
**Revisiting “National” Interest and Hedonic
Consumption in tune with Climate Change:**

US Carbon Emissions and Ethiopia’s Forests in Focus

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**Revisiting “National” Interest and Hedonic
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US Carbon Emissions and Ethiopia’s Forests in Focus**

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Introduction

“ ... [W]hat marvels can (man) look for in a world where so many animal species are vanishing, where plant life is retreating further and further from our dwellings, and where man is increasingly confronted with the products and the signs of his oppressive presence?”

UNESCO Secretary General, 1976

“Global inequalities in income increased in the 20th Century by orders of magnitude out of proportion to anything experienced before. The distance between incomes of the richest and the poorest country was about 3 to 1 in 1820, 35 to 1 in 1950, 44 to 1 in 1973, and 72 to 1 in 1992.”

Human Development Report 2000, UNDP

The tone of much literature on environmental challenges may sound some sort of doomsday rhetoric. Unfortunately, however, the gloomy side of the challenges of climate change cannot be avoided unless our behaviours at individual, community, national and international levels speak otherwise. The *first* quote (here-above) shows the disharmony between human actions and the ecosystem because we “are consuming and destroying those aspects of Earth that sustain human and other life at a rate that is ... faster than they can be created. In addition, our rate of consumption is accelerating.”¹ As a result, the life-supporting ecosystem is deteriorating at an alarming rate.

According to Cullinan, global warming and climate change are cases in point with regard to the deteriorating capacity of the ecosystem to support life. “Burning fossil fuels over the past couple of hundred years has released vast quantities of carbon dioxide (CO₂) and other gases that result in warming of the atmosphere”² thereby causing drought, desertification, a rise in sea levels, hurricanes, floods, forest fires and unpredictable calamities resulting from erratic manifestations of climate change. This indeed worsens

¹ Cormac Cullinan (2002) *Wild Law* : Governing People for Earth, Capetown: Siber Ink, p. 17

² Ibid, 18

The following summarizes Lester E. Brown's remarks with regard to the stress our planet is in:

World population has doubled and the world economy has expanded by 7x in the past 50 years. We have a 'bubble economy' that is using resources at an unsustainable rate and that will collapse without drastic intervention. Major concerns are overgrazing rangeland, overpumping aquifers, draining rivers dry, overfishing the oceans, destroying habitat, increasing CO₂ release leading to global warming, the first mass extinctions of species since 65 million years ago, soil erosion and expanding deserts, etc. As of about 1980, we are consuming not just the interest earned by nature but also the principal of our natural endowment, and this will lead to environmental bankruptcy. We are currently (as of 1999) exceeding nature's capacity by about 20%

World population grew from 2.5 billion in 1950 to 6.1 billion in 2000, exceeding that of the past 40 million years. Our global economic output rose from \$7 trillion in 1950 to \$46 trillion in 2000. Population growth and increasing prosperity promotes increased consumption of grain, tripling demand from 1950 to 2000. Producing this grain has accelerated topsoil erosion. Water use has tripled, causing water tables to fall and wells to dry up. Fossil fuel consumption has gone up 4x, and CO₂ emitted exceeds natural fixation capacity, leading to the rise in atmospheric CO₂ from 316 PPM [part per million] in 1959 to 369 in 2000. ...[T]he grain harvest fell short of consumption (for example, in 2002 the grain harvest of 1807 million tons fell 5% short). Farmers are unlikely to be able to close this gap without causing further environmental degradation.⁵

We thus seem to be at a juncture that requires rethinking certain concepts (such as *national interest* in unlimited industrial growth and '*imprudent*' consumption). And this inevitably evokes some big questions although we might not at this stage be able to come up with answers which are as big.

a) Background of the study

'*National interest*,' for the purpose of this study, refers to a country's economic and strategic (security) aspirations and goals. And the magnitude of its reclusiveness (in disregard to global concerns and other legitimate national interests and to the needs of

⁵ Lester E. Brown, *Plan B: Rescuing a Planet under Stress and a Civilization in Trouble*, (Summary by Machel Macgoodwin (2005) http://mcgoodwin.net/pages/otherbooks/lrb_planb.html (Accessed: March 17, 2008)

To date, public international law has served as the legal regime that balances and regulates relations and conflicts between states. Countries usually take ‘*national interest*’ and reciprocity into account when they enter into bilateral and multilateral relations. At present, however, post-Westphalian rigid delineation of ‘interests’ within the reclusive confines of nation states (or state-nations) is gradually changing from the paradigm of coexistence onto cooperation thereby manifesting common interests, global concerns and integration.

Global economic forces, global concerns for human rights and the environment, the information age that has indeed drawn the globe very close, the increasing growth of transnational civil societies and the trend towards empowering and strengthening transnational institutions (ceding certain portions from powers of national governments) are signals of unfolding events. In particular, global *environmental concerns* such as climate change are progressively defying national boundaries.

There is thus the need to revisit the definition of ‘*national interest*’ and ‘*happiness*’ in the context of win-win sub-regional, regional and global environmental concerns against global warming and climate change. It is with this background that this study will examine “national interest” and current natural resource consumption patterns with particular focus on US carbon emissions and Ethiopia’s deforestation.

b) Statement of the Problem

The core research problems addressed in this study pertain to the subjective and objective problems involved in bringing about meaningful reduction of carbon emissions in developed countries such as USA and in reversing waves of deforestation in developing countries like Ethiopia as long as *egoist hedonism* and perpetual economic expansion permeate national policies in developed countries, and unless developing countries triumph over the vicious cyclic chain of poverty, population explosion and deforestation. While substantial reduction in carbon emissions may seem to be in conflict with “national interest” and “rising standards of living”, deforestation, on the other hand, is mainly aggravated by the subsistence needs of a steadily growing rural population dependent on

e) Scope and delimitation of the study

As the title of the study indicates, the scope of this paper does not allow thorough analysis and discussion on climate change and the carbon emission regime. Thus, issues such as transfer (or acquisition) of emission reduction units, clean development mechanism, and carbon (or emission) trading embodied in Articles 6, 12 and 17 of the Kyoto Protocol, are beyond the scope of the study. Moreover, the study does not examine national interest and happiness in detail. It limits itself to the task of discussing the need to revisit highly entrenched thoughts related with certain notions of ‘national interest’ and ‘happiness’ that are strongly influenced by ego-hedonic misconceptions.

Nation Statehood has indeed been progressive in contrast to the endless skirmishes and battles between neighboring clans, tribes, kingdoms and feudal lords. It was a phenomenon that enabled tens and at times hundreds of communities to come together under shared administrative and political structures despite apparent injustices forced upon the vanquished in favour of the victors. The study does not thus defy the positive aspects of national interest, but rather attempts to discuss that global concerns regarding climate change are gradually becoming component elements of national interest.

Nor does the paper argue against hedonism in general, but shall only attempt to forward the pitfalls of its egoistic version which is in fact inconsistent with the basic tenets of mainstream hedonism itself (which might take the forms of enlightened self-interest, altruistic hedonism, or utilitarian hedonism). In view of the nature and theme of the issues involved in this study, the paper shall focus on critical analysis rather than exhaustive depth, and in effect targets at encouraging further research and discourse.

f) Research Question

The *first* question raised in this study is whether there exists a need to revisit the concept of ‘*national interest*’ and current consumption patterns which create pursuits toward perpetual economic expansion detrimental to the ecosystem. The *second* research question is whether the conception of ‘well-being ought to be redefined in tune with the

Chapter 1

Climate Change and “National Interest”

1.1- The ‘Inconvenient Truth’ about Climate Change

The words ‘Inconvenient Truth’ are borrowed from an Oscar award winning film by former US Vice-President Al Gore.⁸ Apparent observations and scientific findings on climate change and its adverse impact have indeed become global concerns although the truth is inconvenient to many policy makers in the name of “national interest” and to various parties (individuals and business entities) owing to their vested interests in ‘business as usual’ production and consumption patterns.

The climate of our planet “is determined in large part by the presence on the atmosphere of naturally occurring greenhouse gases, including in particular water vapour, carbon dioxide (CO₂), methane (CH₄), CFCs (chlorofluorocarbon), nitrous oxide (N₂O) tropospheric ozone (O₃).”⁹ These gases “are transparent to incoming shortwave solar radiation” but meanwhile “absorb and trap longwave radiation emitted by the earth’s surface”¹⁰ thereby enabling earth to retain the warmth which is essential for our very existence. This warmth retention effect is referred to as ‘greenhouse effect’. Article 1(5) of the 1992 Climate Change Convention¹¹ defines greenhouse gases as “those gaseous constituents of the atmosphere, both natural and anthropogenic that absorb and re-emit infra-red radiation.”

Carbon dioxide (CO₂) is the main greenhouse gas that is in the course of causing global warming. Its ‘sources’ are industrial, transportation, construction and individual

⁸ Roger Ebert, Film Review on Al Gore’s “*An Inconvenient Truth*”, *Infra* note 27

⁹ Philippe Sands (2003) *Principles of International Environmental Law*, Cambridge University Press, p. 357

¹⁰ *Ibid*

¹¹ *United Nations Framework Convention on Climate Change* (1992)

there is nothing wrong with doing something that benefits all humanity, but that is, in a sense, a second-order effect. America's pursuit of the national interest will create conditions that promote freedom, markets, and peace. Its pursuit of national interests after World War II led to a more prosperous and democratic world. This can happen again.

Ms. Rice then states that the adoption and ratification of international conventions such as the Kyoto Protocol goes against US national interest.

