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IC-GWBT 2013

Proceedings

The 2nd International Conference
On Green World in Business and Technology

Intellectual Property Rights in Technopreneurship Based on
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Yogyakarta, 23 March 2013
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**PROCEEDING OF
THE 2nd INTERNATIONAL CONFERENCE ON GREEN
WORLD IN BUSINESS AND TECHNOLOGY**

*“Intellectual Property Rights in Technopreneurship based on
Green Bussiness and Technology”*

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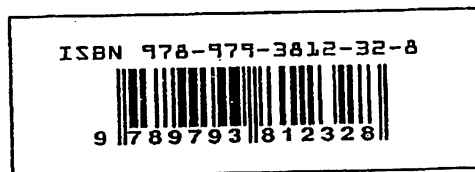
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FOREWORD FROM RECTOR OF AHMAD DAHLAN UNIVERSITY

The Guest of honor, Distinguished Delegates, Ladies and Gentlemen.

On behalf of the committee of The 2nd International Conference on Green World, Business and Technology 2013 and on my own behalf, I take great pleasure to welcome you to The 2nd International Conference on Green World, Business and Technology 2013.

The issues of global warming are causing human life to be uncomfortable. University of Ahmad Dahlan, as Center of Excellence, takes the lead to invite and bring together practitioners, scientists and environmentalists from various disciplines who are expected to contribute to the government of Indonesia and the world in preventing and overcoming all the consequences of environmental damage. Furthermore, University of Ahmad Dahlan accelerates global sustainability through organizing international conferences; publishing and dissemination of sustainable businesses, innovations and enterprises world-wide; Implementation of community development projects, and promoting & celebrating sustainable innovations.

As you may be aware, the Green Economy was the main focus of the Rio+20 Summit in Rio de Janeiro in Brazil in June 2012. As such the global community was focusing on the green economy agenda. According to UN, 2012 is a year of sustainable energy for all, therefore it is every ones' responsibility to engage in any act that produces or promotes sustainable energy in order to contribute to a green economy. The need to take action is now, as we proceed into the future. That is the reason why University of Ahmad Dahlan, since 2012, has been spearheading the production of green economies through the world clean technology summit as an important pillar in order to attain a sustainable future for all. I am pleased that this International conference has attracted a global attendance providing an opportunity for technology transfer and for participants to engage, interact with each other, exchange development contacts, inspire partnerships and pave a way forward for a sustainable future. This conference offers numerous exciting exposure and networking benefits, because of its enrichment with diversified themes to stimulate presentations, discussions, roundtable networking sessions, exhibitions, site-visits, as well as post-conference networking meetings, excursions and tourism.

It is our obligation to say thank you to all those people and organizations that are developing their nations with reduced or no harm to the environment. On this note I would like to congratulate all presenters and participants for being able to join this International conference.

Our pledge is to continue providing a global platform to promote sustainability, clean technology, as well as the production of green economies through strategic activities and events delivering global solutions.

I wish you an inspiring conference.

SPEECH FROM CHAIRMAN OF
THE 2nd INTERNATIONAL CONFERENCE ON GREEN WORLD
IN BUSSINESS AND TECHNOLOGY

All thanks to Allah, Whose blessings us and make all possible so we can attend The 2nd *International Conference on Green World in Business and Technology* with the theme Intellectual Property Rights in *Technopreneurship* based on Green Business and Technology This events organized by Center of Intellectual Property Rights Ahmad Dahlan University Yogyakarta.

The issues of global warming, as well as increasing CO₂ emissions in the air, high air temperature, climate change, deforestation, flooding, energy crisis, food crisis are causing human life to be uncomfortable. These global problems require solutions. To meet the need of searching for solutions, University of Ahmad Dahlan will conduct an *International Conference on Green World in Business and Technology*, in which many experts will share ideas and experiences.

International Conference on Green World in Business and Technology is designed to invite and bring together practitioners, scientists and environmentalists from various disciplines who are expected to contribute to the government of Indonesia and the world in preventing and overcoming all the consequences of environmental damage.

