreement with this proposed solution as it would not solve problem of overall throwaway waste generated by the centre. -HGI felt that the community should move completely from creating any waste whether plastic or biodegradable and were in favour of the solution of using reusable cutlery and either having them washed by paid workers or by installation of industrial dishwasher in the centre - the group was against using large amounts of biodegradables.	
August 2019	-The next green measures being considered is to move away from costly biodegradable cutlery and introduce ceramic china cutlery for the mosque and a big size industrial dishwasher (costing 75-100K pounds) to wash the china and ceramic cutlery at the centre thus obviating need for anyone to bring dinner cutlery to mosque from home.	
August 2019	-One ongoing long term initiative at the instance of the young resident Alim in which the HGI team is participating is to formulate a long term (five year) strategy working with all the Jamaat institutions to deliver education and awareness to community members -this would involve using the youths, seniors, two Madrassas, Nursery, pulpit, EC, green team, volunteers, ladies committees, in conjunction and in cooperation with each other and help one another deliver their respective mandates. -The HGI had meeting with two bodies under Jamaat namely Al Hadi Youth body and Stanmore young women's' body to discuss the draft plans for all the three bodies in August 2019. -This approach was suggested by the Resident Aalim who is keen to help the green initiatives and participates in the Green team WhatsApp discussions. -The resident priest who is a keen eco champion has been seeking to help HGI create a five year environmental plan for the community -and to liaise with other bodies under the umbrella of the Jamaat (who are also involved in creating	

	their own five year plans) to help each other in critiquing and reviewing the five year plans of these bodies	
2019 -2020	-One other idea being considered was the possible creation of new strategic green body under Jamaat EC where the existing HGI could continue to have a defined role of liaison with communities outside Hujjat on all green matters -and providing inputs to the strategic green body thus leaving the strategy and policy matters to the new body and creating different teams for different roles.	This idea has not been fully considered and thought through by the EC as yet.

Appendix 4
list of key codes and sub-codes used

First cycle coding

Grouping of codes and sub-codes and descriptions

Grouping of codes	sub-codes and descriptions
1. Group recruitment process	(a) Process of obtaining clearance for project from community leadership (b) community leadership clearance for the project
2. Group recruitment process - how easy or how difficult	(a) Participants' enthusiasm and commitment to the environment project (b) Participant group enthusiasm for the research project (c) Interaction among group participants
3. Evaluation of Community environment practices	(a) perceptions about environmental matters in the community (b) what role seen by community members for faith and religious beliefs in making the change (c) Identification of key community environmental practices to focus on (d) Utilisation of plastic and Styrofoam cutlery in mosque food events
4. Obstacles to changing the community practices	(a) Entrenched practice of using plastic cutlery (b) Lack of facilities to wash in the centre the used soiled reusable cutlery (c) Inconvenience of taking unwashed soiled reusable cutlery home to wash (d) Long-established systems of community volunteers for serving food and drinks and disposal of used cutlery (e) most convenient and cheap and affordable (f) lack of awareness of impact of environmental degradation in the community among older adults and seniors (g) greater financial cost of eco-friendly alternatives like biodegradable or hard paper products (h) lack of sufficient motivation to make the change
5. Physical and logistical constraints	(a) Logistic difficulties in switching to reusable cutlery in the mosque (b) Obstacles and constraints posed by planned Mosque reconstruction and extension building works in the mosque building (c) Lack of suitable and sufficient washing and related facilities in the mosque (d) Physical constraints and limitations in mosque premises (e) Logistics and inconvenience of bringing the reusable cutlery from home (f) after use in the mosque, taking back soiled and used cutlery to wash at home (g) Impediments to implementing industrial dish washer solution
6. Remedial measures for improvements in community practices and Green initiatives discussed and explored in the groups	(a) community awareness-building measures (b) Reducing and stopping utilisation of plastic and Styrofoam cutlery in the mosque

	(c) Identifying alternatives to plastic cutlery utilisation (d) Energy and water utilisation (f) Extent of meat consumption in community food events (g) Community food waste and other waste disposal practices (h) Private car transportation to mosque and carbon footprint (i) Carpooling and organising bus or other group transport for community members to come to the mosque (J) to save energy and reduce the carbon footprint on transport (k) Overall environmental audit of mosques (l) Ideas about practical things to initiate, such as composting for mosque food vegetarian peels (m) Pollution of clothing waste - generated by community at home (n) Recycling of used plastic and paper cutlery as an option (o) Waste disposal of mosque-generated waste (p) Exploring the feasibility of moving to biodegradables from plastics for Ramadan iftaar (q) Exploring alternatives of recyclable cutlery (r) BYO cutlery campaigns in the mosque (s) Exploring the idea of selling reusable hard plastic cups and plate and silicon cup cutlery to the community in the context of the BYO drive (u) How to change community mindset (v) Comparing costs incurred by mosques for plastic disposables, biodegradables and reusable cutlery (w) Exploring the feasibility of moving to biodegradables from plastics for Ramadan iftaar
7. Strategic planning and development plan	(a) Long-term plan and strategy (b) Overall and baseline environmental audit of mosques (c) Promoting small and incremental changes, e.g. solar panels (d) Long-term environmental strategy and development
8. Modalities of change	(a) Which approach for change will work (b) what would motivate social change in community practices (c) which approach is needed top down, bottom up or hybrid both together (d) buy-in on the green initiatives from the leadership of the community (e) buy-in from community volunteers (f) buy-in from community members (g) buy in community seniors
9. Difference in attitude towards environment and change	(a) Generational factors (b) Among different age groups, youths, elders and seniors (c) Gender factor - different among men and women
10. Role of faith, religious beliefs and traditions in motivating change	(a) what role seen by community members for faith and religious beliefs in making the change (b) Inspiring the congregation to faith motivation (c) promoting a deeper understanding of what Islam says about protection of the environment

	(d) role of faith in shaping eco-responsibility of human beings (e) Using the platform of mosque lectures, sermons and majlises to raise awareness about the environment (f) Use of platform of debates between staff and students of community madrassah to raise awareness among parents and community members (g) Asking the resident priest to speak about the environmental issues in the centre (h) Using occasions such as Earth Hour, World environment day, and Dahwul Ardh according to Muslim traditions to raise awareness among the community congregation (i) Use of platform of debates between staff and students of community madrassah to raise awareness among parents and community members
11. Impact of social media and clips on plastic pollution on raising community awareness	(a) Use of social media like you tube etc, for awareness-building messages (b) Visual impact of plastic pollution and environmental degradation on marine life and the Earth (c) Demonstration effect of Sir David Attenborough's attendance at the Glastonbury festival in June 2019 and the event being plastic-free as a model to pursue
12. Demonstration effect of other project communities or Khoja communities switching from plastics and initiating green measures	(a) impact and demonstration effect of green measures initiated and implemented by other project communities of inquiry and other khoja communities in other western countries, e.g. Haydery, Portsmouth, Stanmore, Toronto (b) Impact of Portsmouth community going plastic free in Ramadan May 2018 (c) Impact of Stanmore community trialling switch to biodegradables from plastic during Ramadan 2018 (d) impact of Haydery, Paris, Portsmouth Khoja Shia communities switching from plastic cutlery to biodegradable or reusable cutlery (e) Initiatives from regional bodies like COEJ at the request of European member Jamaats to facilitate discounted bulk buying of biodegradables
13. Collaboration and liaison with external bodies and organisations	(a) interaction with external environmental research bodies (b) Collaboration with Earth watch as the partner of Birmingham University and its encompass project -undertaken by Dr Carl Stevenson, Geology lecturer, Geosystems research group, earth sciences, School of Geography, Earth and Environmental sciences and its project on plastic pollution (c) interaction and green activities with neighbouring community organisations and mosques (d) interaction with external environmental research bodies (e) Collaboration with Plastic free Mosely - friends of Earth- Birmingham footprints - involvement in the promotion of climate emergency declaration in Birmingham

	(f) Participating in the cleaner air for Birmingham initiative by the Birmingham council (g) Participating in plastic-free iftar in Ramadan with neighbouring mosques organised by Sultan Bahu Trust in Birmingham (h) Effort to organise and hold workshops showcasing environmental initiatives and promoting good practices in collaboration with neighbouring mosques and external eco organisations (i) interaction and green activities with neighbouring community organisations and mosques such as Sultan Bahu Trust, UKIM mosque, Springbrook mosque and Islamic centre, Green plastic free street iftar in Ramadan, visit to Cambridge eco mosque, and visit to Hindu community temple and organising and participating in Christmas lunch for the homeless. (j) attendance by a group member in meetings of Zero carbon house to learn about being zero carbon (k) collaboration with Sultan Bahu Trust and neighbouring mosques on eco matters, cleaning and practical environmental activities for kids carried out in the mosque - the planting of biodegradable pencils containing seeds for madrassa and nursery children (l) participating in a neighbourhood mosque project to set up a family community garden in the Balsall Heath area to encourage families to participate in nature-loving activities with children and grow vegetables and fruits (m) Tree planting drive initiated by “who is Hussein (to commemorate the supreme Shia Martyr for the shia communities and grandson of Holy Prophet) ” community organisation. (n) Initiatives by Birmingham community nursery to promote planting vegetables and fruits activities among Nursery kids (o) extending the ongoing collaboration with the Birmingham University for nursery children in doing simple and practical science experiments - to teaching children and promoting recycling of paper and plastics activities among the children
14. Impact of EC presence in the discussion group through a representative	(a) Support and buy-in of community leadership What green measures were supported, facilitated, initiated and implemented by EC leadership (b) Participation of EC representatives in the community discussion group (c) adoption of project discussion group as EC committee by EC leadership - In Birmingham, change of name of the group from KSIMCB going green to KSIMCB (Community Social responsibility) CSR (d) Amalgamation of the research project discussion group into an EC sub-committee in Birmingham (e) Autonomous working of the discussion group under the coordination of EC representative Green initiatives and measures supported, facilitated, initiated and implemented by EC leadership in the community (f) MR agency in the project discussion groups - intervention - monitoring - sharing information from other groups -

15. Evaluation of initiatives discussed, trialled and implemented and Improvements in community green practices	(a) Use of sports events to promote going plastic-free - Plastic-free initiative done by ladies at the Annual MAMT ladies sports event for UK and European Khoja communities held in Birmingham on 26 August 2019 (b) this was not done in the Gents' side of the same sports event, and plastic bottle and cutlery utilisation continued in their breakfast, lunch and dinner food events held over three days. (c) waste disposal of mosque-generated waste and use of a local waste disposal company that assures that all waste is either recycled or decomposed and used in making bricks (d) option to use collapsible cups and imposing a plastic levy of 10 to 50 pence (e) introduction of wooden spoons in Birmingham food events (f) use of raffle tickets scheme to monitor numbers bringing BYO and giving an incentive of prizes (g) Incentive scheme for children and adults bringing their own cutlery through reward chart registering and giving tickets to those participating in the scheme with an offer of prizes at the end of the Ramadan period (h) Bring Your Own cutlery drive (i) Evaluation of various initiatives trialled in the community (j) Modalities of bringing about change in communities (h) Recycling of used plastic or paper cutlery as an option (j) Plastic levy of 50 pence for the use of plastic plate and 25 P for plastic cup and spoon (k) Extent of the success of the initiatives trialled. (l) Extent of buy-in from seniors groups and their weekly meetings and food events in the community
16. Impact of Covid 19 lockdown on the research project	(a) Mosque shut down in Covid 19 lockdown period from 2020 to 2021 (b) Closure of mosques in lockdown (c) No face-to-face events (d) No close proximity food events (e) Niyaz distributed through home-to-home delivery of take-away containers (f) Online majlises and lectures on Zoom, Teams and other digital platforms

Appendix 5

Table of first cycle coding and themes in the data

Appendix 5

key themes emerging during the fieldwork in the communities, as shown in the results of the first cycle coding in tabular format.