So multilateral agreements and institutions should not be ends in themselves. U.S. interests are served by having strong alliances and can be promoted within the U.N. and other multilateral organizations, as well as through well-crafted international agreements. But the Clinton administration has often been so anxious to find multilateral solutions to problems that it has signed agreements that are not in America's interest. *The Kyoto treaty is a case in point: whatever the facts on global warming, a treaty that does not include China and exempts "developing" countries from tough standards while penalizing American industry cannot possibly be in America's national interest.* (Emphasis added)

In contrast to the views forwarded by Dr. Condoleeza Rice, the following excerpt⁸² states that environmental conservation is part of Sweden's national interest.

The (Swedish) Environmental Code describes certain areas of national interest. These are geographical areas of special value. The areas of national interest can be appointed in the interests of development, as well as conservation. The areas of national interest could thus be within the interests of conservation, outdoor recreation, reindeer herding, the fishing industry, communication, and energy. (www.naturvardsverket.se, 2005). In the municipal planning, there should be a consideration of these areas and the county administration boards are responsible for their protection. ...

When different demands compete with each other, nature and culture are of priority in the areas of national interest of conservation. The environment should be used so that ecological, social and socio-economic requirements are satisfied and good management is promoted. (Emphasis added)

2.6- Commitments to the world, self-interest and eco-friendly development

According to Denmark's Prime Minister, *Anders Fogh Rasmussen*, the UN climate change talks that are going to be held in Copenhagen in late 2009 are crucially important,

⁸² Rosemarie Ankre (2007) "Understanding the Visitor: A Pre-Requisite for Coastal Zone Planning" Mid Sweden University, pp. 29,30
[http://www.bth.se/fou/forskinfor/nsf/0/c7219801e0082a2dc125737800311bdd/\\$FILE/Ankre_lic.pdf](http://www.bth.se/fou/forskinfor/nsf/0/c7219801e0082a2dc125737800311bdd/$FILE/Ankre_lic.pdf) (Accessed: January 28, 2008)

interests are engaged. This will not change over the next fifteen years. Indeed, as the industrialising economies of East Asia continue their high growth rates, the primacy of the Asia Pacific in Australian foreign and trade policy will become even more evident.

Australia's economic well-being depends on domestic and international factors, especially the competitiveness and flexibility of the Australian economy, and the strength of international markets and their openness to our exports and investment. Australian interests therefore require action on all these fronts.⁷⁷

b) U.S.A

US Secretary of State Condoleezza Rice was Senior Fellow at the Hoover Institution and Professor of Political Science at Stanford University, and foreign policy adviser to Republican presidential candidate George W. Bush when she made the following statement in 2000, under the topic "*Promoting the National Interest.*" Part of the Statement entitled "*Summary*" reads:

With no Soviet threat, America has found it exceedingly difficult to define its 'national interest.' Foreign policy in a Republican administration should refocus the country on key priorities: building a military ready to ensure American power, coping with rogue regimes, and managing Beijing and Moscow. Above all, the next president must be comfortable with America's special role as the world's leader.⁷⁸

Dr. Rice states that the end of the post- Cold War Period is a period of transition which is important because it may offer strategic opportunities, because "During these fluid times, one can affect the shape of the world to come." She stated that the opportunities in the economic front were enormous:

The enormity of the moment is obvious. The Soviet Union was more than just a traditional global competitor; it strove to lead a universal socialist alternative to markets and democracy. The Soviet Union quarantined itself and many unwitting captives and clients from the rigors of international capitalism. In the end, it sowed the seeds of its own destruction, becoming in isolation an economic and technological dinosaur.⁷⁹

⁷⁷ Ibid, Paragraphs 8, 9

⁷⁸ <http://www.foreignaffairs.org/20000101faessay5-p10/condoleezza-rice/campaign-2000-promoting-the-national-interest.html> (Accessed: June 5, 2007)

⁷⁹ Ibid

a) Australia

Australia's Foreign Policy White Paper (1997) is a framework document signed by two high ranking government officials (the Minister of Foreign Affairs and Deputy Prime Minister and Minister of Trade). "It focuses on the conceptual foundations of the Government's foreign and trade policy, examining the major challenges for Australia over the next fifteen years, and identifying broad strategies for dealing with them."⁷⁰

The concluding paragraph of the Foreword reads:

Australia must have a foreign and trade policy that the Australian community understands and supports. Throughout this document we have sought to explain and to emphasize the contribution that foreign and trade policy makes to the advancement of Australia's core national interests: the security of the Australian nation and the jobs and standard of living of the Australian people. In this way we hope that the White Paper will contribute to a better understanding in the community of why Australia, more than most countries, must pursue an active and tightly focused foreign and trade policy.⁷¹ (*Emphasis added*)

It is to be noted that the core national interests stated in the Foreword, are two: the security of the Australian Nation, and the jobs and standard of living of Australian people. And these two core interests of 'security' and 'standard of living' illustrate the two elements of national identification highlighted above, i.e. material benefits and *security against threat*.

The 'Overview' Section of the Document reiterates these two core interests:

The Government's foreign and trade policy objectives over the next fifteen years will be geared towards exercising leadership on the issues which advance Australia's economic and strategic interests. This involves ensuring that Australians enjoy the growth in jobs and higher living standards which come from an internationally competitive economy; that Australia's region remains secure and stable; that Australia maximises the economic and strategic opportunities offered

⁷⁰ In the National interest : *Australia's Foreign and Trade Policy White Paper*
<http://www.dfat.gov.au/ini/> (Accessed: June 5, 2007)

⁷¹ Ibid

accompanied by introduction of the Napoleonic Code into Prussia, an event that for Hegel signified the arrival of modernity in Germany.⁶⁶

The Napoleonic wars led to the Treaty of Paris (1814) and Congress of Vienna (1815) which reinforced the era of nation-statehood and put in place the mechanism of its sustenance through *balance of forces* which was believed to render victory upon invasions difficult (if not impossible). The decades beyond the Congress of Vienna saw steadily growing rise of German Nationalism which a century after the Napoleonic wars culminated in the First World War (1914-18), and then brought about the Second World War of 1939-45.

It would appear that nationalisms have a certain life history. At certain stages of historical development, such as in agrarian societies, they don't exist in people's consciousness at all. They grow most intense just at or past the point of transition to industrial society, and become particularly exacerbated when a people, having gone through the first phases of economic modernization, is denied both national identity and political freedom. This is not surprising that the two Western European countries to invent fascist ultra-nationalism, Italy and Germany, were also the last to industrialize and to unify politically...⁶⁷

2.3- Elements of national interest: *Material benefits and security*

Loyalty to a group or social entity is natural. Loyalty to one's nation has progressed from loyalty to a clan, tribe, city state, etc., and has its positive aspects in creating national consensus, shared values, social cohesion, resource mobilization, national defence, and enthusiasm and work ethic towards economic development. However, it may also bring about hegemonic desires and invasions beyond boundaries as a result of reclusive "national interest".

Habermas states two factors which determine the dynamics behind national identification. He builds up this theory based on Freud's *anaclytic* and *oedipal* modes:

In the *anaclytic* or *sympathetic* mode, the identification is made with the direct materialistic benefactor. In the infant's case this is with the parental provider of

⁶⁶ Fukuyama, *Supra* note 63, p.74

⁶⁷ *Ibid*, 270

Although it was victory for Protestants in Germany from the religious perspective, it was also a victory for the French with regard to territorial gains and the unequivocal end to the Holy Roman Empire of the Habsburgs. Westphalia thus seemed win-win to the parties which were highly exhausted by prolonged wars. In spite of “its shared historical development, its cultural and social uniformity, Europe was divided into separate political states.”⁶⁰ The core outcome of the Treaty of Westphalia was the emergence of “the classical concept of sovereignty, which stipulated that all sovereigns are equal and that sovereign states have absolute power over their own territory.”⁶¹

2.2- Competing national interests and major wars

The principle of ‘sovereignty’ of nation-states which was the bedrock of the Peace of Westphalia seemed to have been influenced by Bodin’s conception of Sovereignty who in 1576 wrote that sovereignty could only be produced by the victory of one side over the other, and sovereignty would ultimately make one sovereign and the other a subject.⁶² The threat of war and the need to secure sovereignty thus remained to be the concern of European nation states after the Treaty of Westphalia.

For example France and Spain “sought to consolidate power over their territories in large measure in order to guarantee the revenues required to wage war with their neighbours. In the seventeenth century, these monarchies were at peace for only three out of three hundred years; the enormous economic requirements for raising armies provided the chief incentive for central governments to break the power of feudal and regional institutions and create what we recognize as ‘modern’ state structures. The rise of monarchial absolutism in turn had a leveling effect on French society by reducing aristocratic privileges, and opening the way for new social groups and would become crucial during the (French) Revolution.”⁶³

⁶⁰ F. H. Hinsley (1973) *Nationalism and the International System*, N.Y.: Oceana Publications, p.71

⁶¹ Anthony Anghie, *Third World Quarterly*, Vol. 25 No. 5, p. 740

⁶² Michael Hardt & Antonio Negri (2000) *Empire*, Harvard University Press. p.98

⁶³ Francis Fukuyama (1993) *The End of History and the Last Man*, N.Y: Avon Books, p. 74

Nation building in Europe can be illustrated through the growth of two provinces of the Roman Empire (*Britannia* and *Gallia*) onto the state nations of England and France. It was the Roman conquest which transformed both to political entities. And after the fall of the Roman Empire, centuries of warring kingdoms and conquests preceded the ultimate growth of both towards state nationhood.

