



KYOTO PROTOCOL AND AFTER: A CRITICAL
EXPOSITION

BY

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ABSTRACT

Climate change is one of the most pressing threats and challenges of our time. It is caused by a buildup of greenhouse gases increasingly emitted by human activities mostly the burning of fossil fuels. The Kyoto Protocol attempts to address this environmental problem by legally binding emissions targets by an average of 5.2 per cent below 1990 levels during the commitment period 2008-12. In order to achieve this objective the Kyoto Protocol has introduced flexible mechanisms. They are: International Emission Trading, Clean Development Mechanism, Joint Implementation and Land Use, Land-Use Change and Forestry. However, these mechanisms have turned out to be beneficial for developed countries rather than developing and least developed countries. Therefore, the Kyoto Protocol can be said to have partially achieved its objective. Notwithstanding that COP 17 has attempted to give life to the Kyoto Protocol, the future roadmap is still unclear especially in view of the fact that the US is not ready to ratify the Kyoto Protocol and Canada has withdrawn its membership from it. Moreover, the economic downturn that some of the European Union countries have may affect their promise to provide \$100 billion per year for the Green Climate Fund. Therefore, there is a pressing need to explore an alternative to the Kyoto Protocol with improvement on the existing mechanisms along with other ways to fight the problem of global warming soonest possible. The researcher has followed a library-based approach in discussing the performance and outcome of the Kyoto Protocol's Mechanisms. He has also done an analytical and critical analysis to highlight their weaknesses. In addition, an exposition has been made of the Islamic law about the importance of environment and its protection which is clearly stated in the Qur'ān and Sunnah with special reference to global warming. In the researcher's opinion, the financial and technological co-operation between the developed and developing countries and the usage of alternative and renewable energy sources are one of the best options for solving the problem of global warming.

خلاصة البحث

يعد تغير المناخ واحداً من أهم التهديدات والتحديات التي عصرنا الراهن، ويحدث هذا بسبب إنشاء غازات الدفيئة المنبعثة على نحو متزايد من أيدي الأنشطة البشرية، ومعظمها عن حرق أنواع الوقود الأحفوري. و "بروتوكول كيوتو" حاولت إلى معالجة هذه المشكلة البيئية بخفض الانبعاثات بنسبة 5.2% عن المستوى الذي كانت عليه في عام 1990 على أن يتم هذا الخفض بدءاً من عام 2008، وحتى عام 2012. ولتحقيق هذا الهدف قدمت بروتوكول كيوتو آليات مرنة، هي: الاتجار بالانبعاثات الدولية، وآلية التنمية النظيفة، والتنفيذ المشترك، واستخدام الأراضي وتغير استخدام الأراضي والحراجة. ومع هذه المحاولات، قد تبين بعد أنهما مفيدة للبلدان المتقدمة وليس للبلدان التي تمر بمرحلة التقدم والنمو أو لأقل البلدان نمواً. ولذلك، يمكن القول بأن "بروتوكول كيوتو" حققت هدفها جزئياً. وبغض النظر من أنالدورة السابعة عشرة لمؤتمر الأطراف (COP 17) حاولت تمنح الحياة لـ "بروتوكول كيوتو"، ما زالت الخريطة الطريق المقبلة غير واضحة، خاصة في ضوء الحقيقة بأن الولايات المتحدة ليست مستعدة للتصديق على "بروتوكول كيوتو"، إذ سحبت كندا عضويتها من ذلك. وعلاوة على ذلك، من الممكن أن تتأثر الوعود التي قام بها بعض بلدان الاتحاد الأوروبي بتوفير 100 مليار دولار سنوياً لصندوق المناخ الأخضر بعد الانكماش الاقتصادي؛ ولذلك أن هناك حاجة ملحة إلى استكشاف بديل بـ "البروتوكول كيوتو" مع تحسين الآليات الموجودة، مع طرق أخرى لمكافحة مشكلة الاحتباس الحراري في أقرب وقت ممكن. واتبع الباحث الدراسة المكتبية في مناقشة التطبيق وفي أخذ نتائج آليات "بروتوكول كيوتو". كما أنه قام بمنهج التحليل والنقد لتسليط الضوء على النقاط الضعيفة فيها. بالإضافة إلى ذلك، بينت الشريعة الإسلامية أهمية البيئة وحمايتها، والتي هي مذكورة في القرآن الكريم والسنة النبوية بوضوح مع الإشارة بوجه خاص إلى الاحتباس الحراري. وفي رأي الباحث أن التعاون المالي والتكنولوجيين البلدان المتقدمة والنامية واستخدام مصادر الطاقة البديلة والمتجددة هي إحدى الخيارات المهمة لحل مشكلة الاحتباس الحراري.