Codes	Sub Codes	Essex	Birmingham	Leicester	Peterborough	Portsmouth	Stanmore	MR Comments
A. Group recruitment process								
	community leadership clearance for project	A.Was obtained easily and without difficulties	See point A.and In fact Birmingham community members asked for the project to include the community	See point A. and B. facilitated by the local coordinator from the community	See points A and B	See points A and B	See point A and C. direct approach to the community leadership	
	recruitment process	D. Was smooth and facilitated by local coordinator and EC leadership	See point D. E. local coordinator was member of EC leadership	See point D and E.	- There was difficulty in recruiting participants during initial period of one year after the holding of initial briefing meeting of December 2016 with potential participants invited by the local coordinator; - this was despite efforts and facilitation by local coordinator and my (MR) efforts to appeal directly to congregation by a talk on project and recruitment	See point D. There was interest in the project at the EC level.	- Was facilitated by a talk given by MR to the community on plastic pollution to congregation during Ramadan and thereafter once participants had signed up facilitated by the local coordinator selected by the members of the group. - This constituted the Stanmore Hujjat green Initiatives team	

					appeal at mosque event. - No specific active facilitative measures were taken by EC leadership for the recruitment. - Eventually after change of two local coordinators during the period 2017-2018 with the third coordinator in place a group of six members was formed in March 2018 under new coordinator.			
B. Participants enthusiasm and commitment								
	Group enthusiasm for project	F. High enthusiasm and interest in project	See point F.	See point F.	-Low enthusiasm for project in initial briefing meeting of December 2016 and lack of positive feedback -Once group was formed there was high enthusiasm for the project on part of members of group and the new third coordinator	See point F.	See point F.	
	Interaction within group	G. High level and active interaction	See point G.	See point G	Some intermittent interaction	See point G.	See point G.	

		among members face-to-face meetings and in WhatsApp group discussions			among members in the one face-to-face meeting and more interaction in the WhatsApp group discussions			
C.Evaluation of Community environment practices								
	Community perceptions about environment	H. Strong and passionate acknowledgment of duty to preserve environment by the group participants. But general community attitude of taking environment for granted and not thinking about environment by most community members	See point H.	See point H.	- See point H. - There was an acknowledgment of duty to preserve environment by the group participants.	See point H.	See point H.	
	Extent of community awareness	I. Considerable awareness of discussion about environmental degeneration and pollution based mainstream and social media information, messages and programmes among younger generation but not among seniors and elderly. Very little awareness	See point I.	See point I.	Little awareness and consideration of discussion about environmental degeneration and pollution based on mainstream and social media messages and programmes among most community members. - Some awareness among younger	J.High level of awareness of and interest in discussion about environmental degeneration and pollution based on mainstream and social media messages and programmes among younger and professional adults generation - but not among	See point J	

		among latter sections of community			generation but none among seniors and elderly. -Very little awareness among latter sections of community	seniors and elderly. -Very little awareness among latter sections of community		
	Identification of eco unfriendly practices in community	K. Extensive use of plastic cutlery in community food events; community food waste; mosque generated waste disposal;	See point K high meat consumption L. energy and water utilisation	See points K and L	See points K and L	See points K and L	See points K and L -high meat consumption.	
	Faith and religious teachings on environment	M. Strong acceptance among the group of the need to publicise, fully understand and appreciate faith teachings on environment and to implement them; community members not aware of these teachings; need to make all community members aware of these faith teachings	See point M	See point M	See point M	See point M N. Community members had not thought about these teachings in terms of their mosque practices;	See point M	
	Extensive utilisation of plastic cutlery and plastic material in mosque	O. Seen as the single foremost key issue facing community in terms of improving	See point O.	See point O.	See point O.	See point O.	See point O.	

		environmental practices; also use of disposable plastic water bottles in the centres either brought by members or served by the mosque to members;						
D.Obstacles to changing community practices								
	Entrenched practice	P. This practice dating from at least four to five decades since migrating to UK was strongly entrenched in community system of serving food and hot and cold drinks and was accepted and regarded by volunteers as the best and effective system for servicing the food events	See point P.	See point P	See point P	See point P	See point P	
	Convenient cheap and affordable	Q. Availability of cheap and affordable plastic cutlery in the UK society and market; eco friendly alternatives being three to four times more expensive; convenience	See point Q	See point Q	See point Q	See point Q	See point Q	

		factor to volunteers of not having wash these disposal cutlery						
	Lack of facilities in mosque to wash reusable cutlery	Essex community in 2010 had sold its previous mosque premises as part of their community project to build new purpose-built centre and pending the new centre being ready were using a local community centre halls in Ghallywood outside Chelmsford with limited facilities such as washing and other wash room facilities; so this was a major constraint to using reusable cutlery or undertaking other green measures whilst there.	Birmingham community during 2018-2019 was in process of planning and implementing rebuilding and reconstruction of their existing mosque premises. This has not begun in earnest except for a small part of the premises due to COVID related start up delays. The location and small number of washing facilities in the gents and ladies' halls and proximity of mosque kitchen to the few sinks was major constraint to using reusable cutlery.	R. The limited washing facilities in the gents and ladies halls and mosque kitchen was major constraint to using reusable cutlery.	The Peterborough community has had ongoing project of extending the centre and providing more facilities for members. This has continued during 2017-2019 and was a factor in the community leadership being reluctant to introduce reusable cutlery without adequate washing facilities. -See point R -this was thus major constraint to using reusable cutlery for the main congregation food events for the members numbering 750.	The presence of a small size dishwasher and number of washing facilities in the mosque sinks and kitchen relative to the smaller number of congregation attending the mosque made using reusable cutlery more feasible and this was introduced by the EC leadership in 2018 in combination with biodegradable cutlery.	See point R	
	Inconvenience of taking soiled reusable cutlery home to wash	S. Despite the inconvenience factor in Essex community the BYO campaign was well received in Ramadan 2018 and 2019 with most of the	See point S. -Despite many BYO campaigns the inconvenience factor of taking home soiled cutlery to wash deterred many from complying.	T. This factor affected compliance with the regular BYO campaigns in the community	In Peterborough community there were no community wide BYO campaigns and members used the mosque provided plastic	-Due to the small number of congregation attendees not more than 150 average and as the BYO campaigns provided for washing in the	See point T This factor hugely affected compliance with the regular BYO campaigns in the community with average attendance of 2000 people	

		regular member families bringing their own reusable cutlery. -The stats for Ramadan 2018 showed that from a usual number of about 2000 plastic plates the number dropped to about 700.	- but A small number however brought their own reusable cutlery especially among the women.		cutlery in normal manner.	mosque by those who brought BYO cutlery and by volunteers - so this factor did not apply and come into play	average in Ramadan. About 10 men and about 40 women and children brought their own reusable cutlery in 2018 and 2019 Ramadan.	
	Volunteers long established system of using and disposing plastic cutlery	U. This requires patience and persuasion to try to change the systems established and used by volunteers - Given that with BYO initiative plastic cutlery was still being used in mosque there was no change in practice actually required from volunteers	See point U	See point U	V. No change was attempted by EC leadership in modifying established system of volunteers	Change was made by decision of EC leadership after consulting the members and volunteers in open meeting as an EC decision for the community.	See point V. There was trialling of the use of biodegradable cutlery at the instance of the Hujjat Green initiative team in Ramadan 2018 - no other direct change was attempted by EC leadership in modifying established system of volunteers; - announcements about BYO campaigns were made in the mosque in Ramadan.	
	Higher financial cost of biodegradables .	X. The differential in cost of I to 4 times. This was a factor which affected the decision to switch to	See point X	See point X	EC leadership did not consider making the switch to biodegradables	See point X -The higher cost did not affect the decision of EC leadership to switch to reusables and using	See point X -This factor affected the decision to switch permanently to biodegradables by EC leadership after the one	This was a deterrence factor despite the mitigation of joint discounted bulk buying arrangement with UK suppliers of

		biodegradables by EC leadership				biodegradables only as back up.	month trial period in Ramadan 2018. -another factor was that no green gain was made in using biodegradables due to lack of composting	biodegradables offered by COEJ to member communities in 2019.
	Lack of awareness of environmental degradation and plastic pollution	Y. There was general lack of awareness of eco degradation and pollution among grass roots community members at large.	See point Y.	See point Y.	See point Y.	See point Y	See point Y	
	No sufficient motivation to make change	The temporary nature of the community centre venue , the financial costs and lack of awareness of faith teachings on environment affected the motivation to make change;	The planned rebuilding and reconstruction of mosque, the unsettling feeling of transferring mosque functions elsewhere and not being certain of when the move will take place, the financial costs and lack of awareness of faith teachings on environment affected the motivation to make change;	the financial costs and lack of awareness of faith teachings on environment affected the motivation to make change;	The ongoing extension building works to the mosque and the priority given to this by EC leadership, the financial costs and lack of awareness of faith teachings on environment affected the motivation to make change;	Change was made by the community to switch from plastics to reusables and biodegradables as backup.	The financial costs, the inability to compost biodegradables and the lack of awareness of faith teachings on environment at grass roots level affected the motivation to make change. EC leadership was influenced by negative feedback to switch to biodegradables by some community members as in absence of composting the general perception was that biodegradables	

							would be a waste of money.	
E. physical and logistic constraints								
	In progress and planned mosque reconstruction and extension works	Z. This was a major constraint	See point Z	This constraint did not apply	See point Z	This constraint did not apply	See point Z -For some period in 2018-2019 there was a project to purchase a big nearby property which will house all the necessary facilities including industrial dishwashers and other eco facilities. This did not come to fruition. This did not however constitute a constraint to ongoing functions of mosque which continued as usual.	
	Lack of sufficient washing facilities for BYO cutlery	AA. This was a major constraint to switching to reusables	See point AA	See point AA	This could have been a major constraint to switching to reusables but EC leadership did not in any case have this matter as its priority.	This constraint did not apply	See point AA	
	Space constraints and limitations in mosque premises	BB. This was a major constraint to switching to reusables	See point BB	Did not apply	This could have been a major constraint to switching to reusables but EC leadership did not in any case	Did not play a major role	See point BB	

					have this matter as its priority.			
	Not sufficient space or plumbing facility for dedicated industrial dishwasher facility	CC. This was a major constraint to switching to reusables	See point CC	Did not apply	This could be a major constraint to switching to reusables though EC leadership was not at that time considering the option of dish washer in the short or medium term.	Did not play a major role. The centre has already a medium size dishwasher.	See point CC	
F.Environmental Improvement measures discussed and explored								
	Community awareness building	DD. Done through lectures, talks and announcements	See point DD. EE. Also showing you tube clips on environmental pollution; - use of raffle tickets and prizes to encourage BYO	See points DD and EE	Apart from a talk from me in main mosque programme, not undertaken by community leadership in a main programme. group local coordinator attempted awareness raising by in meetings with EC and seniors	See points DD and EE	See points DD and EE -Also Hujjat green initiative group's stalls for one to one conversations and digital and hard copy posters on environment,	
	BYO cutlery campaigns in mosque	FF. Undertaken by the group with support from community leadership	GG. Undertaken by community leadership	See point GG	Not undertaken by community leadership	See point GG	See point FF and GG	
	Alternatives to plastic cutlery	HH. Considered and discussed; BYO promoted	See point HH	See point HH	-Metal cutlery at instance of discussion group considered and permitted by community leadership for small limited	See point HH Considered and implemented biodegradables and reusable cutlery	Trialled biodegradable cutlery for Ramadan 2018	