The genetic stock of the British and French nations is substantially different from that of the two territories two millennia ago. In Britain the Angles, the Saxons, the Vikings and then the Normans came. In France, there were also great invasions, the greatest of which is symbolized in the change of the country from Gaul to France; one can still argue today about who are the genuine Frenchmen- the Gauls or the Franks. Although the territory of France was consolidated later, and more gradually, than that of England, both countries began to manifest an increasingly authoritative and centralizing monarch during the same period; furthermore, these new governments implemented policies which reached beyond barons and feudal lords to touch the mass of national peoples.⁵⁴

Shared aspirations, benefits, values, legal systems, political systems and defence against invasions gradually led to a strong psychological process of national identity (in both Britain and France) for generations and centuries. Gradually, and particularly from the twelfth century onwards national identities steadily grew stronger “than the European identity of being fellow citizens of the Christendom, even though the language Latin, and the religion, Christianity, were shared.”⁵⁵

It was at this juncture that *national interest* gradually and steadily came to the forefront. People at grassroots identified themselves as nationals of political entities than loyalty to emperors and local chiefs, and loyalty deepened to the extent of readiness to sacrifice one’s life in defence of the motherland. Such martyrdom and series of model figures in return cemented the intergenerational and intra-generational feeling of togetherness, common roots, common destiny, loyalty, national identity and shared aspirations *ad infinitum*. In the economic front as well, such nation building and national consensus brought about remarkable development.

⁵⁴ Ibid, 63, 64

⁵⁵ Ibid, 65

Development which is “*first and foremost about allowing people to lead a life that they value and enabling them to realize their potential as human beings.*”⁵¹

The next chapters attempt to highlight elements of national interest, comparative ethical perspectives on excessive desire towards consumption and luxury, limits to eco-unfriendly industrial growth and the chicken-egg cycle of poverty and deforestation.

⁵¹ Human Development Report (2006) UNDP, Foreword, p. v

need not be member of the Kyoto Protocol as long as it is making progress with regard to reduction of the emissions.

...[P]eople had equated the issue of dealing with climate change with the Kyoto Protocol. The Kyoto Protocol is one means of addressing climate change issues. It's a global treaty that establishes the objective, or tries to put together, a global cap and trade system. That's one way to go about it. But, another way to look at this is that if you have an economy, and it produces greenhouse gases, and you want to reduce that, you essentially have three options. You can cut the size of your economy, which none of us want to do. You can shift a part of your economy to another country, so it doesn't show up on your books. That is partly what this cap and trade thing is about. Or, you can reduce the greenhouse gas emissions through different, cleaner technologies. That is where we are putting our money and our effort and making a great deal of progress.⁴⁶

It is indeed encouraging that the USA made unequivocal statements about its concern regarding climate change and its agreement that human activity contributes to global warming. Moreover, USA admits that its industry and individual behaviour currently contribute a quarter of human activity towards global warming. The statement made in support of the recent IPCC report, in which U.S. scientists played a leading role and expression of commitment towards reducing greenhouse gas emissions are also encouraging. However, USA is not yet ready to embrace the commitments embodied in the Kyoto Protocol.

USA is among the 36 states listed under Annex I of the 1992 Framework Convention on Climate Change. According to Article 3 (1) of the Kyoto Protocol, membership to Kyoto would require USA (as an Annex I state) to “individually and jointly ensure that the (its) aggregate anthropogenic carbon dioxide equivalent emission of the greenhouse gases, listed in Annex A,⁴⁷ do not exceed (its) assigned amount which is calculated pursuant to its “quantified emission limitation and reduction commitments” stated in the Kyoto Protocol. As expressed in Mr. Volker’s statement, however, USA is unwilling to join the Kyoto Protocol, but rather promises to reduce greenhouse gases through cleaner

⁴⁶ <http://www.state.gov/p/eur/rls/rm/82688.htm> (Accessed: January 30, 2008)

⁴⁷ The greenhouse gases listed under Annex A of the Kyoto Protocol are: Carbon dioxide (CO₂), Methane (CH₄), Nitrous oxide (N₂O), Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs) and Sulphur hexafluoride (SF₆).

Report of the Commission for Africa (2005) holds the same view. “Africa’s economies and people are vulnerable to environmental hazards such as droughts and floods, the frequency and extremity of which is likely to be increased by climate change.”⁴² The Report further states that “sub-Saharan Africa is seeing a faster degradation of many environmental resources, important to poor people, than any other region. Problems include land degradation, desertification, biodiversity loss, deforestation ...”⁴³

1.4- US “National Interest” and the Kyoto Protocol

On February 12th, 2007, Kurt Volker, Principal Deputy Assistant Secretary for European and Eurasian Affairs made the following official statement⁴⁴ at the German Marshall Fund in Berlin, Germany:

... I want to speak today about an issue where we are frequently misunderstood, an issue that shapes a large part of public attitudes about the United States.

I am talking about climate change, what the United States is doing about it, and what we and the European Union, and indeed the world, can do about it together--because there is perhaps no other issue where we agree so much, yet understand each other so little.

But it's not just me--this is being done top down. As all of you know, President Bush devoted a significant portion of his State of the Union address last month to the subject of climate change--and to what the U.S. intends to do about it. And our Ambassador to Germany, William Timken, has spoken out on this issue often, and is doing so again on February 21st at an event sponsored by the Atlantik Bruecke.

... [L]et me start out with some clear, simple statements:

- The United States, and this Administration, care deeply about climate change.
- We agree that human activity contributes to global warming.

⁴² *Our Common Interest* (March 2005), Report of the Commission for Africa, Part II Analysis and Evidence, Paragraph 144, p.248

⁴³ Ibid

⁴⁴ <http://www.state.gov/p/eur/rls/rm/80465.htm> (Accessed: January 30, 2008)

The Convention entered into force in 1994. During the first session held in Berlin the following year,³³ “[it] was agreed that the pledges by the developed country parties to reduce emissions by 2000 to 1990 levels were not adequate and preparations were commenced to draft further legal instrument by 1997. It was also agreed not to establish new commitments for developing country parties, but rather to assist the implementation of existing commitments.”³⁴

The commitments embodied in Article 4 of the Framework Convention on Climate Change were crystallized into distinct targets and timetables towards the reduction of greenhouse gases by virtue of the 1997 Kyoto Protocol to the UN Framework Convention on Climate Change which was adopted in December 1997 at the third conference of the parties.³⁵

The major achievement of the Kyoto Protocol was the commitment of (the parties stated in Annex I of the Protocol) to quantified emissions reduction targets and a timetable for their achievement. ... It provides that Annex I parties ‘shall, individually or jointly, ensure that their aggregate anthropogenic carbon dioxide equivalent emissions of the greenhouse gases listed in Annex ‘A’ do not exceed their assigned amounts. ... Annex I parties must implement their obligation under Article 3(1) ‘with a view to reducing their overall emissions of [Annex A] gases by at least 5 per cent below 1990 levels in the commitment period 2008 to 2012.’ This is estimated to represent an actual reduction of about 30 percent over ‘business as usual’ emission levels.³⁶

1.3- Emissions, reduced sinks and victims of climate change

Increased gas emissions and reduced ‘sinks’ for carbon dioxide are causes of climate change. While the former is attributable to the increasing consumption of fossil fuels in developed countries, the latter factor mainly involves deforestation (which is attributable to poverty, population growth and imprudent utilization of resources in developing

³³ Malcolm N. Shaw(2003), *International Law*, Fifth Edition, Cambridge University Press, p.788

³⁴ Ibid

³⁵ Sands, *Supra* note 9 p. 369

³⁶ Ibid, 371

1.2- FCCC and Kyoto Protocol: Overview

Global Warming is one of the areas of International Environmental Law “that is becoming the subject of its own regime.”²⁹ The climate change regime “began to take shape in 1992 at the UN Conference on Environment and Development in Rio de Janeiro where states adopted the Framework Convention of Climate Change”³⁰ (FCCC).

The Convention was intended as a first step to combat global warming by returning emissions of certain green house gases to their 1990 levels by the year 2000. In a system of ‘common but differentiated responsibilities’ the Convention requires all member states to cooperate in controlling, reduction and preventing particular gases but imposes the obligation to limit their emissions only on industrialized countries.³¹

The 1992 UN Framework Convention on Climate Change was adopted at the 1992 UN Conference on Environment and Development (known as the 1992 Rio Conference). Article 2 states that the purpose of the Convention and related instruments “is to achieve ... stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.” The provision targets at achieving this level “within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner.” Articles 3 and 4 respectively state principles of the Convention and the commitments of the State Parties.

The 1992 Convention, *inter alia*, established “commitments to stabilize greenhouse gas concentrations in the atmosphere at a safe level, over the long term, and to limit emissions of green house gases by developed countries in accordance with soft targets and time tables” and “a financial mechanism and a commitment by certain developed country parties to provide financial resources for meeting certain incremental costs and adaptations measures.”³²

²⁹ Lori F. Damrosch *et al*, (2001) *International Law: Cases and Materials*, 4th Ed. (American Casebook Series, West Group, St. Paul, Minnesota, p. 1527

³⁰ Ibid

³¹ Ibid

³² Sands, *Supra* note 9 p. 359.

conclusions of the IPCC and many prominent scientists, “we believe that it is prudent to understand and respond to the potential harms that may arise from a substantial temperature increase.”²¹

The Fourth Assessment Report (2007) of IPCC²² summarizes (under Topics 1 and 2) changes observed in climate and effects, and assesses their causes. And, Topics 3 and 4 of the Report present projections under various scenarios and adaptation and mitigation options.²³

Observed changes in climate included the following:

Eleven of the last twelve years (1995-2006) rank among the twelve warmest years in the instrumental record of global surface temperature (since 1850). The 100-year linear trend (1906-2005) of 0.74 [0.56 to 0.92] °C is larger than the corresponding trend of 0.6 [0.4 to 0.8] °C (1901-2000) given in the Third Assessment Report ... (of IPCC). The linear warming trend over the 50 years 1956-2005 (0.13 [0.10 to 0.16] °C per decade) is nearly twice that for the 100 years 1906-2005. ...

