

## **LOCAL WISDOM IN RELATION TO CLIMATE CHANGE**

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### **INTRODUCTION**

Earth's climate is changing, with the global temperature now rising at a rate unprecedented in the experience of modern human society. These climate changes, including increases in ultraviolet radiation, are being experienced particularly intensely in the Arctic. Because the Arctic plays a special role in global climate, these changes in the Arctic will also affect the rest of the world. It is thus essential that decision makers have the latest and best information available regarding ongoing changes in the Arctic and their global implications.

There are so many ways how to understand climate change problem in the world from a peripheral interest to a central concern within the discipline of environmental sciences. This article offers a new way to understand the climate change problem and is concerned with problems of modernity, postmodernity and local wisdom in the context of contemporary environmental thought. Focusing on the international politics surrounding the UN agreement on climate change, the Framework Convention on Climate Change and its Kyoto Protocol, the author examines this important issue using the key aspects of climate change science, global environmental politics, and global environmental management.

Subsequently, according to IPCC 2001 in Glover (2006) an increasing body of observations gives a collective picture of warming world and other changes in the climate system such as:

- Global-average surface temperature increased by about 0.6°C over the 20<sup>th</sup> century.
- 1990s warmest decade and 1998 warmest year in last 1000 years in Northern Hemisphere.
- Over last 50 years night-time minimum temperatures increased by about 0.2°C per decade.
- 10% reduction in snow cover ice since late 1960s.
- Reduction of about two weeks in annual duration of lake and river ice over the 20<sup>th</sup> century.
- Widespread retreat of mountain glaciers during the 20<sup>th</sup> century.
- Northern Hemisphere spring and summer sea-ice extent decreased by 10-15% since the 1950s.
- 40% decline in late summer Arctic sea-ice thickness in recent decade.
- Global-average sea-level has increased by 10-20 cm during the 20<sup>th</sup> century.
- 0.5% per decade increase in northern hemisphere mid-latitude precipitation during the 20<sup>th</sup> century.
- 2-4% increase in frequency of heavy precipitation events in the northern hemisphere mid- and high-latitudes over latter half of the 20<sup>th</sup> century.

A number of extrapolations have also been projected by related scientists for future prediction and it was found that:

- Global-average surface temperature projected to increase by 1.4 to 5.8°C by 2100.

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- Rate of warming likely unprecedented in at least last 10, 000 years.
- Land areas will warm more than the global average.
- Global average precipitation will increase over 21<sup>st</sup> century.
- Very likely to be more intense precipitation events.
- Snow cover and sea-ice extent projected to decrease further.
- Glaciers and icecaps projected to continue widespread retreat.
- Global mean sea-level projected to increase by 9 to 88 cm by 2100.

From such situations it could be concluded that quality of environmental condition in our planet getting worse in every single time. Of course the condition will make us worrying for life sustainability for all creatures on our lovely world. These could be due to modernity as well as postmodernity type of social development so far. Further question arise: "What should be done?"

### **Modernity**

Modernity is a contentious and elusive concept subject to much sociological inquiry and philosophical contemplation. From the beginning of the industrial era, elements of the 'modern life' emerged and were duly considered by thinkers as Karl Marx, Adam Smith, and others. Modern societies are characterized by urbanity, industrial production, social stratification, social roles taken by professional groups, bureaucracy, and the nation state. Technology is usually taken as a major determinant of the social transformation that culminates in a modern society, wherein all facets of life are technologized.

Modernity is distinguished from 'pre-modern' or traditional social forms, so that modernity embraces the character or essence of an entire society, seeking generalities beyond the immediate dynamics and lingering traditions. Dichotomies between the modern and the pre-modern disturb some scholars who fear that modern society be seen as internally uniform, without its own traditions and those remnants of its precursor social forms not be properly acknowledged. Toulmin (1990) notes that for most critics the chronology of modernism begins in the early decades of the seventeenth century. Sociologists and historians have identified the following features of modern society (Berger 1977; Kumar, 1988; and Mumford, 1970) as the following:

\_ specialized social functions, with birth, death, education, medicine, religion, the production of food, shelter, and clothing, and income-generation typically occurring outside the home; social institutions and a professional cadre provide key social functions;

\_ pluralism and the operation of a social web that organizes and manages the multiplicity of functions and activities; economic interdependencies link elements of a fractured society of diverse activities; society itself is diverse;

\_ social relations and activities are discontinuous and temporary, mobility is high, social change is rapid, and social networks fluid and dynamic;

\_ rationality, efficiency, planning, and future-orientation in individual decisions, social institutions, and bureaucracy;

\_ individuation and the cultivation of individuality as the basic social element in which personal liberty and individual rights assume the highest status, so that self-expression and achievement are primary goals;

\_ abstraction marks many social relations, state and corporate structures are large-scale and remote from individuals, power relationships are often indirect, communication uses abstractions and much specialized terminology; and

\_ society seeks and takes decisions at many scales to shape the future to its design and pursues an escape from a destiny determined by natural forces.