					programmes such seniors dawn prayers programme and Baligha youths programmes ; -these programmes have small attendances not exceeding 30 to 40 persons			
	Selling reusable cutlery mosque logo as part of BYO	II. Considered but not undertaken	Considered and implemented to a small extent for seniors and other members	See point II	Not undertaken for general membership; metal cutlery purchased by private donation and provided to the seniors and youths programme	See point II	Considered and initiated and undertaken in the community	
	Community food waste and other waste disposal	JJ. Measures taken to reduce mosque waste through stacking plastic plates resulting in reduction of numbers of black bin bags being put out for council waste collection; measures taken for reducing food waste	See point JJ Also engaging waste disposal contractors who assured community that waste is not sent to dump but is either recycled or decomposed to make bricks etc.	See point JJ - Measures taken to reduce food and other waste	Specific measures not undertaken apart from their usual ways of dealing with mosque waste	Seepoint JJ biodegradables composted	See point JJ -food waste separated and collected separately in special bin by council for energy generation	
	Environmental audit of mosque	KK. Not considered at this stage given temporary venue; postponed to when community moves to rebuilt purpose built	KK. Not considered at this stage; postponed to when the new mosque is reconstructed	Considered for plan in future	May be considered when the extension works are completed	Considered possibly as part of long term environment development plan for future	Being considered at present by Hujjat green strategy team as part of long term environment plan	

		mosque centre in 2020 ; Community has now moved to new premises						
	Arranging group transport for members to mosque	LL. Not considered at present	Considered for plan in future	See point LL	See point LL	See point LL Considered for plan in future	See point LL Considered for plan in future	
	Recycling of mosque plastic and other waste	MM. Not considered at present	Being done by waste disposal contractors engaged by mosque	See point MM	See point MM	See point MM	See point MM	
	Reducing meat consumption in food events	NN. Not considered at present	See point NN In future plan	See point NN	See point NN	See point NN	See point NN	
G. strategic planning and development plan								
	Baseline environmental audit	OO. Not considered at present - being looked at in the new mosque planning	See point OO	See point OO	See point OO	See point OO	See point OO	
	Long term plan and strategy	PP. not at present Will be considered in new premises	See point PP -Will be considered in new premises	See point PP	See point PP	See point PP In future plan	Plan and strategy being developed at present	
	Modalities of change that work in community	QQ Both Bottom up and top down	See point QQ Bottom up and top down	See point QQ Bottom up and top down	See point QQ Bottom up and top down	See point QQ Bottom up and top down	See point QQ Bottom up and top down	
	Securing buy in from all key groups of community members	RR .Has been relatively easier in small community of Essex but still requires lead time to develop consensus	SS Has not been an easy process; requires lead time	See point SS Has not been an easy process; requires lead time	See point SS Has not been an easy process; requires lead time	See point RR Has been relatively easier in small community of Portsmouth but still requires lead time	See point SS Has not been an easy process; requires lead time	

	Generational and age group factors	TT. Youths and young adults and professionals are more amenable to the change in thinking about environment; there is longer lead time and process and persuasion required for older persons and seniors	See point TT	See point TT	There is little or less enthusiasm for environmental issues among youths and young adults and professionals as well as older generations; A longer process of awareness building and persuasion required for all age groups in the community.	There is enthusiasm and awareness among all groups in Portsmouth community	See point TT	
	Gender factor	UU. Women are more enthusiastic and passionate about eco pollution and are driving the environmental initiatives in the community	See point UU	See point UU	There is more enthusiasm among women but given the lack of support from EC leadership there is no avenue to demonstrate their drive for environment. The youths programme run by young women showed greater willingness to change to metal cutlery than from the older members.	See point UU	See point UU	
H. faith as change agent and driver								
	Role seen by community members for faith	VV. A key central role seen for faith teachings	See point VV	See point VV	See point VV	See point VV	See point VV	

	Modalities of faith motivation in community	XX. Mosque lectures, sermons and awareness raising faith preaching by community Alim and preacher. highlighting personal individual responsibility for safeguarding environment; debates among youths, students and parents of community madrassah and members of community, Using occasions such as Earth Hour, World environment day, Dahwul Ardh (spreading of earth mass from centre point of Kaaba) according to Muslim traditions to raise awareness among community congregation; teaching children at nursery school about nature, plants and flowers and environment and faith;	See point XX Specific Initiatives by Birmingham community nursery to promote planting vegetables and fruits activities among Nursery kids	See point XX	See point XX	See point XX	See point XX	
I. impact of social media for								

awareness building								
	You tube clips on environmental and plastic pollution	YY. Immense impact of you tubes, videos, documentaries and other materials on main stream and social media on community group and all members	See point YY	See point YY	See point YY - Would have had. immense impact if shown on main events in the mosque to members and in community schools to students and parents	See point YY	See point YY	
J.Demonstration effect of green initiatives of other communities		ZZ. There was demonstration effect and impact of green measures initiated and implemented by other project communities of inquiry and other Khoja communities in UK and other western countries e.g. Haydery, Portsmouth, Stanmore, Toronto; Impact of Portsmouth community going plastic free in Ramadan May 2018; Impact of Stanmore community trialling switch to biodegradables from plastic during Ramadan 2018;	See point ZZ	See point ZZ	See point ZZ There was some discussion of some of these developments in WhatsApp group discussions.	See point ZZ	See point ZZ	

		This demonstration effect of Haydery, Paris, Portsmouth Khoja Shia communities switching from plastic cutlery to biodegradable or reusable cutlery. Would have been more if publicised by the community leadership in main programmes. The above were highlighted and discussed in whatsapp group and face to face meetings						
k.Collaboration and liaison with external bodies and organisations		AAA. Not much collaboration and liaison with external environmental research and proactive organisations. - Some interaction with interfaith group in one event organised by Essex community in the mosque to celebrate nature on Harvest Day and highlight	-Immense collaboration and liaison with external bodies and organisations; -Collaboration with Earth watch -interaction and green activities with neighbouring community organisations and mosques -interaction with external environmental research bodies	See point AAA .	See Point AAA -Some interaction with the Peterborough Eco faith network and attendance by local coordinator at public meeting in July 2018 to promote awareness in churches and wider community on sustainability and ecology.	See Point AAA -No specific collaboration and liaison with external environmental research and proactive organisations. -Regular interaction with various faith groups.	See Point AAA No specific collaboration and liaison with external environmental research and proactive organisations. -such future liaison and collaboration is included in the strategy for long term environment plan	

		environmental issues.	-Collaboration with Earth watch -Plastic free Mosely - friends of Earth-Birmingham - footprints - involvement in promotion of climate emergency declaration in Birmingham -Participating in cleaner air for Birmingham initiative by Birmingham council -Participating in plastic free iftar in Ramadan with neighboring mosques organised by Sultan Bahu Trust in Birmingham -Effort to organise and hold workshops showcasing environmental initiatives and promoting good practices in collaboration with neighbouring mosques and external eco organisations interaction and green activities with neighbouring community organisations					
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			and mosques such as Sultan Bahu Trust, UKIM mosque, springbrook mosque and Islamic centre - - visit to Cambridge eco mosque, Hindu community temple - organising and participating in Christmas lunch for the homeless. -attendance by group member in meetings of Zero carbon house to learn about being zero carbon - collaboration with Sultan Bahu Trust and neighbouring mosques on eco matters Discussions with Birmingham university encompass project undertaken by School of Geography, Earth and Environmental sciences of the University -cleaning and environmental practical activities for kids carried out in mosque					
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			- planting of biodegradable pencils containing seeds for madrassa and nursery children -participating in a neighbourhood mosque project to set up family community garden in Balsall Heath area to encourage families to participate in nature loving activities with children and grow vegetables and fruits -Tree planting drive initiated by “who is Hussein (to commemorate the supreme Shia Martyr for the shia communities and grandson of Holy Prophet)” community organisation. -Collaboration with Birmingham University project and its partners Earth watch project on plastic pollution Initiatives e.g. such as					
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			Birmingham community nursery collaboration to promote planting vegetables and fruits activities among Nursery kids -collaboration with the Birmingham University for nursery children in doing simple and practical science experiments - to teaching children and promoting recycling of paper and plastics activities among the children					
L. impact EC support and presence in discussion groups		BBB. Endorsement and Facilitation of green measures in the community events; participation of EC representative in community discussion group meetings; the local coordinator was a EC. member;	See point BBB -adoption of project discussion group as EC committee by EC leadership - In Birmingham change of name of group from KSIMCB going green to KSIMCB (Community Social responsibility) CSR Amalgamation of the my research	See point BBB	-No such formal participation in Peterborough discussion group from EC leadership -One group member was an EC committee member who signed up as individual capacity	See point BBB	See point BBB	

			project discussion group into an EC sub committee in Birmingham Autonomous working of the discussion group under the coordination of EC representative Green initiatives and measures supported, facilitated, initiated and implemented by EC leadership in community					
M. Evaluation of green measures trialled		CCC Reducing rubbish waste generated by mosque; BYO drive and campaign; reduction of food waste. -Other initiatives could not be undertaken given temporary venue of centre.	See point CCC -Use of sports events to promote going plastic free event; Plastic free initiative done by ladies at the Annual MAMT ladies sports event for UK and European Khoja communities held in Birmingham in 26 August 2019 - this was not done in the Gents side of the same sports event and plastic bottle and cutlery utilisation	See point CCC .	- measure introduced in Peterborough was the use of stainless steel cutlery for early morning prayers food event and youths food event. -No other measure introduced.	-Elimination of use of disposable plastics and with help of members bringing their own cutlery under BYO initiative drive -reliance on back up of single use biodegradable cutlery and products has been cut down. -From August 2019 Jamaat policy has been to serve niyaz food with stainless steel plates and metal cold drinks cups.	-Apart from one month trial period using biodegradables during Ramadan 2018 the Stanmore mosque still uses plastic cutlery. -EC leadership installed a water fountain at the mosque at cost of 1200 pounds to minimise use of throwaway plastic bottles; its use has been limited; -The green proposal last being considered in 2019 was introduce metal	

			continued in their breakfast, lunch and dinner food events held over three days; -waste disposal of mosque generated waste - use of local waste disposal company that assures that all waste either recycled or decomposed and used in making bricks - option to use collapsible cups and imposing plastic levy of 10 to 50 pence discussed but plastic levy not implemented; -introduction of wooden spoons in Birmingham food events - use of raffle tickets scheme to monitor numbers bringing BYO and giving incentive of prizes - Incentive scheme for children and adults bringing own cutlery through reward chart registering and giving tickets to those participating in			-The metal cups are not suitable for hot drinks so member are still bring their own mugs to drink tea. -As back up single use biodegradable cups are provided by the Jamaat. -The use of reusable metal crockery has required change in logistic operation of kitchen volunteers since these need to washed at the centre using the medium size dishwasher and kitchen sinks.	or ceramic china cutlery for mosque use in food events and install in mosque premises a dedicated big fast circuit industrial dishwasher costing 75K to 100K pounds to wash these china or steel cutlery in the mosque. -community has purchased a new spacious property for use as new centre. -plans are also underway for extensive extension of building to provide more facilities - the proposal to install such industrial dishwasher in new premises is considered feasible.	
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			the scheme with offer of prizes at end of the Ramadan period					

Appendix 6

Illustrative quotes from participants of the groups

Appendix 6 -Illustrative quotes from participants of community groups

Selected quotes from and voices of group participants

1. Essex Community Discussion Group

04/03/2017 - Earth has been made by Allah swt and has been given to mankind as an imanat - Quote from Imam Ali "Do not waste water even if you live next to a river" - What can we do in our own homes and lives that can make a difference e.g. green mosque or green home. Do we waste water while brushing teeth or performing wudhu?