APPROVAL PAGE

I certify that I have supervised and read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Master of Comparative Laws.

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DECLARATION

I hereby declare that this dissertation is the result of my own investigations, except where otherwise stated. I also declare that it has not been previously or concurrently submitted as a whole for any other degrees at IIUM or other institutions.

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**THE RELATIONSHIP BETWEEN PARENTING STYLES, FAMILY
FUNCTIONING AND MENTAL HEALTH AMONG SECONDARY SCHOOL
STUDENTS IN MALAYSIA**

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I humbly dedicate this dissertation to my beloved parents

Wali Muhammad & Sakinnah Wali

&

My beloved Brothers and Sisters

For their endless love, patience, care and prayers.

May Allah (s.w.t) Bless and Reward them With His Jannah.

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LIST OF ABBREVIATIONS

4AR	Fourth Assessment Report
AAU	Assigned Amount Unit
AFB	Adaptation Fund Board
AOSIS	Alliance of Small Island States
ARD	Afforestation, Reforestation and Deforestation
ASEAN	Association of South East Asian Nations
AWG-LCA	Ad Hoc Working Group on Long-term Cooperative Action
BAPA	Buenos Aires Plan of Action (Decision 1/CP.4)
CAN	Climate Action Network
CAN\$	Canadian Dollar
CDM	Clean Development Mechanism
CDM EB	Clean Development Mechanism Executive Board
CER, ICER and tCER	Certified Emission Reduction, long-term Certified Emission Reduction and temporary Certified Emission Reduction
CFC	Chlorofluorocarbon
CH ₄	Methane
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent
COP	Conference of the Parties
COP/MOP	Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol
CPRS	Carbon Pollution Reduction Scheme
CTCN	Climate Technology Centre and Network
DCs	Developing Countries
DECC	Department of Energy and Climate Change
DNA	Designated National Authority
EC	European Community
EIA	Environmental Impact Assessment
EIT	Economy in Transition
ENGO	Environmental non-governmental organisation
ERU	Emission Reduction Unit
ET	Emission Trading
EU	European Union
EU ETS	European Union Emission Trading Scheme
FAR	First Assessment Report
FCCC	Framework Convention on Climate Change
G-77	Group of 77
GDP	Gross Domestic Product
GHGs	Greenhouse Gases
GTFS	Green Technology Financing Scheme
GW	Gigawatt
HCFC	Hydrochlorofluorocarbon
HFC	Hydrofluorocarbon