### ***Modernity and ecologism***

Today, it seems, everybody claims to be an environmentalist. In some senses, the widespread claim is reasonable, as few wish to publicly favor wholesale environmental destruction or allow environmental threats to human welfare to be enhanced by vested interests. On the other hand, if every citizen, corporation, institution, and government in the industrialized world comprises environmentalists, then the concept of environmentalism as one implying protection of environmental values and requiring a re-orientation of routine activity is completely corrupted. 'Environmentalism' has, of course, always been a fairly woolly term, such that its recent transition from having pejorative meaning in the mainstream to a generally positive connotation has aroused little comment. Within the panoply of environmentalism have been proponents seeking radical social change, and applying ecology as a critique of modernity. From this group has arisen the ideology of 'ecologism. Dobson (2000) and Baxter (1999), and others have drawn a useful distinction, suggesting that while 'environmentalism' recognizes environmental values in social activity, no social change is implied, whereas 'ecologism' requires radical changes to accommodate environmental values in social and political activity. Of all the modern social movements within modernity, ecologism has arguably produced one of its most extensive and considered critiques.

### **Postmodernity**

Entomologically, the 'postmodern' succeeds modernity and is defined by not being modernity. But this inverse or negation of a definition leaves open postmodernism's identity: it can be the outcome of modernity, the refusal of modernity, the latest stage of modernity, the remnants of modernity, a rejection of modernity, and so on. Postmodernism conflates at least two possibilities: firstly, an attack on the understanding and condition of modernity; and secondly, to sketch out a future different from the present. Many applications of the term have used more than one version of these possibilities.

Postmodernism, in some accounts, records the negative consequences of modernity, such assumptions of European superiority and associated racism and colonization of the New World. In other accounts, postmodernism is the failure to reach or continue to strive for the Enlightenment ideals, so that contemporary times are marked by exhaustion, pessimism, failures of reason, and abandoning the quest for absolute knowledge. Postmodernism is, at the least, the most recent criticism that modernity and critique of the Enlightenment that modernity has leveled against itself.

### **Climate change's challenge to modernity**

Environmental philosophy and politics can be tested by their relationship with modernity, which roughly hews the discourse into those set against it and those more or less reconciled to reforming modernity from within. Only a small number of environmental thinkers have directly taken up postmodernity as offering a response to the ecological crisis, which necessarily entails interpreting the works of its seminal thinkers, who offered no thoughts on the environmental condition per se. Researchers and scholars of environmental problems concerned with postmodernity, including those interested in constructivism, and those several environmentalist discourses set against modernity, have applied postmodern concepts to the broader conceptualization of these issues in several ways.

### **Modern knowledge of a decreasingly natural world.**

Scientific knowledge is the basis on which the entire response to the climate change issue rests. Without science, detection of small changes in climate cannot be discerned at scales beyond the local and forecasts of the rate and direction of future changes are impossible. Global data collection, data analysis, and climate modeling are essential in the efforts to gather knowledge about climate processes and to build scenarios of future climate. Identifying future impacts and resultant risks to human and natural systems is a function of contemporary scientific knowledge allied to other social assessments. Put simply, without contemporary science operating on a global scale there would be no recognition of the climate change problem and, hence, no dedicated response.

Environmental issues in the modern era are characterized by the role of scientific knowledge through its factual basis and their organization and integration through ecology, and climate change is unremarkable in this sense. However, the facts of climate change are not as objective, certain, and progressive as conventional accounts assert. Climate change knowledge reflects a range of values, interests, and assumptions and in turn influences the direction, values, interests, and priorities of climate change governance and politics. Capturing the character of the climate change science discourse is far from straightforward; it is a sprawling, multi-disciplinary, and inter-disciplinary exercise without clear boundaries. Public controversy brought climate change science into the realm of the popular media where corporate and environmental interests contested the outputs of scientific institutions. Further, there is its scale of the research programs involved and the complexity of the science itself to add to the burden of explanation.

In addition, the important of local wisdom must also be considered as one of supporting efforts of a decreasingly natural environment. In Bali (Hindhu society) for examples, there are number of local widoms still alive and develop within society from previous time to current situation that could be understood, whereas, the essence of such values is based on the ancient Hindhu philosophy likes: *Tri Hita Karana*, *Nyepi* Day, use of “*saput poleng*” etc.

### **Local Wisdom**

#### ***Tri Hita Karana Hindhu Philosophy.***

One of the ancient-famous Hindhu philosophy is known as *Tri Hita Karana*, meaning the “three sources of life” in the ancient Balinese Sanskrit language. *Tri* means three, *hita* means prosper, and *karana* means cause. The concept holds that God, humanity and nature are inseparably linked, and that happiness and prosperity can only be attained if all human beings live in balance and harmony with God, with other human beings and with the environment.