How can we bring about change in our communities? Wasting food - Don't throw away food - give it to food banks and shelters for the homeless. During niyaz programmes only put in your plate what you can eat. Encourage our children to do the same - Can we use resources to make resources?? Allah created people and the environment so the expectation is people will use the environment sensibly and proportionately. How do our religious practices damage the environment e.g. bring your own cup and plate to mosque?

Take yourself out of your comfort zone to see how precious resources are. Then you can see how every part counts - Is faith a motivator to protect our environment? To get a resource can you waste another resource. -What impact will all this make in our jamaats and in our lives? - What further impacts can we make?

12/03/2018 - At a high level.... 1. A deep dive to assess issues, and more importantly, the reasons behind issues. 2. A discussion with key stakeholders on solutions. 3. Implementation plan, with key milestones. 4. Ongoing oversight and monitoring. (e.g. Evaluation of the plan at each milestone to see if the plan needs adjustment).

Each step above usually needs a lot of work. And there is margin of trial and error too. Most common problem in bringing change is people's lack of desire to change. This needs to be very well dealt in the plan when starting out, for example, having role models (change champions) and thinking about how to embed change in the culture. Human nature....we don't like change. what would make us change depends on each scenario. Can be different to each individual. Some react to fear of harm, whilst other for greater good. A good plan will probably have agenda for all types of target audience. Consider running some pilot change programmes and presenting findings on 'implementation of change'. This could be a brilliant contribution to the Jamaat globally...

12/03/2018 - So each implementation measure eg styrofoam cups etc would be in effect a pilot change programme. The change agent is and would be the focus group itself. Their results would be the findings of challenges faced and outcomes of implementation programme.

12/03/2018 - Yep...or we can call the whole thing a pilot...for example from cups to electric to gas to whatever objectives we set out...easier said than implemented, and more importantly, recorded.

12/03/2018, thanks for very useful discussion and contribution.

12/3/2018 - It is great work like this (referring to the eco practices change project) that is showing the world that Muslims also want to take care of the environment and are an active part of it's future. Ahsant really profound insight into the reality of the consequences of our actions not just to our environment but on our Eimaan as well 🌱🌱
Reference to example of Toronto Khoja mosque.

2. Birmingham group

22 March 2018 - We cannot recycle polystyrene or most disposable cups so it destroys the earth. MashaAllah some already doing this so would be great we could all do it & encourage others to do this. We will be serving Allah to help protect our world and all those living within it.

22/04/2018 - Wherever you are in the world, u have the opportunity to take a positive stance with caring for the environment. The holy month of Ramadan is fast approaching. Iftars and chai for all! Coming together in this season is a gift from Allah. Let's maintain this by supporting Green Deen! Wherever u r, promote and pledge to 1. BYOM/BYOP ...

02/08/2018 - Today is Earth Overshoot Day. It marks the date when we (all of humanity) have used more from nature than our planet can renew in the entire year. This year, it lands today - 1 August. We are using 1.7 Earths. How? By using more ecological resources and services than nature can regenerate through overfishing, overharvesting forests, and emitting more carbon dioxide into the atmosphere than ecosystems can absorb. In Surah Rahman, Allah clearly instructs us to be sustainable, give back to the earth with one hand what we've taken with the other. "And observe the weight with equity and do not make the balance deficient" (Quran 55:9)_ #EarthOvershootDay is a reminder to pay heed to the teachings of this Surah.

11/09/2018 - I definitely recommend working with Bahu Trust and its networks. I've been working with him for past year through IFEEES/EcolIslam. This weekend just past Bahu Trust won Best Green Initiative at the British Beacon Mosque Awards.

24/9/2018 : I would recommend that as part of any campaign you highlight that conserving the Earth (which is an Islamic duty) is more important than "saving money"/feeding more as this seems to be the community's main argument against "greener" choices holding back progress.

30/09/2018 - Definitely need more workshops to bring awareness to our own community. there is so much in the Quran about looking after the environment, so it effects each one of us

20 October 2018 : The best guide is the Sunnah of the Prophet. We need to get out of the mindset of buying stuff (which is rapidly exhausting world's resources, polluting and causing global warming) and go back to utilising our own manpower which is not going to cost the Earth anything. As they say "many hands make light work". Getting together for community service whether it be washing up, cooking food, serving it or growing vegetables will then build togetherness, love and community spirit for Allah, which is the essence of Islam.

20/11/2018- All the diseases of this world are spiritual diseases and this is a disease of greed, carelessness and thoughtlessness. We've known about the un-biodegradability and toxic breakdown of plastic for decades so we should have stopped using it along with oil years ago, we can only blame ourselves for this. We shall be punished in this life and the next.

03/01/2019 - Each year millions of #pilgrims visit #Iraq. During this stay, a pilgrim consumes 6 to 8 cups of water each day. The water available in Iraq comes in sealed plastic cups. #Plastic glasses are offered in roadsides, markets and other places where they visit. Imagine the number of plastic cups that are disposed in #Karbala alone !

According to a khadim (servant volunteer) of Abul Fazal Abbas a.s, Harram (the shrine of Abbas son of Ali in Kerbala) uses up to 3000 plastic cups in less crowded days and more than 30,000 cups daily on special occasions. Where is all this plastic going? It ends up in landfills, lanes, empty plots, roadsides and sadly also in branches of The River of Euphrates/Furaat....With the same rate of unnecessary consumption of plastic cups & spoons we will very soon bring irreversible destruction to Iraq's #environment and #ecology. The solution is simple...Carry a reusable bottle, spoon and glass with you. As a pilgrim of Imam Hussain a.s we must leave a positive impact on this scared land.

20/04/2019 - A sense of urgency to the need to act responsibly while we are on earth. It is about sitting down and really taken account - how exactly am I performing as God's Khalifa on earth? The opportunity to live life on earth is a sacred trust. So is the world around, nature, the environment, other people. All belong to God, and how I deal with them shows the extent of my understanding of God's Lordship over all things. If I do understand that I am His servant and all this belongs to Him then I treat it with reverential awe, because it is His.

Seyyid Hossein Nasr has written much about a sacred concern for all things, especially for nature. 'Islam is not only for human beings,' he says. 'It is a cosmic reality; all creatures participate in Islam.' Religion permeates the cosmos, with all things bowing down to, and glorifying, God. The human being is the guardian of creation.

What are you doing to abrogate - albeit in a small way - the rapid destruction of the earth by human beings, in so many ways. How can you try in the upcoming month of Ramadan to be fully responsible for your own contribution to stem this tide? To counter the greed, the meanness, the pollution. Your efforts may seem very small but if it is an expression of your consciousness of the sacredness of all things, the value is huge.

03/06/2019 - Enough devastation is happening in the world as a direct result of single use plastics amongst other environmental disasters! We are serving *Niyaz in our Prophet & Imam's name* whilst leaving lasting negative impact on the only place we can call Home. Questions arise: - What legacy are we leaving for #ourfuture generations? - Do you want our community to be part of the problem or an example of solution? - Are we ready to make a change for our Imam (Peace be on Him)?

01/07/2019 David Attenborough spoke in Glastonbury festival last weekend and the whole festival was plastic free, saving more than 1 million plastic bottles from being used. I think we should have done something to avoid so much plastic and Styrofoam from being used and wasted at the funfair yesterday and I think we should work towards that for next year.

06/09/2019 - the head of Muhammadi nursery (of Birmingham community) has worked towards creating a greener low carbon future. The nursery has been involved for the past couple of years in 'planting project'. She said "We have been growing our own vegetables and fruits such as runner beans, tomatoes, broad beans, potatoes, herbs, strawberries etc. in big planters donated by the parents". She works with Footsteps and Friends of the Earth.

02/10/2019 - *Nursery Recycle Initiative* - Muhammadi Nursery in conjunction with CSR (Committee for Social Responsibility) has embarked on a recycling program whereby we are educating our young children on the importance of recycling. We would like parental support by bringing in one piece of recyclable item (either paper or plastic) once a week to place into our recycling bins.

02/10/2019 - For the past couple of years our nursery children have been invited to participate in workshops organised by University of Birmingham, 'chemistry week'. They have been involved in science experiments (change in state) such as making jelly and also how to keep the environment plastic free. Discussion was around how the plastic being dumped in the ocean has such a devastating effect on ocean animals. They are at risk of dying due to plastic materials being eaten by them or they become entangled by plastic bags. One of the ways to stop this is to reduce plastic usage and recycle ♻️. I think it's never too early to teach 3-5-year-olds about taking care of our planet 🌍 and making a difference to our environment. We should take the inspiration from 16 year Greta Thunberg (teenage environmental activist) saying, 'you are never too small to make a difference'. Environment both indoors and outdoors promote awe and wonder and spirituality in young children.

28/02/2020 - a poster for a "TREE PLANTATION" drive initiated by *Who is Hussain*. The idea is to plant a seedling for every one year of your life. On registration you give in your age and how many seedlings you wish to plant. They say the best time to plant a tree was 20 years back.

3. Leicester Discussion Group

28/02/2018: My thoughts are to start promoting by Posters, Workshops, Weekly announcements, Liaise with all sub-committees to have an active role in encouraging their attendees to recycle. This is all part of our duty to serve Allah and look after this beautiful world he has provided for us.

01/03/2018: we are keen to start making our mosque environmental friendly and for each one of us to be an Environmental Ambassador in our service to Allah. 🌿 We pray by making small changes we will be improving our community and the world around us. 🌍. Our first change is - Bring your own cup for chai. 🍵🍵🍵 *Why are we doing this?*. We create so much waste that is not recycled, this means it takes up space in our world where we should be growing trees and making homes for those in need. 🏠🌳. Also, all the cups and plates we use cost money. *£££*. Money we can instead use to improve our community and support other charities in the UK and abroad. GB 🐧👤👤👤👤🌍. Please join us in helping improve our environment by saving one cup at a time. 🍵🍵. We cannot recycle polystyrene or most disposable cups so it destroys the earth.

09/06/2019 - The Jaffari Community Centre in Toronto has won a Sustainability Award for great practice and green eco policies during Ramadhan. On May 30th the Jaffari Community Centre was awarded the 2019 York Region Sustainability Award.

26/11/2019 - Salaam all green team. This team and discussion group was set up at my suggestion as part of my DProf research project to improve environmental practices in faith communities. In the representative of Leicester EC you have a valuable link with the admin decision making management committee. The task of this group is to initiate and discuss eco ideas for implementation by the Leicester EC and Jamaat. There has not been much discussion in this group lately. Maybe the group should discuss ideas and further steps to rejuvenate this green team into active discussions and initiatives. Any comments and ideas on this suggestion.