At continental, regional and ocean basin scales, numerous long-term changes in other aspect of climate have also been observed. Trends from 1900 to 2005 have been observed in precipitation amount in many large regions. ...²⁴

IPCC Fourth Assessment Report (2007) further states the causes and drivers of climate change:

Global greenhouse gas emissions due to human activities have grown since pre-industrial times, with an increase of 70% between 1970 and 2004. ... CO₂ is the most important anthropogenic greenhouse gas. Its annual emissions have grown between 1970 and 2004 by about 80%, from 21 to 38 Gt, and represented 77% of total anthropogenic greenhouse gas emissions in 2004. ...

The largest growth in greenhouse gas emissions between 1970 and 2004 has come from energy supply, transport and industry, while residential and commercial

²¹ *Ibid* at 1695

²² Intergovernmental Panel of Climate Change, Fourth Assessment Report (Climate Change 2007: Synthesis Report)

²³ *Ibid*, Introduction

²⁴ *Ibid*, Topic 1, p.2

and he believes that Europe can make a real difference⁸³ in the combat against global warming.

The Kyoto Protocol was a landmark in the global fight against climate change and it has been the main reference point for international debate on the subject for years. However, the first commitment period to fulfil pledges to cut greenhouse gas emissions between 2008 and 2012 only came into force a few months ago. For the next four years, those countries that ratified the protocol will be busy delivering on their binding promises. Meanwhile, the political debate has moved on – and rightly so. Kyoto was crucial, but it was only a first step. According to scientific evidence compiled by the International Panel on Climate Change, it will require strenuous efforts well beyond the Kyoto horizon of 2012 to limit temperature increases to 2° Celsius. This is now widely recognised. With Europe promising to lead the way beyond Kyoto, the eyes of the world will be on the Europe Union in 2008 to see how effective a lead we will take.⁸⁴

Prime Minister Rasmussen admits that “Europe shares responsibility for the world's current climate problems, accounting for approximately 14% of global carbon dioxide emissions.”

Cutting European emissions will make a substantial contribution towards worldwide efforts to reduce carbon levels – even though it cannot reverse global warming by itself. The EU also has good reason to act. Not only have we made *commitments to the rest of the world*, but we have a *strong self-interest* in combating climate change. Europeans are no strangers to extreme weather phenomena such as drought, forest fires and floods.⁸⁵ (Emphasis added)

The UN Climate Conference in Bali⁸⁶ (in December 2007) had adopted a timetable so that a new global accord can reach an initial peak in Poznan, Poland in December 2008

⁸³ <http://www.europesworld.org/EWSettings/Article/tabid/78/Id/5cdd65d2-1374-46a8-beca-2c1af03c439e/Default.aspx?language=en-US> (Accessed: March 15, 2008)

⁸⁴ Ibid

⁸⁵ Ibid

⁸⁶ The Conference, hosted by the Government of Indonesia, took place (from December 3rd to 14th) at the Bali International Convention Centre and brought together more than 10,000 participants, including representatives of over 180 countries together with observers from intergovernmental and nongovernmental organizations and the media. The two week period included the sessions of the Conference of the Parties to the UNFCCC, its subsidiary bodies as well as the Meeting of the Parties to the Kyoto Protocol. A ministerial segment in the second week concluded the Conference. The conference culminated in the adoption of **the Bali Roadmap**, which consists of a number of forward-looking decisions that represent the various

Chapter 3

Excessive Desire towards Consumption and Luxury

Our survival depends on the resources available in our environment. But unlike other creatures, human desire goes beyond basic necessities of food, shelter and the like. Fulfilled desires lead to other desires and expectations, because human wants are becoming endless and infinite. It took over 160,000 years since the times of *Idaltu*'s sub-species of *Homo sapiens* (who lived in Pleistocene Africa: Afar, Ethiopia) to hit the population figure of one billion in 1820, and within less than two centuries world population has gone beyond six billion.

Apart from such rapid progression in numbers, the consumption pattern of human beings has shown drastic changes throughout history. Ancient and medieval societies considered virtues and moral values as prime purposes in life, while the predominant mindset since the renaissance, in particular, is increasingly growing towards endless desires for material possession, material comfort and physical pleasures. Even worse, desires in these domains is in the course of rising at a geometric progression to the extent that we now need triplets and quadruplets of Earth to satisfy the insatiable wants and desires of human communities.

3.1- The 'hedonic treadmill'

"A systematic study of 22 people who won major lotteries found that they reverted to their baseline level of happiness over time."⁸⁹ This is attributable to what is referred to as the *hedonic treadmill*.

...[T]he 'hedonic treadmill' ... causes you to rapidly and inevitably adapt to good things by taking them for granted. As you accumulate more material possessions ... your expectations rise. ... The deeds and things you worked so hard for no longer make you happy; you need to get something even better to boost your level of happiness into the upper reaches of its set range. But once you get the next possession or achievement, you adapt to it as well, and so on. ...⁹⁰

⁸⁹ Martin E.P. Seligman (2002) *Authentic Happiness*, N.Y: Free Press, p. 48

⁹⁰ *Ibid*, p. 49

The Table here-above was a result of a cross-sectional survey which involved tens of thousands of adults. Dr. Seligman's conclusions were the following:

[O]verall national purchasing power and average life satisfaction go strongly in the same direction. Once the gross national product exceed 8,000 (US Dollars) per person, however, the correlation disappears, and added wealth brings no further life satisfaction. So the wealthy Swiss are happier than poor Bulgarians, but it hardly matters if one is Irish, Italian, Norwegian, or American.⁹²

Dr. Seligman, however, takes note of plenty of exceptions to the wealth-satisfaction association:

Brazil, mainland China, and Argentina are much higher in life satisfaction than would be predicted by their wealth. The former Soviet-bloc countries are less satisfied than their wealth would predict, as are the Japanese. The cultural values of Brazil and Argentina and the political values of China might support positive emotion, and the difficult emergence from communism (with its accompanying deterioration in health and social dislocation) probably lowers happiness in eastern Europe. ... [Countries with the lowest purchasing power, i.e.,] China, India and Nigeria ... have fairly high life satisfaction; these data tell us that money doesn't necessarily buy happiness. The change in purchasing power over the last half century in the wealthy nations carries the same message: real purchasing power has more that doubled in the United States, France, and Japan, but life satisfaction has changed not a whit.

... In the United States, the very poor are lower in happiness, but once a person is just barely comfortable, additional money adds little or no happiness. Even the fabulously rich—the *Forbes* 100, with an average net worth of over 125 million dollars—are only slightly happier than the average American.⁹³

3.2- Ancient oriental conceptions of happiness

a) Confucius

China was in the midst of hardships owing to prolonged wars between its provinces when Confucius was born in 511 B.C, in the province of Lu. Confucius believed that evil doesn't come from the heavens beyond earthly life, but from unwise human behaviours. Confucius made "wisdom" the cornerstone of his belief and teachings. According to Confucius, at all times, and at times of trouble in particular, the best guide of human activity is wisdom. Although he believed in divine power, he didn't preach in favour of many gods (polytheism) nor animism (belief in spirits), other than using the term "Way

⁹² Ibid, 53

⁹³ Ibid

b) Mencius, Mozi, Yang Zhu and Gaozi

Mencius (fourth century B.C.) defended the teachings of Confucius “against other influential movements of thought, especially those associated with Mozi (fifth century B.C.) and Yang Zhu (fifth to fourth century B.C.).” He believed that ‘*human nature is good*’,⁹⁹ a view of human nature on the basis of which he defended the Confucian ideal and developed an account of the self-cultivation process. His view was subsequently challenged by Xunzi (third century B.C.), another major Confucian thinker, who defended the alternative view that ‘*human nature is evil*’.¹⁰⁰

For Mozi (fifth century B.C.) “something is *yi* (appropriate) if it brings profit or benefit. He related profit primarily with the material needs of the people. Mozi defended the practice of indiscriminate concern for each as what brings profit, apparently opposing the Confucian idea that one should have special concern for and obligations to those closer to oneself.” On the other hand, the Yangist movement associated with Yang Zhu (fifth to fourth century B.C.) “emphasized nourishing one's *xing*, a term often translated as “nature”. Earlier uses of the term referred to the direction of growth of a thing, and eventually the term came to also refer to needs and desires that a thing has or to certain tendencies characteristic of it. The Yangist conception of *xing* of human beings emphasizes biological life, including living a long life and satisfying one's basic desires.”

Mencius believed that human beings have “four ethical attributes, *ren*, *yi*, *li*, and *zhi*” which “result from our cultivating four kinds of predispositions of the heart/mind that everyone shares,” namely: commiseration, the sense of shame, a reverential attitude toward others, and the sense of right and wrong.” Furthermore he “regarded love for parents and obedience to elder brothers as the starting point for cultivating *ren* and *yi* respectively. His view that the heart/mind has these ethical predispositions provides the basis for his response to the Moist and the Yangist challenges.”

⁹⁹ <http://plato.stanford.edu/entries/mencius/> (Accessed: Nov. 23rd, 2007)

¹⁰⁰ Ibid

declined food given with abuse, at the expense of loss of life, show that human beings do share this sense of priority of ethical propriety over even life itself.¹⁰²

Mencius didn't, however undermine the need to nourish ethical predispositions. "One should direct attention to and seek *yi* under their guidance, and should act accordingly till one can do so with ease and takes joy in so acting." Mencius believed that the senses can lead a person astray because they "operate automatically — when they come into contact with their ideal objects, they are pulled along by these objects and have neither the capacity to reflect on the propriety of the course of action nor the capacity to refrain from being pulled along." By contrast, Mencius thought that "the heart/mind has the capacity to reflect on what is proper, and has the capacity to halt any course of action it regards as improper. The heart/mind should do so under the guidance of its ethical predispositions, and should constantly exercise these capacities to ensure that one progresses in an ethical direction."