The ICGWBT 2013 conference provided a forum for scientists in academia, industry, and government to address the most innovative research and development including technical challenges and social, legal, political, and economic issues, and to present and discuss their ideas, results, work in progress, and experience on all aspects of information computing and applications.

There were a very large number of paper submissions. All submissions were reviewed by Technical Committee members and external reviewers. It was extremely difficult to select the presentations for the conference because there were so many excellent and interesting submissions. In order to allocate as many papers as possible and keep the high quality of the conference. We believe that all of these papers and topics not only provided novel ideas, new results, work in progress, and state-of-the-art techniques in this field, but also stimulated the future research activities in the area of Green world in *Business and Technology*. This seminar is also expected to discuss solutions to address all aspects of program-related "green world".

We are also grateful the Rector of the Ahmad Dahlan University, to the members of the Organizing Committee for supporting us in handling so many organizational tasks, and to the Keynote Speakers for accepting to come to the conference with enthusiasm. We hope you enjoy the conference program, and the beautiful attractions of Yogyakarta.

Yogyakarta, 23th March 2013
Chairman Program

Dr.Dwi Suhartanti.,M.Si

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Islamic Bioethics for Green Spirit

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Abstract

Science and technology have backfired which lowers the dignity of the human rights due to a first generation of Human Rights that tends to glorify the liberal right for autonomy or self-determination excessively. Human rights will be upheld proportionally if fought through bioethics on life and living. The principles of bioethics consisting of beneficence or doing good, non-maleficence or do no harm, autonomy or respect for others and justice or bring justice to the all people has the function in balancing human selfishness of first generation of Human Rights. Science and Technology with the environment in order to remain sustainable (green forever). Indonesia as the largest Muslim country has a special concept known as the local genius with Islamic Bioethics in line with the philosophy of Pancasila for creating preservation of life and living in accordance with the green spirit. Islamic bioethics consists of maqosidus sharia and qowaidus sharia. Both the concept of Islamic bioethics is particularly relevant in preventing environmental damage caused by the application of science and technology. Islamic bioethics is also useful in guiding biomedical research process in term of medical context in order to uphold the ethics of science to love the life and living.

Keywords: *Green Spirit, Islamic Bioethics, Maqosidus sharia, Qowaidus Sharia.*

Introduction

More and more people realise that humankind proceeds in dangerous, potentially even lethal, directions.¹ We believe the world-wide industrial capitalist system is destroying the Earth. This system, with its human-centered view of nature as a "resource" and its roots in endless economic growth and consumerism, has us all on a death path.² Increasing anthropogenic greenhouse gas emissions by activity of industry, transportation, mining, household electronic and machines are causing global climate change, including global warming and a rise in ocean levels.³

Science and technology has changed and caused everything changes so that the world might become damage. In fact, all science is to glorify human being and humanitarian. Science of law is to provide justice for mankind, medical science to help improve the quality of human life, economics to improve the well-being. But damage is found almost all over the world including environmental damage as consequences of science and technology usage that tends to glorify the liberal right for autonomy or self-determination excessively without balancing of bioethics principle. Science and technology becomes wild, backfire which lowers the dignity of the human rights and uncontrollable by exploitation motif for taking advantage of the earth indefinitely without harmonization of bioethics principles consisting of beneficence or doing good, non maleficence or do no harm, autonomy or respect to others and justice or bring justice to the all people.⁴

Excessive consumption and population growth may also be regarded as major problems of the world today. Consumption leads to a long list of

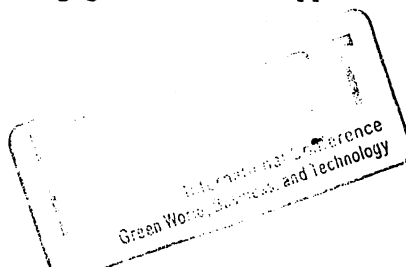
consequent problems, and this includes environmental, social, cultural, moral, ethical and perhaps even spiritual and religious problems. One may regard human consumption to be the root of many problems, accelerated and worsened by a growth in the number of humans. Over population may cause consequent social problems such as disease, poverty, famine, inequality, political instability and increased consumption. Population also becomes an environmental problem due to limitations of resources and the planet's ecological carrying capacity. Admittedly, there are other factors that contribute to such problems, but it would be hard to deny that population and consumption are major contributors.⁵