26/11/2019 - It will be good to know what constraints and impediments green team feels exists to push the green agenda in the community.

6/11/2019 - EC representative Leicester: Salaams everyone, hope you're all well. There is a Management Committee meeting on Monday and i'd like for this group to agree on three proposals for moving forward towards a greater environmentally friendly community. Once we agree on these, we can discuss this in the Management Committee meeting

28/11/2019- The bring your own cup and plate campaign was a good start. I'm not sure how well it is doing in Leicester. I think the community should look into steel plates and an industrial dishwasher. On the cups side, stacking cups for storage would need more space than stacking plates. For this I think going for recyclable cups might be better. The washing up by volunteers is a good idea but a point to consider is how much water is being used. It's not about the cost. It's the amount of water. Generally, I would say hand washing dishes uses a lot more water. It does serve the purpose but at a greater unseen cost. something is better than nothing. The places that can install the dishwasher should do so. the places that cannot at this moment need to look into other options and have a vision and plan of doing so sooner.

28/11/2019 : Alternative to dishwasher will be washing by hand and with paid or unpaid volunteers. One will need also to factor in the need to conserve water and energy in its utilisation. On the other hand, we need to stop using plastics and styrofoam.

01/12/2019, 09:36 - EC representative KJ Leicester: I've been thinking about this, and I'm sure you can understand that when you ask for high expenditure, people's backs 'straighten out' so to speak and they're not so quick to approve where large amounts of money is involved. So, I was wondering if people have any suggestions for 'quick wins' that would almost be 'cost free' and add value and making even small steps to our cause of a greater environmentally friendly community?

01/12/2019, 19:26 - EC representative MKSI Leicester group proposals: Group's Proposals submitted by group to EC on 1 December 2019 as follows: 1. Look into steel plates and an industrial dishwasher. 2. On the cups side, stacking cups for storage would need more space than stacking plates. For this we think going for recyclable cups might be better. 3. Makbul Rahim to give a talk on lecture on his DProf research findings 4. Fifty pence cup and plate levy, As part of bring your own cutlery. Selling sets of reusable cutlery to members to bring to mosque. 5. Education programme to all sections of the community to raise awareness on climate change and environmental protection.

5 December 2019: Response from the Management Committee after reviewing the proposals as follows:

Leicester Community recognise the importance of Environmental Health and we see it as our social and religious responsibility to promote these areas positively. We have a plan to improve our Environmental Health footprint. We don't see this as a "slam dunk" but more a phased approach, implementing "paitive" steps that will deliver more strategic and sustainable adoption across the community.

1. Having reusable cups/plates and dishwasher is our objective. We have looked into cost (machine and housing it) and need to determine budget and plan in 2020. In the immediate term we are taking actions to move to paper, which is a step forward from plastic. Plus we will continue to promote "bring your own" and provide facilities/incentives to encourage adoption (current uptake is low). On a side note, EC has looked into buying an industrial dishwasher

2. EC is currently liaising with community volunteer and are purchasing recyclable cups

3. cup levy is controversial. Rather than the levy, we'd like to support the Environmental Health Leicester group to work on and coordinate a Raffle system, for those bringing their own cutlery, to trial during Shahr Ramadhan/ the next opportunity of regular niyaz. With prizes for raffle winners.

4. Go ahead with organising classes for an Education program to all sections of the community, please liaise with PACE (Public and Community Engagement Team) and Madrasah directly, we will support to have these events booked in on the planner.

Comments: These proposals are a testament of Islamic values and principles. An excellent form of tabligh and insha Allah as a collective community we can move forward towards a greater environmentally community. We praise the Environmental Health Leicester group, and want to further support these activities. We look forward to supporting through the approved items inshaallah. May Allah swt reward you for your efforts.

05/12/2019 - Coordinator - On a personal note, thank you for being the key driver and pushing this agenda and keeping the group enthused and motivated. Sometimes we just need that extra push. And in this case, it really made a huge difference

4. Portsmouth Wessex group

13/02/2018 - Yesterday's meeting lifted my spirits and on our way home my daughter and I saw a barn owl and a muntjac deer. We're watching BBC 4 brilliant programme about wildlife in our gardens. 9pm-10th. 30pm

17/02/2018 - using the Ayyame Fatimiyyeh Majalises to announce about the adverse effects of using polystyrene to the environment? After all this earth it's an amanah that belongs to our living Imam(ATFS). One way we can be amongst his followers is by taking care of this amanah on his behalf.

17/02/2018 - We must educate the new generation about the impacts of our actions in a way that they would love to do it, as change it's often followed by resistance and "soft sell" approach is good. We must not impose nor be complacent. Small steps at the time.

20/02/2018 - I believe it's time the jamaat executive takes a lead on making a policy statement on environment. We shall endeavour 1. To avoid and discourage further pollution; 2. Become partners to any safer environment initiatives; 3. Find eco-friendly alternatives to current disposables.

09/03/2018 - we overlook at the biggest pollutant- "I". I am responsible when "I" want bigger, better, cheaper, easily accessible, convenient and "I" want it now thus creating a demand in the marketplace that is exploited by the big corporations creating goods and services and commodities that are not sustainable nor environmentally friendly.

The solution: Only religion is a hope to bring some equilibrium since commercialism and consumer markets for products and service is always looking into selfish gains which is driven by greed.

21/03/2018 - every time I enter our mosque the air, the greenery and the landscaping subhanallah takes me closer to my creator - a natural and profound feeling of immense gratitude to have a place like ours alhmdulliah but would our children and their children benefit of such clean and fresh environment?

As we enter the Holy Months of Rajab, Shaban and the Sacred month of Ramadhan fast approaching it's time to plan and prepare ourselves as these are spiritually recharging

months and probably the busiest in terms of mosque attendance. During the month of Ramadhan the hearts are more receptive to change and community spirit comes to life.

22/04/2018- Re EC decision to switch from plastics to reusables in Portsmouth, Mashallah dream come true. amazing step for pleasure of Allah. EC VP Thank you so much for this major step in the journey towards love of Allah swt and safeguarding of environment and fulfilment of our Amanaah. Mabruk and duas

29/05/2018 - Where do we create a shift in mindset that everything discarded will not be wasted. How can we create a culture within us so that children observe the elaborate exercise of separating the various categories of disposables for further recycle.

26/09/2018 - sadly in places like Karbala - during Arbayeen specially, All one sees on the floor and the banks of river Furat is plastic and more plastic waste due to sheer number of people visiting and consuming food in those plastic throw Aways.

27/09/2018 - in Islam we believe it takes 40 days of repeated action to become a habit. This Arbayeen (40 days) of imam Hussain's sacrifice. We run a campaign for 40 days leading to Arbayeen starting this Friday, 10th day after Ashura till Arbayeen where we remember Aba Abdillah by reducing, recycling and re using.

18/05/2019 - lecture in making connection between Islam and nature, which should be our first and foremost fitrah As we believe we are made of clay, live on earth as His representative and nature is part of our fabric and an amanah entrusted upon us.

10/06/2019 - There was a time when progress was slow but health was steady and life was much simple - people did do with the little they had but then we grew smarter and richer too perhaps and wanted more, better, newer, quicker, practical, convenient and slick goods at our disposal. However, since human beings have been made by One God who has instilled in us the innate fitrah that pulls us to what is good, sustainable and environmentally friendly and viable, we suddenly woke up and fortunately coming back to basics! I wouldn't be at all surprised if a few generations down the lane the banana leaves are the plates, the bamboo sticks our spoon, forks and knives and coconut shell our cups!

5. Stanmore Hujjat group WhatsApp discussion - illustrative quotes

30/4/2018 - Be the stewards of earth and fulfil your responsibility under Islam to the environment. Be eco-friendly channels of mercy of Allah and simply refuse to use Styrofoam cutlery which hurts and kills the environment and switch to eco-friendly cutlery. Let us start by making small changes in our lives and make big impact by giving up use of Styrofoam and single use throw away plastic.

30/04/2018 - As you know, plastic and polystyrene are environmental hazards that are devastating marine life, killing our oceans and polluting this beautiful planet gifted to us by Allah. This Shahr Ramadhan we would like to go plastic and Styrofoam free by using fully biodegradable dinnerware that fully decomposes into the soil and does not damage the environment.

03/05/2018 - The measure of success is not the actual amount donated but how many hearts were moved, and minds awakened for environment.

3/5/2018 : Lets work together for a #WasteFreeMuharram. '

01/10/2018 - *As 'stewards [of Allah] on the earth' (Qur'an 2:60), it should be of paramount concern to us all that we are destroying this earth through various forms of

pollution, including plastic pollution.* Plastic is killing birds and wildlife, suffocating ecosystems and ravaging an ocean that by 2050, will contain more plastic than fish.

*When we quench the thirst of others in the holy name of Imam al-Husayn (as), let it not be through plastic bottles that absorb a huge amount of natural resources, including oil and water, and thereafter, poison our oceans. * Let us instead build wells and fountains, providing flowing water, without destruction. The masjid is sacred and blessed. It should *NOT* become a source of excessive plastic consumption and waste.

27/03/2019- The resident Alim and Aalima are the driving force of the community their views and suggestions may convince committee members with their support and backing may ease our process inshallah

27/03/2019 - But we seek to change habits so people must be and feel incentivised if not we risk failure.

29/03/2019, - One of the discussions yesterday concerned whether the thrust of our approach, particularly in relation to cutlery, should be led by a bottom up, grassroots movement or a top/down policy shift. EC has the view it should not impose any policy change from the top and the change should come from the masses themselves, inspired and made aware through the educational efforts of HGI. The policy of polystyrene and plastic cutlery provision has always been a leadership decision and policy. Therefore, the onus and responsibility to reverse or change this policy, rests on the leadership itself.

6. Peterborough Group

Peterborough group whatsapp discussion - illustrative quotes

06/05/2018 - In Peterborough we don't have iftar in mosque very often but there's always tea. I think that it would be good to at least have a campaign to encourage people to bring their own mugs to the centre and privately request that the EC and ladies committees (as well as ourselves) to set an example.

13/05/2018 - Unless things are pushed change does not take place as inertia sets in and no action becomes easiest option.

13/05/2018 - I am confident that something will accrue from this. Little steps to start with.

16/6/2019 - Sorry for being quiet for a while, but finally we are ready to lay the first seed of cutting down on plastics (at a small scale) as discussed as a trial in two areas, namely, baligha club and fajr breakfast on Sundays. After a long thought process, the main obstacles are at least twofold- washing the utensils and getting everyone to bring their own longer term. Fajr and baligha club are small, and manageable, but not jamaat niyaz.

16/6/2019 - First 4 plastic plates saved today in HIC Peterborough during Fajr. £0.34p saving 😊.

28/06/2019 - Alhamdulillah a total of 8 plates saved plus associated waste disposal costs over the past two weeks. I will keep updating the records to collect at least 1 year's worth of data, and hope this will then be good enough to go for bigger areas like senior citizens niyaz, chalismo, khari mani... but extra commitment will be required. 20 more plates have been ordered, so expecting to have 40 in total before the 7th July ready for baligha club. Insha'Allah. Once things settle down, I am hoping to roll to it Saturday Fajr program.

07/07/2019 - Baligha club event - we ended up using a mixture of the metal plates and some paper plates for kids who wanted to take food home. We also used some metal plates for serving the food. All have been washed and are in the mosque kitchen. As we had the metal plates, no polystyrene or plastic plates were used Alhamdulillah. Altogether we saved 38 plastic plates.