In addition to uncontrolled senses, Mencius stated that "there are other factors that can interfere with one's ethical development" and which can in effect lead a person astray such as "erroneous ethical doctrines" and he cited Moist and the Yangist doctrines which he believed ought to be opposed.

c) Xunzi on human nature

Xunzi ("Master Xun")(479–221 B.C.E.) "considered himself a follower of Confucius and was one of the central early figures in the consolidation of what came to be thought of as the Confucian tradition."¹⁰³ Xunzi's views on human nature were contrary to that of Mencius.

Xunzi's philosophy of human nature is based on a distinction between those characteristics that arise spontaneously in people and cannot be changed, on the one hand, and characteristics that are the result of human effort, on the other. ...

¹⁰² Ibid

¹⁰³ <http://plato.stanford.edu/entries/xunzi/> (Accessed: November 25, 2007)

3.3- Ancient Greek conceptions of happiness

a) Socrates

Socrates (circa 470 – 399 B.C.) raised ethical, metaphysical, political and other challenging discussions and dialogue. By dissecting issues into their essential component elements, he encouraged rational analysis based on facts and reasoning. Thales (636 – 546 B.C.) had already raised the issue “why things happened?”, and other Ionian¹⁰⁸ philosophers had forwarded various general concepts through abstraction. However, with the emergence of the Socratic Method, philosophy embarked onto the era of dialogue and analysis, which went beyond the ‘why’ aspect of an issue and generalized hypothesis.

Socrates inquired into issues such as worthy life, beauty, justice, happiness, etc. and patiently listened to what his fellow Athenians would say. In due course of arguing against fallacies, loopholes and inconsistencies in premises, arguments and conclusions, he facilitated the search for truth.

His widely quoted statement “*an unexamined life is not worth living*” clearly reveals his dedication to philosophy. Socrates believed that human beings can attain the “Supreme Good” (i.e. utmost good to be sought) and genuine happiness. According to Socrates, men can be good, wise and happy by pursuing towards excellence through inquiry, knowledge and other virtues.

b) Plato

Plato (427 – 347 B.C.) was one of Socrates’ disciples. In the “Republic”, his literary masterpiece written in the form of Socratic dialogues, he discusses the ‘just’ versus ‘unjust’ man and the impact of being ‘just’ on happiness. Plato states three categories of human pursuits, namely, that of:

- a) knowledge, truth and wisdom,

¹⁰⁸ A region inhabited by Hellenic People on the South Western coastline of Asia Minor (currently Turkey) was the homeland of prominent philosophers usually referred to as the ‘Pre-Socratics’. Ionia has provided the world with such great philosophers such as Thales, Anaximander, Heraclitus and Democritus.

“... Nay, surely as (man’s) ... eye, and hand and foot, plainly have each its own function, so we must suppose that man also has some function over and above all these.

What then is it?

Life evidently he has in common even with plants, but we want that which is peculiar to him. We must exclude, therefore, the life of mere nutrition and growth.

Next to this comes the life of sense; but this too he plainly shares with horses and cattle and all kind of animals.

There remains then the life whereby the acts – the life his rational nature, with its two sides or divisions, one rational obeying reason, the other rational as having and exercising reason. ...

The function of man, then, is the exercise of his vital faculties on one side n the obedience to reason, and on the other hand (the exercise of his vital faculties) with reason.

Aristotle’s distinction between ‘exercise of vital faculties in obedience to reason’ and ‘exercise of vital faculties with reason’ requires some clarification. “*Obedience to reason*” seems to refer to desires and activities that ‘obey reason’ although emotions and passion may pull us towards a different direction. On the other hand, ‘*exercise of vital faculties with reason*’ can denote habitual desires and activities that are so strongly personified in us that rational conduct becomes an automatic habit performed with reason subconsciously, without the need for introspective monitoring of possible gaps between reason and emotion (passion).

Book X of Nicomachean Ethics, entitled ‘Happiness’ sums up Aristotle’s views on Happiness. Aristotle remarked that a person who ‘sleeps all his days’, i.e. he who is lazy, idle and unresourceful “lives the life of a vegetable”, and is in effect alien to happiness. Amusements and pastimes, he argued, are not ends-in-themselves.

“... [W]hat the perfect man finds most desirable ... is the exercise of virtue. ... [I]ndeed, it is absurd to suppose that the end (or purpose of life) is amusement, and that we toil and mol all our life long for the sake of amusing ourselves. We may say that we choose everything for the sake of something else, excepting only happiness; for it is the end. But to be serious and to labor for the sake of amusement seems silly and utterly childish; while to amuse ourselves in order that we may be serious, as Anacharisis says, seems to be right; for amusement is a sort of recreation, and we need recreation because we are unable to work continuously.

Recreation then cannot be an end; for it is taken as a means to the exercise of our faculties.

[Thus] the happy life is thought to be that which exhibits virtue; and such life must be serious. ...”

the first and greatest good is prudence, thus making prudence even more valued than philosophy. From it all remaining virtues are derived as it teaches it is not possible to live pleasantly without living prudently, nobly, and justly, nor can one live prudently, nobly, and justly without living pleasantly. For the virtues have grown into the life of pleasure, ... the life of pleasure is inseparable from these.¹¹²

Epicurus followed the 'atomist materialistic' outlook of Democritus (5th Century B.C.) and believed that we, as living human beings, do have only one lifetime to live, and that immortality is impossible. This, he thought, will enable us to triumph over the most dreadful fear, i.e. - the fear of death. To this end, he wrote: "... death, the most terrifying of ills (evils), is nothing to us, since as long as we exist, death is not with us; but when death comes, then we do not exist."¹¹³ Without entirely rejecting belief about gods, Epicurus thought that they do not interfere in human affairs.

e) Stoics

Zeno (335 – 262 B.C.), a philosopher from Citium (in Cyprus) thoroughly studied the teachings of Cynics after he came to Athens. He agreed with Cynics that happiness can be obtained by living in accordance with nature, and realized the unity and harmony between human beings and nature. But Zeno thought that the extremism of Cynics in their total rejection of material comforts was unacceptable.

The term stoic has entered into popular language, as synonymous with great self-control and uncomplaining endurance. Stoics rejected belief in Tyche (meaning fate, chance or doom). Even where a person's efforts or activities fail to attain the desired objectives, Stoics argued, virtuous deeds (irrespective of their failure or success) are worth striving for. In their efforts to rule out the impact of fate on happiness, Stoics focused on how virtuously they live and how excellent their deeds are, without much regard to what they receive and achieve. For stoics virtue is life according to reason, and morality is rational action. "The wise man consciously subordinates his life to the life of the whole

¹¹² Ibid, Paragraph 11

¹¹³ '*Epicurus' to Menoeceus*', Translation by C. Bailey, Paragraph 3 (in *Ethics*, Oliver A. Johnson & Andrews Reath, 9th Ed. 2003) pp. 96, 97

b) St. Augustine

St. Augustine (354 – 430) wrote “City of God” during the conquest of Rome by the Goths. In addition to the religious aspects of his writing, Augustine’s philosophic reflections, *inter alia*, underlined that “The peace of the irrational soul is the harmonious repose of the appetites, and that of the rational soul the harmony of knowledge and action. The peace of body and soul is the well-ordered and harmonious life and health of the living creature.”¹¹⁸

Stoicism, argued Augustine, does not avail remedies against earthly sufferings and hardships. He rejected the stoic view that hardships and misfortune can be endured solely through wisdom and secular virtues. He also opposed those persons who resort to suicide as an outlet against unendurable hardships.¹¹⁹

c) St. Thomas Aquinas

The writings of St. Aquinas (1224/25 – 1274) embodied a synthesis of Christian faith and Aristotelian Philosophy. Aquinas believed that human happiness does not consist in bodily pleasures:

..[I]t is clear that the functions that are followed by the (bodily) pleasures ... are no man’s ultimate end but are directed at certain specific ends; - for instance eating at the preservation of the body... Therefore, these joys are not the ultimate end, nor do they accompany the ultimate end. Therefore, (ultimate) happiness is not located in such pleasures,”¹²⁰

Aquinas further noted that happiness does not consist in what is good solely for the body. He stated that what is good to the body “is common to man and to other animals. But happiness is a good proper to man alone. Man’s happiness therefore does not consist in the things mentioned (as bodily goods) “

[M]any animals surpass man in the goods of the body. Some are speedier, some stronger, and so on. If the highest good of man were in these things, man would not

¹¹⁸ St. Augustine, *City of God*, Book XIX, Chapter 13

¹¹⁹ Ibid, Book XIX, Chapter 20.

¹²⁰ St. Thomas Aquinas, *Summa Theologica*, Book III, Ch. 27

Bentham did not undermine the legitimate interests of individuals in the guise of “community interest.” He considered community interest as “the sum of the interest of the ... members who compose it.” He also argued that “It is in vain to talk of the interest of the community without understanding what the interest of the individual is.” He then clarified what is meant by interest:

... A thing is said to promote the interest, or to be of interest of an individual, when it tends to add the sum total of his pleasures; or what comes to the same thing, to diminish the sum total of his pains.

An action then may be said to be conformable to the principle of utility, ... (with respect to the community at large) when the tendency it has to augment the happiness of the community is greater than any it has to diminish it.¹²⁴

The sources of pleasure and pain indicated by Bentham are physical, political, moral and religious. Unlike Plato, Aristotle and many other philosophers, Bentham did not distinguish between higher and lower level pleasures solely on the ground of quality or essence. According to Aristotle, for instance, the happiness attainable in the contemplative or speculative life of philosopher (a scientist, researcher, writer, etc.) is of a higher quality than what he considered as ‘happiness in the secondary sense’ which may, through virtue, be attained in other walks of life.