Needed are new ecological, social, political, spiritual and cultural visions, and a reduction in human population. A new environmental ethic and associated environmental economics are required as part of bioethics discipline. Societies have to be ecologically sustainable for the survival of all species on Earth.² The green spirit with eco-ethics, spiritual and religious ecology attempts to assist in correcting the course, to build a new house for humanity and to secure the future of our species and its ecological support systems.¹

We are facing global disaster about humanity and human dignity become absurd in term of human rights because autonomy as expression of self determination rights without limitation if no loss of material or economic disadvantages. The right of autonomy have become the most important rights as first generation of human rights than health and education or environmental as second and third generation of human rights. This latter claim about undesirable commitment of moral imperialism by autonomy principle. For those reason UNESCO have made revision of declaration on human rights 1948 become Declaration on Human Rights and Bioethics in 2005 to minimize and prevent the misuse of science and technology based on self determination of human rights excessively regarding with anthropocentrism.^{6,7}

This condition have emerged new consciousness of many expert to control environment crisis by practical intervention and philosophy approach needed for saving and restoring the earth by green spirit using left biocentrism or anthropocentrism approach and deep ecology platform.⁸

Today many aspects of the environmental conservation movement are empowered by spiritual principles and interdisciplinary cooperation.³ Within many faiths, environmentalism is becoming an area of study and advocacy. Christian environmentalists emphasize the ecological responsibilities of all Christians as stewards of God's earth, while contemporary Muslim religious ecology is inspired by Qur'anic themes, such as mankind being *khalifa*, or trustee of God on earth (2:30). There is also a Jewish ecological perspective based upon the Bible and Torah, for example the laws of *baltashchis* (neither to destroy wantonly, nor waste resources unnecessarily). Engaged Buddhism applies Buddhist principles and



teachings to social and environmental issues in response to global warming and environmental crisis.⁹

The practical interventions needed for saving and restoring the earth will require a collective shift of such magnitude as to take on a spiritual and religious intensity. This transformation has in part already begun. Traditions of ecological theology and ecologically aware religious practice have been preparing the way for decades.⁸

The Buenos Aires draft declaration (2004) (hence forth BDD) on the ethical dimensions of climate change makes clear that there is a large amount of scientific and economic literature on climate change but the ethical dimensions of climate change have not been sufficiently addressed.¹⁰ Stephen Gardiner in his survey article draws upon the authoritative Intergovernmental Panel on Climate Change (IPCC) report of 2001 and says that climate change is essentially an ethical issue and then goes on to question why there has been a neglect on the part of moral philosophers to take climate change seriously.¹¹ Dale Jamieson contends that the problems of climate change are essentially problems of ethics and politics.¹²

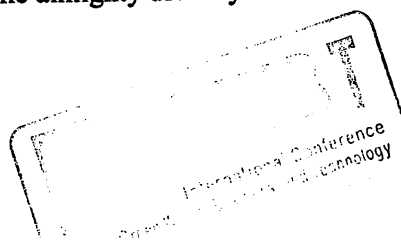
It is really important that Islam as the comprehensive religion for inspiration in dealing with environmental problems through the Islamic concept of green spirit using Islamic Bioethics. In this paper, we want to discuss the concept of green spirit generally and implementation of Islamic bioethics for green spirit.

Methodology

This article offers my interpretation of the literature on green spirit and its implications in Islamic bioethics. I examined related books, articles and websites, collected through searches of databases such as Pubmed and EBSCO and search engines such as Google and Yahoo using several keywords including Islamic bioethics, bioethics, green spirit, deep ecology and eco-ethics. I benefited a selected collection of above mentioned references according to their relevance to the subject of this article and I based my discussion on my understanding and interpretation of them as well as my discussion with experts. I discussed the meaning and importance of the concept of green spirit in the Islamic schools of theology and their implications in the Islamic bioethics.