07/07/2019 - Alhamdulillah very good today only including Fajr we saved 45 plates

14/07/2019, As an update today we tried the bowls (picture below), and we are now nearly plastic free in Fajr weekend (only pending item is cups, because we need source suitable ones, and this is potentially the biggest area). Our total to date is: 70 plates + 3 bowls. Bowls have been introduced for cereal, sugar, and runny curries etc.

21/07/2019 - Totals this week 113 plates , 6 bowls . Next steps 30 extra plates sourced and (3 further bowls sourced for trail) awaiting delivery, so this will make the totals as follow big plates total 50, and small plates total 20. The above will be sufficient to cover all senior events (ladies and gents, baligha and fajr). Good behaviours: - some are washing their own plate after eating and very little food waste on plates.

27/07/2019, n total 80 big plates have been sourced, and 20 small ones. I don't feel that the upscale to niyaz has to be rushed at the moment because its best to wait and move things forward gradually as it is the only area outstanding. In terms of the number of plates saved to date totals are: 180 plates, 9 bowls. totals to date: 253 plates, 12 bowls

10/08/2019, 07:23 - As an update, I attended the meeting with the Management Committee to clear the air, and an official go ahead has now been given on both baligha club and Fajr programme. Following, the meeting I have submitted a basic financial analysis to the MC for the full niyaz, which includes the investment in an industrial dishwasher, which washes 540 plates per hour. The basic analysis confirms that the investment will be self-paying in 2 years, and definitely worthwhile for consideration, and in the best interest of the Jamaat. Hurdles, remain minor and can be overcome. The requirement for seniors is approximately 80 plates, they were used successfully on both occasions. However, the MC has not yet come back with an official go ahead.

However, unfortunately the impression in the MC was one of mixed views, and some misconceptions have now been clarified, yet the impression of mixed views remains to be resolved.

13/08/2019 - apart from the dishwasher (and stainless steel plates), In my view, not every eco initiative is one to take forward.

14/05/2019 - Also whilst manning the green information desk we should have feedback forms for members, by creating a google doc this can be crucial when collating statistics for EC. When I speak to individuals, they are concerned for the environment but it's the convenience that is leading them to use disposables and are shy to bring their own.

16/05/2019, 20:34 - "We may never reach zero in zero waste but that's not the reason not to take zero action" - Ann Marie Bonneau

Appendix 7

Khoja Shia Ithnaashery communities in East Africa and global community network building process

Introduction

In this note I will define and explain what I mean by the term “Khoja “and “community” in my thesis document. I will explain the concept and characteristics of these social and faith groups, known by the name “Khoja Shia Ithnaashery Muslim communities” which constitute the subject of inquiry and provide the context of my research project. The communities are also known as “the Jamaats”. The basic unit of the Jamaat is defined as a group of Khoja people who live as Shia Ithnaashery Muslim faith congregations of 100 individuals based around a mosque or community centre. The community is defined as “all those persons throughout the world who are of the Shia Ithnaashery faith”

In my thesis the term “Khoja” refers to the Indians living in communities in India which had converted from the Shia Ismaili faith (being followers of Agha Khan) to Shia Ithnaashery faith. They migrated initially mainly from Sindh and Gujarat (in India) to Oman and Zanzibar from the late eighteenth century to the nineteenth century and settled in Zanzibar, Tanganyika, Kenya, and Uganda in East Africa, where they formed a wide African network of Khoja Shia Ithnaashery communities. Their economic success as professionals, business people and entrepreneurs and their drive to maintain Khoja communal identity gave impetus to the building of community institutions and social infrastructure.

Khoja Community building process and the formation of regional Khoja bodies

Their economic success as professionals, business people and entrepreneurs and their drive to maintain Khoja communal identity gave impetus to the building of community institutions and social infrastructure.

The Khoja communities in East Africa went on to form a regional body called the Federation of Khoja Shia Ithnaashery Jamaats of Africa in 1946 to unite the various Khoja communities in different towns and cities in East Africa and advance faith, economic progress and welfare of the Khoja communities. Later in 1962, the Jamaats of Madagascar, Mauritius and the Indian Ocean islands and in 2013, the reunion Jamaats joined the Africa Federation.

Following the independence of the East African countries, instances of political insecurity for the communities emerged in Zanzibar after the 1964 revolution and in Uganda after the expulsion of Ugandan Asians in 1972 from Uganda. This led to many Khoja community members migrating from East Africa to the West, including Canada, USA, and the UK where they formed religious communities based around a mosque or community centres (constructed with funding and donations from the global community) in various towns and cities leading to the formation of a global network of Khoja communities.

There was also a movement to form regional bodies in various parts of the world wherever many Khoja communities existed. Thus, in Europe (Council of European Jamaats), in North America (NASIMCO), in India (Gujarat Federation in 1979) and in Pakistan and in Australia, federal bodies of Jamaats were formed. In 1976 the World Federation of Khoja Shia Ithnaashery Muslim Communities was formed in the UK to provide global leadership and strategic policy direction to the worldwide network of Khoja communities. The Africa Federation became a member of the World Federation together with the other regional Khoja bodies.

The WF has now been in operation for over 40 years, connecting some 114 (some estimates put the number to 140 to 151) Jamaats working in international relief of poverty, promotion of religious education and propagation of the faith and providing Khoja identity to the member communities. It has been granted special consultative status as an NGO with the Economic and Social Council (ECOSOC) of the UN in the last ten years. The individual Jamaats are members of their respective regional bodies, and the six regional bodies are direct members of the WF. The Federation of Australasian Khoja Communities of Australia became WF member in 2015. The total number of individual Khoja persons worldwide in the communities is estimated to be 150,000.

Khoja community structure, governance, and activities

The communities have common cultural, social, and religious backgrounds and bonds. As immigrant communities settled in East Africa in the last 100 years since the 1920s, they have evolved a community structure revolving and centered around a mosque or community centre as faith communities. They come under the jurisdiction of the charities laws as registered charities or voluntary sector organisations. They operate under the framework of written constitutions providing for charitable objectives and membership of the organisation, governance of the organisation through members general meetings and regular election of a committee of office bearers called Executive committee or Management committee and charity trustees with clear demarcation of duties and obligations of Executive/Management Committees, charity trustees and rights of members.

Following the emigration of many Khojas to the West and specifically to the UK they have maintained a similar organisational and governance structure and have formed faith communities for the practice of their religion and provision of charitable services to members and needy people in the community and society. In the UK faith communities have been formed along geographical lines in different towns and cities. There are thus Khoja faith communities in major English cities such as London, Birmingham, Leicester, Peterborough, Chelmsford in Essex and Portsmouth in Wessex. My research project covers London, Birmingham, Leicester, Peterborough, Chelmsford in Essex and Portsmouth in Wessex. The membership in these communities is approximately Portsmouth (350), Birmingham (700), Leicester (600), Essex (150), Peterborough (750) and London -Stanmore (5000).

The community has clearly defined and controlled decision-making processes for matters relating to the community and is primarily funded by wealthy donors from the community and, to a limited extent, by smaller annual membership subscriptions. The core paid up membership of these bodies varies from about 200 to 2000 depending on the size of the respective congregation.

There are regular religious events and activities throughout the year totalling about two hundred, including Ramadan Iftar and Muharram food events, wedding food events and privately sponsored religious functions.

The functions and events are serviced by mainly unpaid volunteers and they have a prominent role in running and facilitating the mosque functions and helping out in all community activities. These volunteers numbering fifty to two hundred, assist in funeral services, wedding services, car parking, kitchen and main hall serving food and drinks and other needed services in the mosque. The mosque or centre activities comprise religious functions, funeral rites, weekly congregational prayers, the weekly meeting of senior citizens, religious courses during weekdays in the evenings, weekend religious madrassah, specific Quran and other classes for ladies and children and sports facilities for seniors.

The youths' activities include sports activities ranging from racket games, football, keep fit sessions, regular meeting of youths with fun activities and intellectual discussions such as seminars and workshops on topical matters. The welfare activities include "helping hands" for elderly and needy members, a cancer helpline, and social and marriage counselling. The community also has burial fund schemes to help with funeral costs for members. Some communities have set up primary schools as well.

The mosque in many Jamaats also houses the community administrative offices and meeting rooms. The religious functions and prayers are serviced by a religious scholar (resident Imam or "Alim") engaged and paid by the community and sometimes by visiting Imams and lecturers who give speeches and talks at the religious events and hold sermons in Friday prayers.

The community has deeply entrenched social and cultural practices that evolved and developed over decades in East Africa and the UK to deliver community services and facilities to members. There is considerable and potential power play positionality and dynamics at play and influence of elected community leaders, high net worth donors and philanthropists and mosque volunteer groups in the decision-making process in the community.

Essentially the Khoja faith communities operate by a process of consensus between the Executive committee members, the high net-worth donors and the volunteers providing day-to-day services. There is regular consultation between the Executive committee and various specific sub-committees that have been delegated particular functions in various areas. The Annual General Meetings of members provide a forum for discussion on decisions that have been taken by the executive committee during the year and the provision of explanations and accountability for the expenditures incurred by the community and major decisions taken.

The power relations and dynamics come into play when major decisions and changes involving the centre or mosque or huge expenditures, e.g. reconstruction costs, purchase of a new centre, are involved since the community relies on support and donations from the high net worth donors and members to implement those decisions and finance the costs.

The community, in addition to religious and welfare services, provides a social institution for the belonging, bonding and cohesion of the community members. The COVID 19 situation in the West and globally that resulted in the closure of the mosques and community centres has demonstrated how integral the community and social and cultural interaction and religious gatherings are to the maintenance of this key social and religious

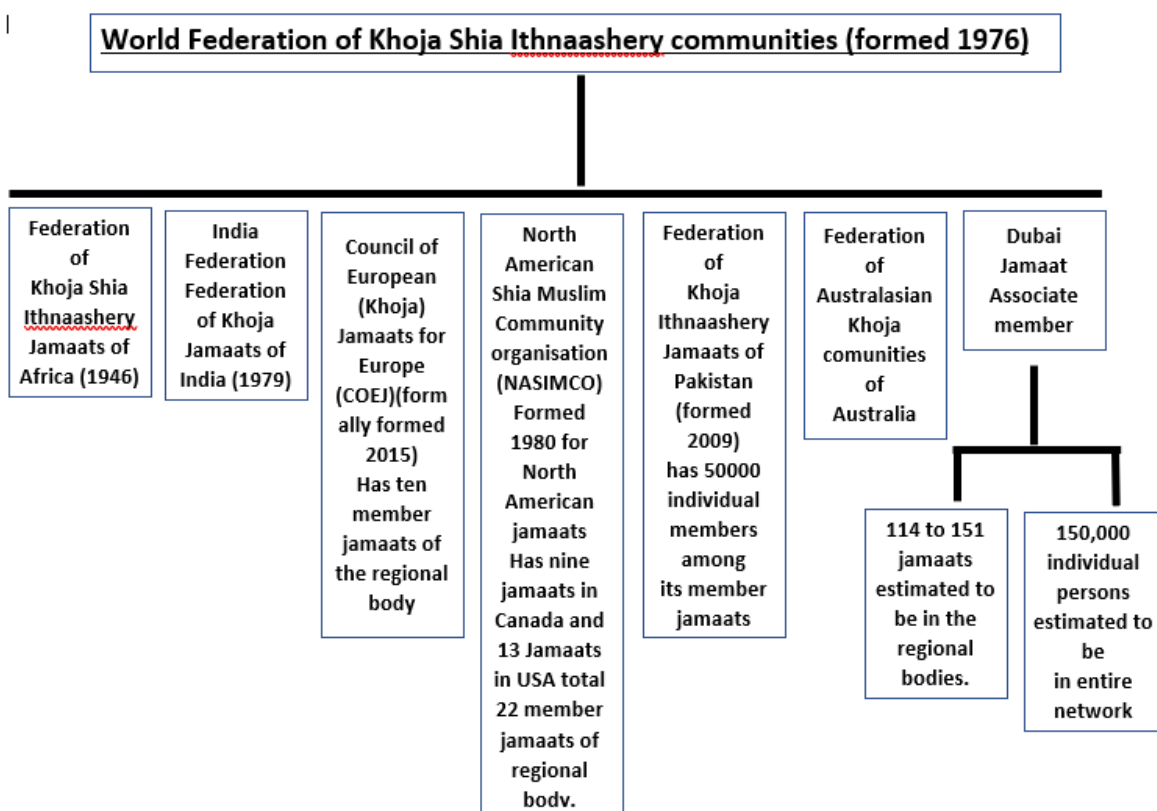
institution to the faith communities and the entire society at large. Figure 1 below sets out the current organisational chart of the World Federation and its members.