IAEA	International Atomic Energy Agency
IEA	International Energy Agency
IEEP	Institute for European Environmental Policy
IEG	International Environmental Governance
IGO	Intergovernmental Organisation
IPCC	Intergovernmental Panel on Climate Change
IPP	Independent Power Producer
JI	Joint Implementation
JISC	Joint Implementation Supervisory Committee
JWG	Joint Working Group
KeTTHA	Kementerian Tenaga Technology Hijau Dan Air
KP	Kyoto Protocol
LDC	Least Developed Countries
LOA	Letter of Approval
LULUCF	Land Use, Land-Use Change and Forestry
MOP	Meeting of the Parties
Mt	Metric tonne
MYCJN	Malaysian Youth Climate Justice Network
MW	Megawatt
NDRC	National Defense Research Committee
NEAA	National Environment Appellate Authority
NEEA	Netherlands Environmental Assessment Agency
NEEP	National Energy Efficiency Plan
N ₂ O	Nitrous Oxide
NGO	Non-Governmental Organisation
OECD	Organisation for Economic Cooperation and Development
OPEC	Organisation of Petroleum Exporting Countries
PFC	Perfluorocarbon
REDD+	Reducing Emission from Deforestation and forest Degradation
REREDP	Rural Electrification and Renewable Energy Development Project
ROK	Republic of Korea
RMU	Removal Units
SAR	Second Assessment Report
SB	Subsidiary Body
SBI	Subsidiary Body for Implementation
SBSTA	Subsidiary Body for Scientific and Technology Advice
SBSTTA	Subsidiary Body for Scientific, Technology and Technology
SF ₆	Sulphur Hexafluoride
SO _x	Sulphur Oxides
TAR	Third Assessment Report
TEC	Technology Executive Committee
tCO ₂ e	Tonn Carbon Dioxide Equivalents
UK	United Kingdom
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UN	United Nations
USA	United States of America
US\$	United States Dollar

WHO	World Health Organisation
WMO	World Meteorological Organisation
WTO	World Trade Organisation
WWF	Worldwide Fund for Nature

CHAPTER ONE

RESEARCH PROPOSAL

1.1 INTRODUCTION

Climate change is not a new phenomenon. It is an issue recognized worldwide. Increase in the average global temperature as a result of excessive emission of greenhouse gases (GHGs)¹ is causing unusual weather conditions which are adversely affecting the whole ecology system of the world including the biodiversity and human mass. People are consequently suffering from famine and catastrophic environmental events. The ultimate effect of the phenomenon of Global Warming is especially affecting people in developing and least developed countries economically and socially. It is for this reason states have yet to solve this problem. If the problem is not alleviated, there might be millions of people adversely affected by environmental problems. Damage caused to the environment and its processes is, in most cases, irreparable.

Governments worldwide recognize the need to give global warming concrete and serious attention. For this reason they are engaged in a constructive dialogue aimed at finding a practical and efficient solution to solve the problem.

The United Nations is playing a key role in this effort. The climate change issue got international attention when the UN General Assembly held a meeting on a proposal from Malta about devastating famine. The UN adopted Resolution 43/45 declaring climate change to be a common concern of mankind.

¹ The greenhouse gases include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydro fluorocarbons (HFCs), per fluorocarbons (PFCs) and sulphur hexafluoride (SF₆)

In 1988, the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP) jointly established the Intergovernmental Panel on Climate Change (IPCC) with the mandate to assess global climate change.² The United Nations Framework Convention on Climate Change (UNFCCC) was adopted in 1992 and entered into force in 1994. Currently, there are 193 parties (192 states and 1 regional economic integration organization) to the Kyoto Protocol to the UNFCCC.³

To support the implementation of UNFCCC and to address the worldwide concerns about the risk of global climate change due to increased atmospheric concentrations of Carbon dioxide (CO₂) and other greenhouse gases (GHGs) forecast, representatives of the member states gathered in Kyoto, Japan in December 1997. Kyoto Protocol was adopted as it contains workable mechanisms for alleviating the GHGs emission: Land Use, Land Use Change and Forestry (LULUCF), Joint Implementation (JI), Clean Development Mechanism (CDM) and International Emission Trading (IET)⁴ with binding commitments, concrete reduction targets and specific deadline for industrial countries. These mechanisms are in practice for various reasons; states are exploring alternatives to them. However, there is a big question mark on the effectiveness of these mechanisms.

In accordance with Article 7 of the United Nations Framework Convention on Climate Change (UNFCCC), the Conference of the Parties (COP) in its authority as the supreme body has the mandate of adopting the necessary decisions for the promotion of legal framework and its effective application. COP is a body of UNFCCC. It meets every year. The annual meeting of the COP is held annually

² Yamin & Depledge, *The International Climate Change Regime* (Cambridge University Press, 2004)

³ Status of Ratification of the Kyoto Protocol, <http://unfccc.int/kyoto_protocol/status_of_ratification/items/2613.php> (accessed 5 December, 2010)

⁴ Kyoto Protocol (1997), Articles 4.1, 6.1, 12.2 and 17 respectively

between the months of November and December every year to evaluate the outcome of the Kyoto Protocol and to check problems faced by the member states and measures initiated by the states to address the issue of GHGs excessive emission. Until today sixteen sessions of the COP have been held. As far as the COP-15 of Bonn is concerned, it was a big failure.