Bentham, on the contrary, believed that every pleasure is in principle, of equal intrinsic ‘value’, and he contended that the basis for the increase or decrease in the ‘value of pleasure or pain’ does not lie in its kind (i.e. level, category, quality or variety), but solely on the following seven quantitative factors:¹²⁵

First, its *intensity*;

Second, *duration*;

Third, the *certainty or uncertainty* of its occurrence;

Fourth, its *propinquity* (i.e. its proximity) or remoteness;

Fifth, its fecundity (i.e. its chance of being followed by the same feeling of pleasure and pain);

¹²⁴ Ibid, Paragraphs 5 and 6.

¹²⁵ Ibid, Chapter IV

In case the pleasure or pain under consideration affects a number of other persons, Bentham suggested that the number of persons whose interests appear to be positively or negatively affected should be taken into account so that the computation can be made “with respect to the total number of community of individuals concerned.”¹²⁹

3.6- John Stuart Mill’s qualitative utilitarian hedonism

In his essay entitled ‘Utilitarianism’ (first published in 1861), John Stuart Mill (1806 – 1873) endorsed much of Bentham’s Hedonist Utilitarianism, but rejected the idea that pleasures are qualitatively equal in value (unless their value varies due to the seven quantitative factors highlighted earlier). Hedonist Utilitarianism eventually enhanced its depth after John Stuart Mill because Bentham’s theory of Quantitative Utilitarian hedonism developed towards Qualitative Utilitarian hedonism in the course of J. S. Mill’s defence against attacks forwarded by adherents of Romanticism and Stoicism.

From the 1780s until the 1850s, Romanticism flourished in Europe. It emphasized the importance of imagination, emotion and inspiration. It glorified subjective feelings and the primacy of the individual and it focused on what can be imagined about space and time than taking the world as it visibly is. Although Utilitarianism takes human pleasures, emotions and aspirations into account, it was criticized by the romantics in nearly the same light as doctrinaire rationalism and stoicism. In the eyes of romanticism, these philosophic schools were considered as barren, dull and too mechanical which do not consider deeper imagination, aesthetics and elative adventures.

Mill’s reaction did not make a direct reference to romanticism. However, his response that Utilitarianism doesn’t commit the error of “...rejection or neglect of pleasure in some of its forms (such as) beauty, ornament or amusement” clearly defends utilitarianism against its romantic critics. With regard to the criticism forwarded by stoics and other critics, however, Mill’s response was relatively sharp:

¹²⁹ Ibid

they will not make him envy the being who is indeed unconscious of the imperfections It is better to be a human being dissatisfied than a pig satisfied; better to be a Socrates dissatisfied than a fool satisfied. ... ¹³³

3.7- Resource Limits to Excessive Consumption-*cum*-Luxury

The conceptions of happiness which influenced human beings through the various centuries seem to be blueprints and reflections of satisfaction levels and expectations of different epochs in history. *Rationalism* which related happiness with virtue and reason was predominant during the golden decades of Greek philosophy, while *stoicism* became the predominant mindset during most periods of civil wars and hardships. And the dream of ever increasing prospects of higher and higher standards of living have nurtured and entrenched *hedonism* in many strata of various societies.

The *ego-hedonic* mindset of giving primacy to physical pleasures, consumerism and endless desires of luxury is in fact different from other philosophies of hedonism as expounded by Epicurus, Bentham and Mill. Epicurean hedonism, as discussed under Section 3.3 (d) didn't advocate lust, the luxuries of wealthy table, and the pleasure of "prodigals, idle enjoyment and drinking", but instead underlined the pleasures obtained by living prudently, honorably and justly. Moreover, the utilitarian conceptions of Bentham and Mill clearly take the definition of pleasure beyond the immediate physical pleasures of an individual.

Pleasure of the moment as an unconditional criterion of goodness is not Epicurean nor utilitarian hedonism, but rather a line of thought that is said to have been promoted by Aristippus (circa 435 to 360 BC).¹³⁴ "Aristippus was the founder of the Cyrenaic ¹³⁵ school of philosophy. He taught that the ultimate goal of all our actions is pleasure, and that we should not defer pleasures that are ready at hand for the sake of future pleasures.

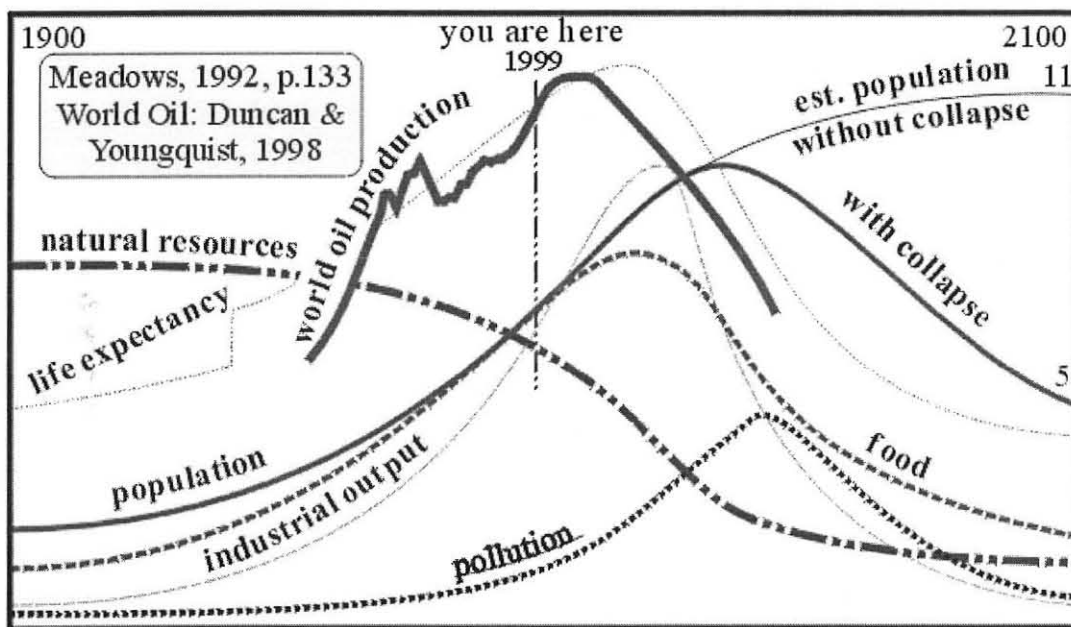
¹³³ Ibid, paragraph 6

¹³⁴ <http://www.britannica.com/eb/article-9028423/Cyrenaic> (Accessed: February 3, 2008)

¹³⁵ Aristippus was born in Cyrene, a Greek city (in current Libya). Under the Romans, Cyrene and other cities became prosperous provinces of Cyrenaica and Tripolitania.

developed countries are currently encountering challenges which necessitate limits to unsustainable economic expansion in developed countries and equally pragmatic limits to population growth and environmental degradation in developing countries. Or else, depletion of natural resources beyond their regenerative potential and degradation of the ecological environment would inevitably give an end not only to our insatiable whims of luxury, but also to the basic necessities of our existence.

The following illustration mainly taken from the book titled “Beyond the Limits” (1992)¹³⁸ illustrates increasingly growing population, industrial production, pollution, and upcoming trends of exhaustible resources such as world oil production and food.¹³⁹



The table above clearly shows the optimal limit of natural resources beyond which industrial production and agriculture cannot be sustained and enhanced. There might be

¹³⁸ Meadows et al. (1992) *Beyond the Limits*, Chelsea Green Publishing Company, p.133

¹³⁹ <http://dieoff.org/page25.htm> (Accessed : February 2, 2008)

Chapter 4

“Limits” to Industrial Growth –versus- Unlimited Avenues of Human Development

As discussed under Chapter 2, one of the basic elements of *national interest* of states is *economic growth* which targets at optimal employment rates and steadily rising standards of living. The ultimate foundation of such national interest, *inter alia*, includes ethical perceptions regarding ‘what is good and right’, as manifested in the widespread conception of happiness and entrenched value systems of the society. An attempt has been made (under Chapter 3) to offer some conceptual framework which can be juxtaposed against national policies with regard to national interest and the trend of human desire towards perpetually rising standards of living.

It might seem natural to seek worldly goods and comfort as much as they can be achieved and availed. However, the discussions made in the preceding chapters regarding climate change vis-à-vis national-cum-individual economic interests evoke a query whether there are limits to the national and individual interests of steadily rising standards of living, and whether human desire for unlimited increase in material comfort is materially and psychologically attainable.

4.1- Sample overview: The American Dream

The “*American Dream*” was the result of the blossoming periods of the World’s biggest economy. For such a big economy that was not ruined by the aftermath of the Second World War, the dream indeed seemed realistic. However, there were skeptics who noticed the mismatch between the American Dream and the finite nature of natural resources.

Samuel H. Ordway (in his book ‘*Resources and the American Dream, Including a Theory of the Limit on Growth*’, 1953) noted that “the consumption of resources in the United States is more a function of technology than of numbers of people, and in identifying

With regard to the first concern, Whitaker noted that “the menace of ... resource base lies in the amazing capacity of ... technological civilization to consume raw materials”¹⁴⁵, and at a global level, population levels need to be taken into account in addition to the concern against growing industrial production of goods. However, Whitaker believes that Ordway’s book gives the impression that sudden dangers might appear due to shortage of resources, and instead holds the following view:

... Contrary to the impression left by the (book), there is no danger that severe shortages will suddenly appear. Shortages develop gradually. One does not suddenly come to a vertical cliff that stops all forward movement; rather, one climbs a slope that gradually steepens. As limits to production appear and become more and more hampering both in reducing economic opportunity and in raising costs of production, it will be easier to convince Americans that technical developments and an original abundance of natural resources no longer make possible an upward movement of levels of living. There will surely be more time than the author appears to grant in which to educate the American people to a different kind of a dream. But there will probably not be more time than required; for *nothing less is called for that a major change in the values which millions of Americans now hold dear and by which they measure the ‘good life’*.¹⁴⁶

It has been over fifty years since Ordway’s book and Whitaker’s review were published in 1953 and 1954, respectively. The question whether we are close to Whitaker’s limits to production or whether it is long overdue is subject of concern.