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religious citizenship - the case of the globalised Khoja - Iqbal S. Akhtar (2014)
Africa Federation (khojapedia.com)

Appendix 8

The organisational chart of World Federation of KSIMC (WFKSIMC) and its members



Appendix 9

Brief background to climate change and global warming concerns

The information for this Appendix is drawn from information contained in Paula Posas's essay in her *Ethics in Science and Environmental Politics (ENSP)* essay on the Role of religion and ethics in addressing climate change, Fazlun Khalid's book *Signs on the Earth Islam, Modernity, and the climate crisis* ((2019), the Carbon Brief and other website sources.

This Appendix sets out a brief historical background on the global warming concerns and various international initiatives to address these concerns.

Early concerns about climate change (1957 and 1979)

Concerns about global warming concerns were raised first in 1957 by US oceanographer Roger Revelle and Austrian scientist Hans Suess. (Hart & Victor 1993). In 1979, the First World Climate Conference adopted climate change as a major issue (IPCC 2004, p. 2).

Establishment of the Intergovernmental Panel on Climate Change (IPCC) 1988

In 1988 the Intergovernmental Panel on Climate Change (IPCC) was jointly established by the World Meteorological Organization and the United Nations Environment Program to provide governments with available scientific data and response strategies. (IPCC 2004). The IPCC submitted comprehensive reports in 1990, 1995, 2001, and 2007. IPCC report 1995 linked global warming to human activity and stated that very substantial cuts in emissions were required to stabilize greenhouse gas concentrations in atmosphere.

UN Framework Convention on Climate Change (UNFCCC) 1994

The IPCC's first assessment report of 1990 served as the basis for negotiating the 1992 UN Framework Convention on Climate Change (UNFCCC) (IPCC 2004) adopted at the Rio Earth Summit at the UN conference on environment and development (Rio De Janeiro 1992). The UNFCCC was the world's first treaty on climate change and sought to prevent 'dangerous' warming from greenhouse gases and set initial emissions targets for industrialized countries (1990 levels by the year 2000). The UNFCCC came into force in 1994. UNFCCC convention 1994 was adopted by the international community and ratified by 195 nations with the aim to prevent dangerous anthropogenic (man-made) interference with the climate system.

Conference of the Parties (COP) of UNFCCC

The Conference of the Parties (COP) of UNFCCC has been held every year except in 2020 due to covid epidemic. COP is supreme decision-making body of UNFCCC and has met every year since 1995 when COP 1 was held in Berlin.

Establishing norms about responsibility for climate change

The Rio Declaration (at the Rio Earth Summit at the UN conference on environment and development (Rio De Janeiro 1992) and UNFCCC were instrumental in establishing norms about responsibility for climate change, stating that 'nations have the responsibility to reduce greenhouse gas emissions of activities within their jurisdictions' and that 'developed nations have the responsibility to take the lead in reducing the threat of climate change' (Brown et al. 2006, p. 14).

Buenos Aires declaration on the ethical dimensions of climate change at COP 10

At UNFCCC-COP10, the Program's partners spearheaded the Buenos Aires declaration on the ethical dimensions of climate change, which posited the urgent need for ethical reflection on climate change.

The 'ethical dimensions of climate change' side event at the United Nations Commission for Sustainable Development (UNCSD-15) 2007

In 2007, an 'ethical dimensions of climate change' side event at the United Nations Commission for Sustainable Development (UNCSD-15) featured Don Brown of the Rock Ethics Institute and speakers representing science, religion, affected populations, and least developed nations. This event focused on the ethical aspects and moral imperative to address the unequal impacts of climate change and the tendency of it to harm the poor and least responsible for it.

The Rock Ethics Institute Program on the Ethical Dimensions of Climate Change 2004

Launched at the 10th Conference of the Parties (COP10) to the UNFCCC in Buenos Aires, 2004, the Rock Ethics Institute Program on the Ethical Dimensions of Climate Change established itself as a key player in increasing international attention to the issue of climate ethics.

Kyoto Protocol (amendment to UNFCCC 1997) came into force 2005

In 2005 Kyoto protocol came into effect with more than 30 industrialised countries adopting emissions reduction targets. These countries committed each to reduce emissions by small amounts (5%-8%) by the period 2008-2012.

UNFCCC's voluntary measures were not enough to precipitate any significant action, and so in 1997, an amendment to the UNFCCC known as the Kyoto Protocol was made providing for mandatory emissions targets for signatory nations with the objective to stabilize greenhouse gas concentrations in the atmosphere 'at a level that would prevent dangerous anthropogenic interference with the climate system' (Gardiner 2004, p. 590). While this was a major step forward, the Kyoto Protocol's effectiveness was limited inter alia by inadequate emissions reductions targets for the 2008 to 2012 commitment period and weak compliance mechanisms (Gardiner 2004).

Extension of Kyoto Protocol at COP 18 Doha 2012

The Kyoto Protocol 1997 was made in COP 3 as an amendment to UNFCCC held in Japan. The Kyoto protocol set out legally binding emissions targets for developed countries only. At the 18th Conference of the Parties (COP18), held in Doha, Qatar, in 2012, delegates agreed to extend the Kyoto Protocol until 2020.

US withdrawal from Kyoto protocol

US withdrew from Kyoto protocol in 2000. In 2001 COP 7 (Marrakech) adopted Kyoto protocol rules on emissions trading and carbon accounting rules.

New plan to get globally binding agreement by 2009

At the COP13 (Bali) 2007, in view of the limited scope of Kyoto, governments agreed to a new plan to get globally binding agreement by 2009 with developing countries and developed countries to adopt targets to curb emissions, long-term vision for an action plan on climate change and cooperative action on finance, adaptation and technology.

COP 15 (Copenhagen) 2009

At the COP 15 (Copenhagen) 2009 the countries failed to reach an agreement on binding commitments after the initial Kyoto protocol targets were to expire in 2012. The Governments took formal note (Copenhagen Accord) of the scientific case for limiting temperature rise to 2°C. The developed countries agreed to a funding goal of \$100bn per year by 2020 from public and private sources for developing countries to help them with adaptation to climate change and reduction of GH gas emissions.

Establishment of green climate fund and the loss and damage mechanism

In 2010 the green climate fund was set up for raising and disbursing climate finance and the 2 degree C target was formalised as an official global objective. The COP 17 (Durban) agreed to develop an agreement with legal force applicable to all parties by 2015. At COP 19 (Warsaw) the loss and damage mechanism were established to address climate change impacts, including extreme events and slow onset events for vulnerable developing countries.

Paris climate agreement of 2015

The Paris Agreement replaced the Kyoto Protocol and entered into force on 4 November 2016 and was signed by 194 countries and ratified by 188 as of November 2020. The Paris Agreement 2015 set a new framework to tackle climate change, and it sought to limit global warming to 1.5 °degrees Celsius. The objective was to limit greenhouse gas emissions to levels that would prevent global temperatures from increasing more than 2° °C (3.6 °F) above the temperature benchmark set before the beginning of the Industrial Revolution.

A new approach of asking for voluntary commitments, or nationally determined contributions (NDCs)

The Paris climate agreement of 2015 took a new approach to the global warming dilemma by seeking voluntary commitments. Instead of pressing for legally binding targets, it simply asked countries to submit voluntary commitments or nationally determined contributions (NDCs). These NDCs are not binding, but countries who submitted them agreed to track their progress and report on it every five years in regular "stock takes," beginning in 2023. Under the accord, nations were to increase their target NDCs every five years for the carbon cuts they will make between now and 2030. The coronavirus pandemic affected many countries' adherence to making new NDCs within the deadlines.

195 nations agree to submit national pledges and five yearly global stock take to keep global warming to well below 2°C

In the Paris Agreement 2015, 195 nations pledged to keep global warming to well below 2° C and pursue efforts to limit it to 1.5° C. The governments agreed to submit the first climate pledges and agreed to get to net zero future in the second half of the century (2050) and that every five years, a global stock take to ratchet up a mechanism to raise national pledges over time so that they deliver agreed temperature targets improve.

Withdrawal of USA from Paris agreement

In 2016 US withdrew from Paris Agreement. In 2018 the Paris rule book was negotiated and largely agreed. The Paris rule book is an operating manual for implementing Paris Agreement and it outlined how governments would measure and report on their mitigation efforts.

No mechanism for enforcing NDC pledges

The Paris agreement does not have any mechanism to enforce the NDCs pledged by countries. Professor Sachs says "The problem is not the treaty's language. It is that climate change, by its very nature, creates thorny, intractable incentives toward non-cooperation and free-riding." It is voluntary and the agreement contains no mechanism for resolving the inevitable controversies over who is doing enough, and no real way to call out or penalize those who aren't.

COP25 Madrid 2019 was an opportunity for the countries to put forward more ambitious targets before COP 26 and finalise rules for an international market mechanism under which nations can trade emissions reductions.

The Glasgow summit 2020

On 12 December 2020 UK Prime Minister Johnson co-hosted - alongside the UN Secretary General, António Guterres, and the French president, Emmanuel Macron - an interim summit of world leaders inviting all countries to make strengthened targets to cut emissions by 2030.

The UK has already set a fresh target of cutting emissions by 68% by 2030, and EU member states announced that they had agreed to strengthen their target for cutting greenhouse gas emissions in the next decade, in line with their long-term goal of net-zero carbon by 2050. The EU has committed to cut carbon by 55% by 2030 compared with 1990 levels.

"Today's agreement puts us on a clear path to climate neutrality in 2050," said Ursula von der Leyen, President of the European commission. While member states rejected the stiffer carbon cuts of 60% that the EU parliament had called for, the plan puts the EU ahead of most of the world's major economies on tackling the climate crisis.

Current commitments under the Paris agreement are insufficient to meet its goal of keeping global temperature rises well below 2C more than pre-industrial levels, which scientists regard as the outer limit of safety, with an aspiration to hold rises to no more than 1.5C. Many big economies have come forward with long-term goals to reach net-zero emissions around the middle of the century.