Result and Discussion

Indigenous nations and peoples believe in the spiritual powers of the universe including Indonesia with Pancasila. We believe in the ultimate power and authority of a limitless energy beyond our comprehension as part of our basic value of nation Pancasila i.e. belief in the almighty one. We believe in the order of the universe. We believe in the laws of creation and that all life is bound by these same natural laws. We call this essence the spirit of life. This is what gives the world the energy to create and procreate. This spirit become the first pillar of Pancasila that is the one almighty divinity.⁹



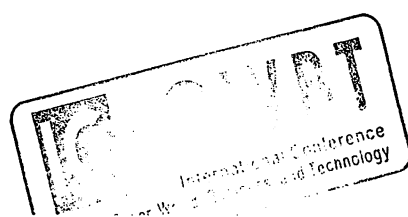
Spirit of life in medicine is symbolized with green color in operating theater when doctor and nurse performing surgery to rescue and keep patient alive. Green is the color of balance. It also means learning, growth, renewal, and harmony. Green is the color of nature consisting of living matter and non living with all environments. It brings peace and harmony into our lives. It is the color of Healing and Hope, optimism, freedom, renewal, long life and balance. In Islam, green is the color of material and spiritual salvation, wisdom, and the prophets.¹³ Green spirit means spirit of life in harmony with environment or nature based on spiritual vision.

We found that there are several term regarding green spirit included deep ecology, ecosophy, and spiritual ecology. Deep ecology distinguished with shallow ecology according to Frijcof Capra.¹⁴ Fritjof Capra defined deep ecology by contrasting it with shallow ecology and showing that it is a network concept: *“Shallow ecology is anthropocentric, or human-centred. It views humans as above or outside of nature, as the source of all value, and ascribes only instrumental, or ‘use’, value to nature. Deep ecology does not separate humans - or anything else - from the natural environment. It does see the world not as a collection of isolated objects but as a network of phenomena that are fundamentally interconnected and interdependent. Deep ecology recognizes the intrinsic value of all living beings and views human beings as just one particular strand in the web of life.”*

Other term of green spirit is ecosophy according to Arne Naess’s in original definition of ecosophy¹⁵: “By an ecosophy I mean a philosophy of ecological harmony or equilibrium. A philosophy as a kind of sofia (or) wisdom, is openly normative, it contains both norms, rules, postulates, value priority announcements and hypotheses concerning the state of affairs in our universe. Wisdom is policy wisdom, prescription, not only scientific description and prediction. The details of an ecosophy will show many variations due to significant differences concerning not only the ‘facts’ of pollution, resources, population, etc. but also value priorities.”The mission of ecophilosophy (ecosophy) is to explore a diversity of perspectives on human-Nature contexts and interrelationships. It fosters deeper and more harmonious relationships between place, self, community and the natural world. This aim is furthered by comparing the diversity of ecosophies from which people support the platform principles of the global, long range, deep ecology movement.

Spiritual ecology is a spiritual response to the ecological crisis. It is a developing field that joins ecology and environmentalism with the awareness of the sacred within creation. It calls for responses to environmental issues that include spiritual awareness and/or practice. According to Fritjof Capra that Ecology and spirituality are fundamentally connected, because deep ecological awareness, ultimately, is spiritual awareness. The spiritual of man contributes to maintaining the sanctity of the world.¹⁶

Bioethics is the study of life ethics. A word coined in the later part of the 20th century to describe the various rights and wrongs of new scientific and technological procedures and discoveries (in particular in response to human



experimentation during World War II) which were seen to bear a direct and significant impact upon humane survival". Other definition bioethics is rules of conduct in scientific research and involves many disciplines and skills such as law, philosophy, theology, medicine, science and technological research [derived from Greek *bio* - life and *ethicos* moral]. Bioethics is interdisciplinary and multidisciplinary studies to make decision for doing good and doing no harm in the context of application of technology in this life and human being in the past, present, and future. Bioethics according to Darryl Macer from UNESCO Thailand Representative is love to life, love to self, love to good, love to environment, love to others.¹⁷