4.2- Industrial and Individual Carbon Emission: USA

The following table indicates the Top Ten Nations by 2000 Carbon Dioxide Emissions.¹⁴⁷

¹⁴⁵ Ibid, p. 611

¹⁴⁶ Ibid

¹⁴⁷ Vandenberg& Stenemann, *Supra* note 20 (under notes 92 and 85 of their article) state that “The data in this table were gathered from World Res. Inst., All figures were converted from tons to pounds by multiplying by 2000 pounds per ton.” See World Res. Inst., Climate Analysis Indicators Tool Version 4.0, <http://cait.wri.org/cait.php?page=gases> (last visited Aug. 31, 2007) (providing total of 5,791.1 mega tons, or 12.7 trillion pounds, of U.S. emissions).

The table shows that “the total emissions for the average American in 2000 equaled over 14,000 pounds (seven tons) of carbon dioxide.” Vandenberg & Steinemann noted that the “total emissions for all 281 million Americans in 2000 was 4.1 trillion pounds. If calculated using 2006 data, the figure would likely be higher. The U.S. population reached roughly 300 million in 2006, while per-capita emissions have decreased only slightly since 2000.”¹⁵⁰

Vandenberg & Steinemann discuss the implication of the total emissions from individual behaviour:

Although the 4.1 trillion pound total is a tremendous amount, its importance is even more apparent in context. The 4.1 trillion pounds emitted by individuals constitute 32% of the roughly 12.7 trillion pounds emitted annually in the United States. By comparison, the entire industrial sector released 3.9 trillion pounds in 2000. The individual behavior figures also dwarf the subsectors that constitute the industrial sector. For example, the chemical-manufacturing and petroleum-refining industries, which were the top emitters among the manufacturing industries, emitted 686 billion pounds and 672 billion pounds of carbon, respectively, in 2002. Other industrial sectors had even lower totals, including iron and steel production (143.9 billion pounds), cement manufacture (90.8 billion), and aluminum production (13.7 billion).¹⁵¹

The authors further compare the impact of emissions from individual behaviour in USA with carbon emissions in other countries which they consider even more striking. The measures which are proposed by the authors towards the reduction of carbon emission from individuals are the following:

¹⁵⁰ *Ibid* 1693

¹⁵¹ *Ibid*, 1694

qualitative under the belief that necessity is the mother of invention and technology and innovation will enable human beings to enjoy unlimited growth.

a) The *limits to industrial growth* model

In 1972, “an international group of scientists, economists, business leaders, and academics, styled as *the Club of Rome*, published an influential report. The Club of Rome, with the assistance of scholars at the Massachusetts Institute of Technology, developed a model of global growth and development”¹⁵⁶ and envisaged two possible alternatives which mankind might pursue in the decades ahead. The first option stated in the report was the following:

If the present growth trends in world population, industrialization, pollution, food production, and resource depletion continue unchanged, the limits to growth on this planet will be reached sometime within the next one hundred years. The most probable result will be a rather sudden and uncontrollable decline in both population and industrial capacity.¹⁵⁷

In case, however, sustainability is given due attention, the report envisaged optimistic events ahead:

It is possible to alter these growth trends and to establish a condition of ecological and economic stability that is sustainable far into the future. The state of global equilibrium could be designed so that the basic material needs of each person on earth are satisfied and each person has an equal opportunity to realize his individual human potential.¹⁵⁸

Professor Jay Forrester at MIT (Massachusetts Institute of Technology) is renowned for having developed “a large-scale computer model (which) was constructed to simulate likely future outcomes of the world economy. ... [D]epending on how the relationships are described, a wide variety of complex behavior can be described by this technique.”¹⁵⁹

¹⁵⁶ Joseph P. Tomain, “Smart Energy Path: How Willie Nelson Saved the Planet”, *Cumberland Law Review* (36 Cumb. L. Rev. 417) 2005-2006, pp. 418, 419

¹⁵⁷ Meadows et al, *Supra* note 153, page 1

¹⁵⁸ *Ibid*

¹⁵⁹ Tietenberg, *Supra* note 155

single-cell protein as a viable means of converting municipal waste into a food supplement.

... When the need arises, they argue, these new technologies will be developed. The cliché, "Necessity is the mother of invention," captures the flavor of the belief of Kahn and his associates that these technologies will be developed as they are needed.¹⁶⁶

c) Is the "Limits to Growth" model a neo-Malthusian hyperbole?

Two decades after the publication of "Limits to Growth" Donella *et al* published "*Beyond the Limits: Global Collapse or a Sustainable Future*" in 1992. The conclusions in '*Beyond the Limits*' are presented not as a futurist prediction but as conditional warning.¹⁶⁷ It reinforced the conclusions of '*Limits to Growth*' and *inter alia* maintained that uncontrolled decline in per capita food output, energy use, and industrial production can only be avoided "by feasible improvements in the efficient energy and materials usage, together with successful policies for population control and to discourage growth in material consumption."¹⁶⁸

When *The Limits to Growth* was first published in 1972, most economists, along with many industrialists, politicians, and Third World advocates raised their voices in outrage at the suggestion that population growth and material consumption need to be reduced by deliberate means. Over the years, *Limits* was attacked by many who didn't understand or misrepresented its assertions, dismissing it as neo-Malthusian¹⁶⁹ hyperbole.

¹⁶⁶ Tietenberg, *Supra* note 155

¹⁶⁷ Donnelly H. Meadows, Dennis L. Meadows and Jorgen Randers, *Beyond the Limits: Global Collapse or a Sustainable Future* (London: Earth-scan Publications, 1992) page xvi

¹⁶⁸ Michael Common, Book Review on "Beyond the Limits: Global Collapse or a Sustainable Future," (1993) *The Economic Journal*: Vol. 103, No. 419) p. 1084

¹⁶⁹ "... [T]he power of population is indefinitely greater than the power in the earth to produce subsistence for man. Population, when unchecked, increases in a geometrical ratio" while the increase in agriculture is linear. Thomas Robert Malthus, *An Essay on the Principle of Population* (1798) Chapter 1

After thirty years of the publication of 'Limits to Growth' the authors wrote "A Synopsis: *Limits to Growth, The 30 Year Update* (in 2004)." The synopsis starts with the signs of limits everywhere around us, and then forwards the 30-Year Update. It further discusses the *World 3* computer model which is based on systems dynamics "a method for studying the world that deals with understanding how complex systems change over time."¹⁷⁰

Meadows *et al* in the *30-Year Update* (2004) held that the signs around us reinforce the warnings stated in *Limits to Growth* (1972) and *Beyond the Limits* (1992). According to *30-Year Update* (2004) the following symptoms around us substantiate their view of limits to growth:

- Sea level has risen 10-20 cm since 1900. Most non-polar glaciers are retreating, and the extent and thickness of Arctic sea ice is decreasing in summer.
- In 1998 more than 45 percent of the globe's people had to live on incomes averaging \$2 a day or less. Meanwhile, the richest onefifth of the world's population has 85 percent of the global GNP. And the gap between rich and poor is widening.
- In 2002, the Food and Agriculture Organization of the UN estimated that 75 percent of the world's oceanic fisheries were fished at or beyond capacity. The North Atlantic cod fishery, fished sustainably for hundreds of years, has collapsed, and the species may have been pushed to biological extinction.
- The first global assessment of soil loss, based on studies of hundreds of experts, found that 38 percent, or nearly 1.4 billion acres, of currently used agricultural land has been degraded.
- Fifty-four nations experienced declines in per capita GDP for more than a decade during the period 1990-2001.¹⁷¹

Meadows *et al* hold that the examples stated here-above "are symptoms of a world in overshoot, where we are drawing on the world's resources faster than they can be restored, and we are releasing wastes and pollutants faster than the Earth can absorb them or render them harmless."¹⁷² The authors further noted that the symptoms "are leading

¹⁷⁰ http://www.mnforsustain.org/meadows_limits_to_growth_30_year_update_2004.htm
Accessed: February 15, 2008

¹⁷¹ Ibid. pp. 1-2

¹⁷² Ibid, p. 2

behavior patterns, through which the human economy will interact with the carrying capacity of the planet over the coming century.”¹⁷⁶ The core question raised by World3 is “How may the expanding global population and materials economy interact with and adapt to the earth's limited carrying capacity over the coming decade? The model does not make predictions, but rather is a tool to understand the broad sweeps and the behavioral tendencies of the system.”¹⁷⁷

Meadows *et al* have been criticized for having undermined the potential of technology in enabling mankind to triumph over the limits of natural resources. 30-Year Update provides the following response to such criticisms.