The United Nations Climate Change Conference took place in Cancun, Mexico from 29th November to 10th December 2010. It encompassed the sixteenth conference of the parties (COP-16) and the sixth conference of the parties serving as the meeting of the parties to the Kyoto Protocol (CMP-6).⁵

Speaking to the media on the third day of the conference, Christiana Figueres⁶ said that Cancun could deliver on adaptation, technology transfer and also clarify what to do about the Kyoto Protocol and how to anchor the targets and actions.⁷

In Cancun, Bolivia and allies (Venezuela, Cuba & Ecuador) strive to protect Mother Earth and humanity; the majority of countries speak with the voice of sellouts.⁸ Bolivian Ambassador Pablo Salas said Bolivia is not prepared to sign the existing document which increases deaths from global warming. He said the current document does not ensure the continuation of Kyoto Protocol. Japan's demands hold up a new climate deal and it is one of 37 countries cutting its greenhouse gases emission under the agreement. But this time in Cancun, Japan said that the extension

⁵ United Nations Framework Convention on Climate Change, <<http://unfccc.int/2860.php>> (accessed December 15, 2010)

⁶ Karen Christiana Figueres Olsen (born August 7, 1956) was appointed Executive Secretary of UN Framework Convention on Climate change (UNFCCC) on 17 May 2010.

⁷ Ibid.

⁸ Closing Session UN Climate Change Conference, <<http://bsnorrell.blogspot.com/2010/12/closing-session-un-climate-change.html>> (accessed December 20, 2010)

of the Kyoto Protocol is not enough, and a wider treaty is needed which must include major polluters, the US and China.⁹

Venezuela's negotiator Claudia Salerno supported Bolivia and urged the delegates not to give up. The negotiator from Ecuador described the floods and disasters that have resulted in millions of refugees. He pressed for greater efforts to halt the increase in greenhouse gases. Too many countries ignored the threat of an increase in global warming in the current document and focused instead on giving dollars to poor countries so polluting countries could continue to pollute.

Secretary General UN, Ban Ki-Moon delivered his speech at COP 16, Cancun, Mexico. It is worth mentioning here a few important points from his speech; He said that the UNFCCC process is an essential component in our overall response. But ultimately, success will be measured by the results- results in these negotiations and results achieved through actions by each and every country to meet this challenge. He said that nature will not wait while we negotiate and we cannot sustain progress towards the Millennium Development Goal without progress on climate change and tangible progress is possible here in Cancun. Mr. Ban repeated twice in his speech that we cannot let the perfect be the enemy of the good.¹⁰

Echoing the comments of other countries, the negotiator from Zambia said the then current document was not perfect, but was a building block, to be carried forward to the next UN climate negotiations in Durban, South Africa in 2011. COP 16 approved the Green Climate Fund of \$100 billion per year and it is considered a good sign for developing countries. After two weeks of talks in Mexico, more than 190 countries were likely to approve a proposal that leaves open an extension of the Kyoto

⁹ Japan's position in Cancun, <<http://www.metro.co.uk/news/849285-japan-s-demands-hold-up-a-new-climate-deal>> (accessed 5 December, 2010)

¹⁰ Secretary General Ban Ki-Moon Cancun, Mexico, <http://www.un.org/apps/news/infocus/speeches/statments_full.asp?statID=1028> (accessed 8 December, 2010)

Protocol whose requirements expire in two years. It is questionable whether the outcome of COP 16 will be a road map for the continuation of Kyoto Protocol.