Islam literally means 'submission to the Will of Allah (God)'. Islam is both a religion and a complete way of life. It is a universal religion comprising all nationalities of the world, holding no distinctions based on color, race or ethnicity. Islam places the onus of practicing religion on the individual.¹⁸ Islam is a religion of peace, mercy and forgiveness, and the majority of its teachings bear no relation to the extremely grave events that have come to be associated with the faith in the public mind. In Islam, human beings are the crown of creation and are God's vice-regents on earth.¹⁹ Humans are endowed with reason, choice and responsibilities, including stewardship of other creatures, the environment and their own health. Muslims are expected to be moderate and balanced in all matters also with environment. The spirit of Islam is ethics as Nabi Muhammad PBUH said that I have been sent down to perfect ethics or akhlaq. Then regarding the environment crisis Islam have given warning in one of verse;

ظَهَرَ الْفَسَادُ فِي الْبَرِّ وَالْبَحْرِ بِمَا كَسَبَتْ أَيْدِي النَّاسِ لِيُذِيقَهُمْ

بَعْضَ الَّذِي عَمِلُوا لَعَلَّهُمْ يَرْجِعُونَ ﴿٤١﴾

Corruption has appeared throughout the land and sea by [reason of] what the hands of people have earned so He may let them taste part of [the consequence of] what they have done that perhaps they will return [to righteousness]. (QS: Ar-Ruum 41).

Islamic bioethics is intimately linked to the broad ethical teachings of the Qur'an and the tradition of the Prophet Muhammad, and thus to the interpretation of Islamic law.²⁰ Bioethical deliberation is inseparable from the religion itself, which emphasizes continuities between body and mind, the material and spiritual realms and between ethics and jurisprudence, as well as human and environment.

Issues on bioethics can be viewed from perspective Islam for green spirit by using Maqosidush Shariah, and Qowaidush Shariah. Maqosiduh shariah mean the purpose of rule in Islam to protect morality and spirituality (religion/ad-din) in relation with The Creator, to protect life, to protect mind, to protect progeny, to protect wealth, and to protect environment. All activities of moslem should take

into account the purpose of religion. **Protection of religion (*hifdh al ddiin*)** essentially involves *'ibadat* (religion service) in the wide sense that every human endeavor that in line with norm is a form of *'ibadat*. Thus effort for perserving and conservaton of environment as manisfetaton of green spirit makes a direct contribution to *'ibadat* by protecting and promoting good environment so that humankind will have good spiritual condition to undertake all the responsibilities of *'ibadat*. A bad environment cannot provide good condition for *'ibadat* properly. **Protection of life (*hifdh al nafs*)** means that the primary purpose of green spirit is to fulfill the second purpose of the Law, the preservation of life, *hifdh al nafs*. **Protection of progeny (*hifdh al nasl*)** means that *green spirit* contributes to the fulfillment of the progeny function by making sure that our next generation or children are cared for well in healthy environment so that they grow into healthy adults who can bear children. Effort should be done to prevent the environment damage that caused infertility. **Protection of the mind (*hifdh al 'aql*)** means reen spirit plays a very important role in protection of the mind, free from neurosis and psychoses or distress. Pollution in any kind of water, air, sound will affect the peace of mind. **Protection of wealth (*hifdh al maal*)** means that the wealth of any community depends on the productivity and carrying capacity of the environment.¹¹ The last one is protection of environment that now all material in our environment is loaned by our grandson in the next generation.²⁰