In accordance with the Tri-Hita Karana Doctrine, local village members work together to develop and implement conservation programs for local environment such as the Sacred Monkey Forest. Additionally, two special Balinese Hindu ceremonies, which are celebrated within the Sacred Monkey Forest, include the *Tumpek Kandang* (where people make special offerings to the monkeys and animals in general) and the *Tumpek Ngunduh* (where plants are equally celebrated). Therefore, such celebration aims to preserve, maintain and sustain plants for decreasingly climate change as the hot issue.

Almost in every single districts of Bali have similar basic concept how to conserve environment through human-nature sustainability development. Ubud town for example, the town lies about 35 km north-east of Ngurah Rai International Airport maintain their natural surrounding under Tri Hita Karana concept. Ubud people maintain their traditional rituals and along with their prosperity, their offerings becomes better in quality and temples or *pura* have been renovated. They preserve their homeland, eventhough in many cases industrialization goes beyond their control. But

they take ownership of their land, knowing that the land is an asset and they get benefit from it. Also, as art is the heart and soul of Ubud people, they tend to appreciate beauty beyond their sights and appreciate different cultures brought by foreigners.

The landscape becomes the objects of many good quality paintings. As people start to see the benefit of the land for their prosperity, they start bring better quality of offerings to God, temples or *pura* have been renovated and they preserve environment as well. They preserve terrace rices and the environment, to fulfill domestic need for food. This beauty landscape then invites tourists to come to Ubud. Ecotourism then grows, so is the art industries. The law of attraction works naturally. Ubud people might clearly know what global warming, climate change and green house gasses are all about, but they do what they belief. For Balinese, Bali is not just a place to live, but it's a place that connects them to their God and nature.

From such illustration it could be concluded, the Tri Hita Karana's Hindhu philosophy has been applying for environmental preservation in decreasing climate change on Bali island from long time ago up to now. Scientifically, conservation efforts is also involving researchers from around the world. In 1990 and 1991, a monkey behavioral research project was conducted, within the Sacred Monkey Forest, by researchers from the University of Alabama (USA) and the University of Udayana (Bali, Indonesia). In 1998, researchers from Central Washington University (USA) and the University of Udayana began a 5 year research project involving looking into the daily lives and ecology of the monkeys, the interactions between humans and monkeys, and the conservation of spectacular places like the Sacred Monkey Forest of Padangtegal-Ubud of Gianyar district.

### ***The essence of Nyepi Hindhu Holiday***

One of the important Hindhu holidays is *Nyepi*, a Balinese "Day of Silence" that commemorated every *Isakawarsa* (*Saka* new year) according to Bali's calendar. It is a day of silence, fasting, and meditation. The day is also celebrated as New year. Observed from 6 a.m. until 6 a.m. the next morning. *Nyepi* is a day reserved for self-reflection and anything that might interfere with that purpose is restricted. The main restrictions are: no lighting fires (and lights must be kept low); no working; no entertainment or pleasure; no traveling; and for some, no talking or eating at all. The effect of these prohibitions is that Bali's usually streets and roads are empty, there is little or no noise from TVs and radios, and few signs of activity are seen even inside homes.

The only people to be seen outdoors are the *pecalang*, traditional security men who patrol the streets to ensure the prohibitions are being followed. Although *Nyepi* is primarily a Hindhu holiday, non-Hindu residents of Bali observe the day of silence as well, out of respect for their fellow citizens. Even tourists are not exempt; although free to do as they wish inside their hotels, no one is allowed onto the beaches or streets, and the only airport in Bali remains closed for the entire day. The only exceptions granted are for emergency vehicles carrying those with life-threatening conditions and women about to give birth. On the day after *Nyepi*, known as *Ngembak Geni*, social activity picks up again quickly, as families and friends gather to ask forgiveness from one another, and to perform certain religious rituals together. As a whole, the *Nyepi* rituals is performed with the following conditions:

*Amati Geni*: No fire/light, including no electricity

*Amati Karya*: No working

*Amati Lelunganan*: No travelling

*Amati Lelnguan*: Fasting and no revelry/self-entertainment

Ultimately, seeing from viewpoint of the *Nyepi* rituals of no fire/light including electricity, no working, no travelling as well as fasting and no self-entertainment, it could be observed that no

fossil fuel combustion and wood firing during such the most important holiday. Subsequently, no air pollution to be happening and of course the environment in general and atmosphere in particular keep cooler in comparison to previous day. Further inquiry is then, would climate change and global warming be affected?

Overall it could be concluded, world managing climate change might be employed by existing modern, postmodern type of society as well as Balinese people under its ancient philosophy of *Nyepi Day*, *Tri Hita Karana* etc.

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