Recently there was a 17th Conference of the Parties (COP17) to the United Nations Framework Convention on Climate Change (UNFCCC) and the 7th Session of the Conference of the Parties serving as the Meeting of the Parties (CMP7) to the Kyoto Protocol.¹¹ Although at the eleventh hour COP 17 gave life to the Kyoto Protocol the future of the Kyoto Protocol is still not clear. Canada has withdrawn its membership from the Kyoto Protocol and in this situation Japan and Russia are not ready to take further commitment. The US is not ready to ratify the Kyoto Protocol even though the US is the largest CO₂ emitter. The outcome of COP 17 will be discussed at full length.

This research will find out about the Kyoto Protocol compliance in some of the member states, particularly the position of Malaysia. The measures taking by the Malaysia's government to achieve the objective of the Kyoto Protocol will be discussed with full length.

This research fundamentally examines the suitability and effectiveness of the Kyoto Protocol and its mechanisms. It will also find out whether the targets which have been fixed by the Kyoto Protocol such as reduction of GHGs, financial support for developing countries and least developed countries by developed countries and technology transfer have been achieved. Moreover the research will find out how we can fight the problem of excessive emission of GHGs more effectively and efficiently. For that purpose, it will take into consideration the usage of alternative and renewable energy sources and hybrid energy as well.

¹¹ COP 17, <<http://www.cop17-cmp7durban.com/>>, (accessed on 30 December, 2011)

In addition, the issue of global warming will also be discussed from an Islamic perspective. Islam is very much conscious about the safety of the environment for the whole world. Islam assures the safety of the environment, not only for the present generations, but for the future generations as well. There is a natural relationship between Islam and the environment. The researcher will make a brief account of environmental safety in the light of Qur'ān and Sunnah and the environment and its components in Islam. This research will elaborate the environmental protection and obligations of *Khalifah* (vicegerent), the concept of *Amanah* (Trust), *Masalah Mursalah* (Public Interest) and the protection of the environment.

As mentioned earlier, the Kyoto Protocol, agreed in 1997 and entered into force in February 2005, represents the world's most ambitious attempt at tackling the ongoing process of global climate change. Its main quantifiable target during its first phase was the list of 37 developed countries to reduce their aggregate greenhouse emissions to five percent below 1990 level by the period 2008-2012.

After the lack of progress leading to a binding commitment or an extension of the Kyoto commitment period in climate talks at COP 15 in Copenhagen, Denmark in 2009, there were several further rounds of negotiation at COP 16 in Cancun, Mexico in 2010, and South Africa in 2011 (COP 17). Because any type of treaty change will require the ratification of the text from the member states before the end of the commitment period December 31, 2012,¹² it seems that any negotiations in upcoming meetings may be unable to bring plausible agreement. So, still there is a big question regarding what will be next after 2012 when the Kyoto Protocol expires. This research will try to help answer this question.

¹²Kyoto Protocol, <http://en.wikipedia.org/wiki/Kyoto_Protocol> (accessed 27 February, 2011).

1.2 RESEARCH QUESTIONS

Global warming is a threat to the world at large that has to be handled legally with efficient and preventive measures at the international level. To overcome this threat, flexible mechanisms have been introduced by the Kyoto Protocol. The application of these mechanisms has raised the following questions which this research seeks to answer:

1. What is the outcome of mechanisms of the Kyoto protocol currently?
2. Are the mechanisms of the Kyoto Protocol able to solve the problem of global warming?
3. Is the Kyoto protocol only beneficial for developed countries and not for developing and least developed countries?
4. How will the ratification of the Kyoto Protocol by the USA make the Kyoto Protocol more effective?
5. What is next after 2012 when the Kyoto Protocol expires?

1.3 HYPOTHESIS

1. The present mechanisms of the Kyoto Protocol for mitigating the problem of global warming have partially achieved the objective.
2. Kyoto Protocol is beneficial for developed countries and not for developing and least developed countries.
3. Ratification of the Kyoto Protocol by the USA will make it more effective.
4. There is a need to explore further improvement on the existing mechanisms along with other ways to fight the problem of global warming.