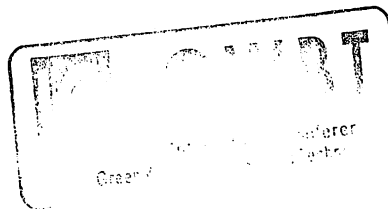
Qowaaidush shariah mean the principle of rule in Islam consisting of intention principle, certainty principle, injury principle, hardship principle, and custom principle. **The principle of intention (*qa'idat al qasd*)** means that the Principle of intention comprises several sub principles. The sub principle 'each action is judged by the intention behind it' calls upon the physician to consult his inner conscience and make sure that his actions, seen or not seen, are based on good intentions. The sub principle 'what matters is the intention and not the letter of the law' rejects the wrong use of data to justify wrong or immoral actions. The sub principle 'means are judged with the same criteria as the intentions' implies that no useful medical purpose should be achieved by using immoral methods. **The principle of certainty (*qa'idat al yaqeen*)** means that *all effort to make healthy environment* cannot reach the legal standard of absolute certainty, *yaqeen*. Solution and decision making in green spirit are based on a balance of probabilities. The most probable decision is selected as the working while those with lower probabilities are kept in mind as alternatives. This provides for stability and a situation of quasi-certainty without which practical procedures will be taken reluctantly and inefficiently. The principle of certainty asserts that uncertainty cannot abrogate an existing certainty. Existing assertions should continue in force until there is compelling evidence to change them. **The principle of injury (*qa'idat al dharar*)** means that intervention of environment is justified on the basic principle is that injury, if it occurs, should be relieved. An injury should not be relieved by intervention procedure that leads to an injury of the same magnitude as a side effect. In a situation in which the proposed intervention procedure has side effects, we follow the principle that prevention of an injury has priority over pursuit of a benefit of equal worth. If the benefit has far more importance and worth than the injury, then the pursuit of the benefit has

priority. Sometimes intervention procedures are confronted with other procedure that are double edged; they have both prohibited and permitted effects. The guidance of the Law is that the prohibited has priority of recognition over the permitted if the two occur together and a choice has to be made. If confronted with 2 situations both of which are injurious and there is no way but to choose one of them, the lesser injury is committed. A lesser injury is committed in order to prevent a bigger injury. In the same way interventions that are in the public interest have priority over consideration of individual interest. The individual may have to sustain an injury in order to protect public interest. In many situations, the line between benefit and injury is very fine. **The principle of hardship (*qaidat al mashaqqat*)** means that interventions procedure for green spirit that would otherwise be prohibited actions are permitted under the principle of hardship if there is a necessity. Necessities legalize the prohibited, *al daruuraat tubiihu al mahdhuuraat*, and mitigate easing of legal rules and obligations. In the green spirit setting a hardship is defined as any condition of environment that will seriously impair physical and mental health if not relieved promptly. Committing the otherwise prohibited action should not extend beyond the limits needed to preserve the purpose of the Law that is the basis for the legalization. The temporary legalization of prohibited intervention procedure or action ends with the end of the necessity that justified it in the first place. **The principle of custom or precedent (*qaidat al urf*)** means that The standard of environment intervention is defined by custom. The basic principle is that custom or precedent has legal force. What is considered customary is what is uniform, widespread, and predominant and not rare. The customary must also be old and not a recent phenomenon to give chance for a consensus to be formed.²⁰

Islamic bioethics also have tailored with environment issue in research activity especially in biomedical research that using animal and plant for genetic engineering or clinical trial in pharmacology. The researcher should consider the harm and benefit based on islamic bioethics by using maqosidush syariah and qowaidus syariah. Research activity become contributor of environment damage especially in biodiversity and biosafety issues. Islamic bioethics will decrease the negative effect of research activity at present and future if well implented by committee ethics in approving or refusing the research proposal.

Conclusion

Green spirit become new movement in our environment crisis today. Within many faiths, environmentalism is becoming an area of study and advocacy including Islam having spirit of ethics in our life called Islamic bioethics. Islamic have given warning about environment crisis and also given recommendation for solution of environment crisis. Islamic bioethics consisting of Maqosiduyariah and Qowaidusyariah can be used in preventing environment damage by human activities.

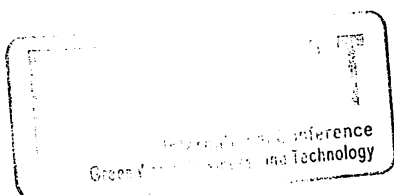


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