China will reach carbon neutrality by 2060, while the EU, Japan, South Korea, the UK and a host of smaller economies will do the same by 2050. The US president-elect, Joe Biden, has signalled his commitment to reach net zero by 2050, though he played no official part in the 2020 summit, and the US administration did not attend the meeting.

These commitments, if carried through, place countries responsible for about two-thirds of global carbon emissions under a net-zero target. According to an analysis by Climate Action Tracker, that would put the world on track to heating of 2.1C, within striking distance of the Paris goal.

COP 26

COP 26 took place in November 2021 in Glasgow. COP did not take place in 2020 because of Covid. The expectations prior to the meeting were that nations with 2025 pledges would communicate new pledges, and those with 2030 pledges would communicate and update existing pledges. All countries were asked to communicate mid-century long-term low GH gas emission development strategies by 2020. It was expected that by 2020 developed nations would have set up \$100 bn per year in climate finance from public and private sources for developing countries' mitigation and adaptation, that new coal-fired power plants projects would end, and the existing ones would be phased out, that parties would

mobilise natural climate solutions such as protecting and planting trees and mandate all financial actors to integrate climate risks in future investment decisions.

COP 26 key outcomes

The key outcomes of COP 26 November 2021 were that there was agreement covering coal, deforestation, and methane. Under the agreement, coal was to be "phased down" instead of being "phased out". There were emission reporting rules for all countries from 2024. The agreement sought to keep alive the target of 1.5 degrees C as the top limit/cap on global temperature. There were processes agreed on climate finance, namely adaptation, loss and damage finance and new climate finance goal from 2025.

Glasgow climate pact 2021

The Glasgow climate Pact November 2021 called for renewed efforts to address cutting emissions, adaptation and loss and damage already caused by warming. This was the first COP decision to explicitly target action against fossil fuels. It called for phase-down of unabated coal and phase-out of inefficient fossil fuel subsidies. The countries were asked to revisit and strengthen their climate pledges by the end of 2022 to align with Paris Agreement 2015 temperature goals. There was a stronger emphasis on 1.5 C ceiling compared with the forecasted expected 2.4C with current global emissions. The warming temperature as at 2020 was 1.02 F or 1.84 F (NASA/GISS website), and 2020 was reported to be the hottest year on record since 1880. The Glasgow climate Pact highlighted IPCC's special report finding that limiting warming to 1.5C requires rapid, deep and sustained emissions cuts. This meant that CO₂ emissions should be falling to 45% below 2010 levels by 2030 and to net zero around mid-century 2050.

Some countries and commentators have regarded COP 26 as a "disappointment", "failure", "lost opportunity" "progressive step but didn't go far enough" "didn't do enough for vulnerable countries" etc. "a slow process". The negative features were that the rich countries failed to meet \$100 billion annual climate finance target for 2020. The "Loss and damage" issue was postponed to 2022. COP 26 was not strong enough on coal and fossil fuels emissions.

The positive features were that there was sustained and increased International focus on the dangerous levels of global warming and its implications for the planet and it was attended by world leaders and delegates from 200 countries. Civil society including youths and children, participated in demonstrations and rallies in Glasgow and elsewhere in many countries, putting focus and pressure on world leaders to agree to positive steps to deal with climate change.

The specific country commitments included the commitment by India to reach net zero emissions by 2070 and renewable energy targets for 2030. 109 countries signed up to global methane pledge to cut emissions by 30% by 2030. There was a pledge by 141 countries to halt and reverse forest loss and land degradation by 2030, backed by \$18 billion in funding, including 1.7 billion for support of indigenous people. A US-China Joint Climate declaration was issued.

Various corporate and governmental groups were formed at COP 26 to push for net zero emissions by mid-century, such as Glasgow financial alliance for net zero in the financial sector. The science-based targets were to have net zero guidance for corporations and procedures for verification of companies' net zero targets. 900 companies committed to set targets in line with 1.5 C. There was First Movers Coalition of more than 12 major companies to target decarbonising heavy emissions industries for greening by 2030 e.g. aviation,

shipping, steel and trucking industries. There was a solar initiative new green grids initiative to build interconnected solar energy infrastructure at a global scale, starting with the India UK partnership. There was an initiative to promote the sustainable economy of a panel of countries that commit to sustainably managing ocean resources.

Rules agreed for International carbon markets under Paris Agreement.

Agreement was reached on the Rules for International carbon markets under Paris Agreement. Common time frames for national climate commitments in five-year cycles were encouraged. The submission of information on emissions and financial, technological and capacity-building support was to be using common standardized set of formats and tables to make reporting transparent and comparable. Rich countries were asked to mobilize the Adaptation fund for adaptation to climate warming for developing countries and finding for international climate finance.

Estimates of global warming

Based on current policies best estimates global warming are of around 2.6 C to 2.7 C by 2100 and it is estimated that this would drop to 2.4 C if NDCs target of 2030 are met by countries.

Appendix 10 - Footnotes

FN1 - The term “Khoja” is a reference to the Indian community which had converted from the Shia Ismaili faith (being followers of Agha Khan) to Shia Ithnaashery faith and migrated initially mainly from Gujarat (in India) to Zanzibar in and around the nineteenth century and later to Zanzibar, Tanganyika, Kenya, Uganda in East Africa where they formed a wide network of Khoja Shia Ithnaashery communities in. They migrated from 1970s from East Africa to the West including the UK where they also formed network of Khoja communities. I have for the purposes of my research included in the term persons from Indo Pakistan regions who are regular members of the congregation and regarded as community members in the faith communities of inquiry.

FN2 - the 2015 Encyclical “Laudato Si” on the care of our common home issued by the Pope Francis 18 June 2015. Encyclical is a teaching document issued by the Pope as a papal document.

FN3 - The 2009 Tehran Declaration on Human Rights and the Environment issued at the International Conference on Human Rights and the Environment in Tehran in May 2009 and following an earlier International seminar on environment, religion and culture in Tehran by Iran Government in conjunction with United Nations Environmental programme in June 2002. Also the Islamic Declaration on Climate Change adopted by the International Islamic Climate Change Symposium Istanbul, 17-18 August 2015.

FN 4 - A version of the expression “when the last tree has been cut down, the last fish caught, the last river poisoned, only then will we realise that one cannot eat money” appeared in the reference work “The Oxford Dictionary of Proverbs” (2009) attributing it as a native American saying. The earliest example given in the reference was dated 1983 and appeared in the book “America born and reborn” by H Wasserman who labelled it an Osage saying. In November 1972 the saying was used by an American native Thomas Parker (a Mohawk from the Akwesasne reservation on the New York-Canada border) at a talk in Harvard University as reported in the student newspaper the Harvard Crimson stating “Someday President Nixon and the other world leaders are going to find out that once they catch the last fish, once they cut down the last tree, they wont be able to eat all the money they have in the banks”. In 1995 a letter written to the New York Times employed the saying and attributed it to the “Cree Indians” [NYCI]: To the Editor: “A Modest Step to Save the Fish” (editorial, Aug. 8) brings to mind a prophecy of the Cree Indians: “When the last tree is cut down, the last fish eaten and the last stream poisoned, you will realize that you cannot eat money.”

FN5 - Tafsir, exegis and commentaries of the verses by the various eminent Shia scholars on Quranic studies Translation and commentary include Al Mizan An exegesis of the Quran by Allamah Sayyid Muhamed Husayn Tabatabai (1983) publishers World Organisation for Islamic Services, Tehran, Iran; Translation and commentary on Holy Quran by Mir Ahmed Al and Agha Mirza Mahdi Puya (1990) Peermohamed Ebrahim Trust, Pakistan; Translation and commentary on Holy Quran by Ayatullah Makarim Shirazi (2004) published by Amir-al Momineen Qom Iran and An Enlightening Commentary into the Light of the Holy Quran compiled by Ayatullah Sayyid Kamal Faghih Imani and a group of Muslim Scholars (1998) published by the Scientific and religious Research Centre, Esfahan, Iran.

FN6 - The four Shia canonical works on Hadith are Al Kafi (the Sufficient) by Mohammed bin Yaqub Kulaini; Man la Yahduru Al Faqih (for one who has no access to Jurisprudent) by Sheikh Saduq Mohamed bin Ali; Tahdhib Al Ahkaam (The Refinement of Laws) by Sheikh Abu Jaffer Tusi; Al Istibsaar (Foresight) by Sheikh Abu Jaffer Tusi. The other works of Hadith are Bihar Al Anwaar by Allama Majlisi; Wasaail Shia by Shaikh Al Hur Al-Aamili; Nahjul Fasaha a compilation of Hadith on ethics and virtues by collected by Abul Qasem Payandeh published 2006 and Nahjul Balagha collection of sermons, letters and quotations of 1st Imam Ali ibne Abu Talib compiled by Sayyid Radi.

FN7 - Sahih Bukhari and Sunan Abu Da'ud are among the six authentic Hadith sources the school of Ahle Sunna and Jama'a (the Sunni school) .

FN8 - one recent example of a possible legal Islamic Law approach is the fatwa of Ayatullah Khamenei, the supreme leader of the Islamic Republic of Iran, dated 2010 prohibiting (stating it is *haram* (not permitted)) the use of nuclear weapons as a serious threat to humanity. See Ayatullah Khamenei's official website under the *Fatwas* section- see website reference farsi.khamenei.ir

FN9 - Holy Quran - Sura Najm 53:31 - "And, to God belongs all that is in the heavens and on the earth...." Sura An Najm 53: 31

FN 10 Holy Quran - Sura Ahzaab 33:72 - "We offered the trust unto the heavens and the earth and the mountains but they shrank from bearing it and were afraid of it. And man assumed it..."

FN11 - see Holy Quran - (Sura Hud 11:61) - "He is the one who created you from the earth and settle you upon it (so that you might husband it)...." and Holy Quran - Sura Al A'raf 7:31 "...eat and drink and do not waste by excess, Allah loves not the prodigal." and Holy Quran-Sura Bani Israel 17:26-27 - "...do not squander in wantonness , Lo the squanderers were ever brothers of the devils and the devil was ever ingrate to his Lord"

FN12 - Holy Quran - Sura Ar Rahmaan 55: 7 -9 - " And the Heaven He raised it high and He made the Balance. That you may not be inordinate in respect of the measure. And keep up the balance with equity and do not make the measure deficient."

FN13 - see Holy Quran - Sura Al Mu'minin 23:71 "- And should the truth follow their (low carnal) desires surely the heavens and the earth and all those who are therein would perished and corrupted"; and Holy Quran - Sura Rum (30:41) - "Corruption has appeared in the land and in the sea on account of what the hands of men have wrought..."; and (11) Holy Quran - Sura Ale Imran 3:57 - ".....And Allah does not love the unjust" and Sura Ale Imran 3: 140; and See Surah Al Baqarah (2:204-205) for reference to man's efforts on land to make mischief in earth and to destroy crops and cattle - Allah loves not mischief. Also see suras Al Baqarah 2:60, A'raf 7:85 , Ankabut 29:36, Qasas 28:77, Asshu'ara' 26:151-152.

FN14 - Greta Thunburg - she has attracted international attention since her lone demonstration outside Swedish Parliament in August 2018. Her "school strike for the climate" has grown into a global movement with 10 million people coming out unto the streets worldwide to demand action on climate change. (source 4 February 2021 - Greta Thunberg effect by Anandita Sabherwal and sander Van Der Linden Cambridge University)

Appendix 11

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