1.4 OBJECTIVES OF THE PROPOSED RESEARCH

There is a need to critically evaluate the framework of the Kyoto Protocol for more effective results, particularly its four mechanisms. Therefore, this research seeks to achieve the following objectives:

1. To investigate the Kyoto Protocol compliance in some of the member states, particularly the position of Malaysia.
2. To suggest some improvements that can be made with regard to the preventive measures taken by the Malaysian government to keep up with the issue of global warming.
3. To highlight the weaknesses and shortcomings of the Kyoto Protocol and its mechanisms in order to improve its efficacy.
4. To propose new techniques to make the Kyoto Protocol and its mechanisms more efficient and effective in solving the problem of global warming.
5. To explore the usage of alternative and renewable energy sources as a way to handle the excessive emission of GHGs
6. To address the issue of global warming from an Islamic perspective highlighting the aspects of environmental safety in Qur'ān and Sunnah.
7. To identify the next step that should be taken when the Kyoto Protocol expires by the end of 2012.

1.5 LITERATURE REVIEW

Climate change or global warming is not a new phenomenon. It is considered by the United Nations as a threat not just to mankind but to the whole universe. The leading scientific research authority on global climate change, the Intergovernmental Panel on Climate Change (IPCC), most recently produced its Fourth Assessment Report in 2007. In this report it was projected that eleven of the twelve years in the period (1995-2006) rank among the top 12 warmest years in the instrumental record (since 1850, towards the end of the Little Ice Age).¹³ The Kyoto Protocol 1997 is a result of universal debate organized by the UN which started in 1992. There is no question that environmental concerns have gotten a clear position in international forums and even in domestic debates. That is why there is plenty of literature from different dimensions and angles with respect to ecological issues in international society. The following are the work of some researchers that deal with the subject matter.

“Environmental Law” (Richard Burnett & Hall Brian Jones, 2009) is a comprehensive book on environmental law. The authors provide a detailed discussion of the major environmental issues. In regards to climate change Burnet and Hall explain the history of climate change and background of the Kyoto Protocol. However they do not discuss the performance of the mechanisms provided by the Kyoto Protocol and their outcome.

A research paper presented by Alane S. Manne & Richard G. Richels (2001) at the Stanford University Energy Modeling Forum under the title *“US Rejection of Kyoto Protocol: the impact on compliance costs and CO₂ emission”*, this paper states that in the absence of US ratification of the Kyoto Protocol, the overall costs of mitigation may decline for the other countries during the first commitment period

¹³ IPCC Fourth Assessment Report, <http://en.wikipedia.org/wiki/IPCC_Fourth_Assessment_Report> (accessed 6 December, 2010)

(2008-2012). However based on the results of their analysis, the reduction in mitigation costs may not be as great as some would suggest. There are certain issues which still need to be discussed. For example, in the case of extending the Kyoto Protocol, what impact will there be on the value of emission permits and what will be the effect of US ratification on the effectiveness of the Kyoto Protocol?

“The International Climate Change Regime” (Farhana Yamin & Joanna Depledge, 2004) introduces the problem of climate change, the legal framework of the United Nations Framework Convention on Climate Change (UNFCCC, 1992), the Kyoto protocol, and its mechanisms. The authors present a comprehensive, authoritative and independent account of the rules, institutions and procedures governing the international climate change regime. This analysis is both detailed and user-friendly, covering the UN Framework Convention on Climate Change, the Kyoto Protocol and all decisions taken by the Conference of the Parties up to 2003, including the landmark Marrakesh Accords. Mitigation commitment, adaptation, the flexibility mechanisms, reporting and review, compliance, public awareness, technology transfer and financial assistance are some of the areas that are reviewed by the authors. But there is no discussion about the outcome of mechanisms and what is next after Kyoto protocol and usage of alternative and renewable energy sources.

“CITIES and Climate Changes” (Harriet Bulkely & Michele Betsill, 2005) generally concerns international agreements on environmental problems including climate change. This research provides a critical analysis of the role of cities in addressing climate change and the prospects for urban sustainability. In the post-Rio era, international organizations and transnational networks have promoted the need for local action on global environmental issues. *Cities and Climate Changes* is the first in-depth analysis of the role of cities in addressing climate change. The book argues