... [T]echnology and markets are merely tools to serve goals of society as a whole. If society's implicit goals are to exploit nature, enrich the elites, and ignore the long term, then society will develop technologies and markets that destroy the environment, widen the gap between rich and poor, and optimize for short-term gain. *In short, society develops technologies and markets that hasten a collapse instead of preventing it.*

The second reason for the vulnerability of technology is that adjustment mechanisms have costs. The costs of technology and the market are reckoned in resources, energy, money, labor, and capital.¹⁷⁸

d) Exponential population and industrial growth

Meadows *et al* regard exponential growth as the driving force towards limits to growth. Since the industrial revolution and particularly for over a century, the world has been experiencing exponential growth in a number of areas, including population and industrial production.” *Positive feedback loops* ¹⁷⁹ can reinforce and sustain exponential

¹⁷⁶ Ibid pp. 4,5

¹⁷⁷ Ibid p.5

¹⁷⁸ Ibid

¹⁷⁹ “*Positive feedback loops* are those in which secondary effects tend to reinforce the basic trend. An example of a positive feedback loop is the process of capital accumulation. New investment generates greater output, which, when sold, generates profits. These can be used to fund additional new investments. This example suggests a manner in which the growth process is reinforcing.” Tom Tietenberg; *Environmental and Natural Resource Economics*, <<http://dieoff.org/page25.htm>> (p.3) Accessed : February 2, 2008

income ratio between the richest and poorest 20 percent had increased from 30:1 to 82:1.¹⁸²

e) Limits to non renewable resources (such as fossil fuels) and renewable resources: soil, water, forests

The 30-Year Update (2004) Synopsis discusses limits to growth with regard to “material and energy that are extracted from the Earth, and the capacity of the planet to absorb the pollutants that are generated as those materials and energy are used.” This refers to the natural limits “to the rates at which sources can produce these materials and energy without harm to people, the economy, or the earth's processes of regeneration and regulation.” It also refers to the sinks that can absorb emissions with the requisite ecological balance conducive to our sustained survival and development.

30 Year-Update states fossil fuels (i.e. oil, natural gas, and coal) as a prime example of a nonrenewable resource whose limits are obvious. It is also to be noted that even renewable resources have their natural limits of exploitation, beyond which regeneration becomes difficult, and at times impossible. Renewable resources such as soil take a very long time to rejuvenate after degradation. The situation of Eastern Nile riparians illustrates this point. The soil degradation in upstream Ethiopia (whose headwaters constitute over 80% of the source of the Nile) is inexplicably grave, while salinization in Sudan and Egypt (aggravated by siltation due to erosion) is hardly renewable once the level of soil degradation reaches a certain stage. Such degradation has a grave chain reaction that involves soil, water, forests and the climate at large.

... The most obvious limit on food production is land. Millions of acres of cultivated land are being degraded by processes such as soil erosion and salinization, while the cultivated area remains roughly constant. Higher yields have compensated somewhat for this loss, but yields cannot be expected to increase indefinitely. Exponential growth has moved the world from land abundance to land scarcity. Within the last 35 years, the limits, especially of areas with the best soils, have been approached.

Another limit to food production is water. In many countries, both developing and developed, current water use is often not sustainable. In an increasing number of the world's watersheds, limits have already been reached. ... In an increasing number of

¹⁸² Ibid, p. 6

4.4- The sustainable world paradigm

The 1987 WCED (World Commission on Environment and Development) Report entitled “Our Common Future”¹⁸⁶ introduced the term ‘*sustainable development*’ which “meets the needs of the present without compromising the ability of future generations to meet their own needs.” According to the 30-Year Update, the limits highlighted above can lead to various scenarios most of which would cause “depletion of resources, food shortages, industrial decline, or some combination of these or other factors” which would fail to meet the needs of present and future generations.

Under the ‘business as usual scenario,’ world society proceeds in a traditional manner without major deviation from the policies pursued during most of the 20th century. In this scenario, society proceeds as long as possible without major policy change. Population rises to more than seven billion by 2030. But a few decades into the 21st century, growth of the economy stops and reverses abruptly.

As natural resources become harder to obtain, capital is diverted to extracting more of them. This leaves less capital for investment in industrial output. The result is industrial decline, which forces declines in the service and agricultural sectors. About the year 2030, population peaks and begins to decrease as the death rate is driven upward by lack of food and health services.¹⁸⁷

Meadows *et al* envisage three possible responses to the obvious fact that “resource use and pollution emissions have gone beyond their sustainable limits.” One of these three patterns of response is “to disguise, deny, or confuse the signals. Generally this takes the form of efforts to shift costs to those who are far away in space and time. An example would be to buy air conditioners for relief from a warming climate, or to ship toxic wastes for disposal in a distant region.”¹⁸⁸

A second way is to alleviate the pressures from limits by employing technical or economic fixes. For example, reducing the amount of pollution generated per mile of driving or per kilowatt of electricity generated. These approaches, however, will not eliminate the *causes* of these pressures. The third way is to work on the underlying

¹⁸⁶ Brundtland Report (1987), *Our Common Future*, World Commission on Environment and Development- WCED, (UNEP/ GC.14/13)

¹⁸⁷ 30 Year Update, *Supra* note 170, p.9

¹⁸⁸ *Ibid*, p. 11

Sustainability does not mean zero growth. Rather, a sustainable society would be interested in qualitative development, not physical expansion. It would use material growth as a considered tool, not a perpetual mandate. Neither for nor against growth, it would begin to discriminate among kinds of growth and purposes for growth. It would ask what the growth is for, and who would benefit, and what it would cost, and how long it would last, and whether the growth could be accommodated by the sources and sinks of the earth.¹⁹⁴

And finally, the 30-Year Update suggests the following general guidelines “for what sustainability would look like, and what steps we should take to get there”:

- Extend the planning horizon. Base the choice among current options much more on their long-term costs and benefits.
- Improve the signals. Learn more about the real welfare of human population and the real impact on the world ecosystem of human activity.
- Speed up response time. Look actively for signals that indicate when the environment or society is stressed. Decide in advance what to do if problems appear.
- Minimize the use of nonrenewable resources.
- Prevent the erosion of renewable resources.
- Use all resources with maximum efficiency.
- Slow and eventually stop exponential growth of population and physical capital.¹⁹⁵

According to Meadows et al “*The necessity of taking the industrial world to its next stage of evolution is not a disaster —it is an amazing opportunity.*” And they underlined that leadership, ethics, vision and courage which are “properties not of computer models but of the human heart and soul” determine the extent to which we can seize the opportunity and “bring into being a world that is not only sustainable, functional, and equitable but also deeply desirable.”¹⁹⁶

4.5- Human development indicators

For centuries there has been focus on measuring *national income* rather than *human development*. Most economists believe that “the national income is a good indicator of

¹⁹⁴ Ibid, pp. 14, 15

¹⁹⁵ Ibid. p. 15

¹⁹⁶ Ibid. pp. 15, 16

While the concept of human development is much broader than any single composite index can measure, the HDI offers a powerful alternative to GDP per capita as a summary measure of human well-being.²⁰¹

4.6- Happiness and the Human Development Index

In a working paper titled “*Happiness and the Human Development Index: The Paradox of Australia*,” the authors discuss the paradox in the disparity between Australia’s 3rd rank in Human Development Index and its international subjective well-being rankings. “Using new data on approximately 50,000 randomly sampled individuals from 35 nations, the paper shows that Australians have some of the lowest levels of job satisfaction”²⁰² among the countries which were subject to the surveys.

The survey involved the following five columns:²⁰³

1. If you were to consider your life in general, how happy would you say you are, on the whole? (To be answered in a range of seven options from *completely happy* to *completely unhappy*)
2. All things considered, how satisfied are you with your family life? (To be answered in a range of seven options from *completely happy* to *completely unhappy*)
3. All things considered, how satisfied are you with your (main) job? (To be answered in a range of seven options from *completely happy* to *completely unhappy*)
4. My job is very stressful (Strongly agree; Agree; Neither Agree nor disagree; Disagree; Strongly Disagree)
5. How often has each of the following happened to you during the past three months? I have come from work too tired to do the chores which need to be done. (Several times; Several Times a month; Once or twice, Never.)

It is to be noted that columns 3 to 5 were forwarded only to persons who were employed or self-employed. Based on this 2002 ISSP²⁰⁴ survey administered in 35 countries,

²⁰¹ Human Development Report 2007/2008, *Fighting Climate Change: Human solidarity in a divided world* (UNDP), p. 225

²⁰² David G. Blanchflower & Andrew J. Oswald, *Happiness and the Human Development Index: The Paradox of Australia*, National Bureau for Economic Research, Working Paper No. 11416, June 2005 <<http://www.nber.org/papers/w11416>> (Accessed February 20, 2008)

²⁰³ Ibid, p. 17

²⁰⁴ The International Social Survey Program

4.7- Unlimited avenues of human development

In the course of a person's development, we observe various aspects of his/her development: physical, mental, emotional and spiritual. At a certain stage, physical growth (in terms of height) reaches its optimum DNA level. And in terms of gaining weight, there is a certain level beyond which obesity sets in.

According to Maslow's *hierarchy of needs theory*, our needs march onto various levels namely: Stage 1: *physiological needs* (air, food, water, constant body temperature ...), Stage 2: *safety needs* (the need for security), Stage 3: the need of (giving and receiving) love, affection and belongingness; Stage 4: *esteem*; and Stage 5: *self actualization*.

When all of (first four-level) needs are satisfied, then and only then are the needs for self-actualization activated. Maslow describes self-actualization as a person's need to be and do that which the person was 'born to do.' 'A musician must make music, an artist must paint, and a poet must write.'

The hierarchic theory is often represented as a pyramid, with the larger, lower levels representing the lower needs, and the upper point representing the need for self-actualization. Maslow believes that the only reason that people would not move well in direction of self-actualization is because of hindrances placed in their way by society. He states that education is one of these hindrances. He recommends ways education can switch from its usual person-stunting tactics to person-growing approaches. Maslow states that educators should respond to the potential an individual has for growing into a self-actualizing person of his/her own kind.²¹⁰

Society is an aggregate of its members. What is true about individuals can thus give insights regarding what can be true of the aggregate, i.e. the society. The two basic elements of *material benefits* and *security* which constitute 'national interest' (as highlighted under Chapter 2), seem to coincide with Maslow's 1st and 2nd level human

²¹⁰ Janet A. Simons, Donald B. Irwin and Beverly A. Drinnien, *Psychology - The Search for Understanding*, West Publishing Company, New York, 1987
<http://honolulu.hawaii.edu/intranet/committees/FacDevCom/guidebk/teachtip/maslow.htm>
(Accessed: February 21, 2008)

Chapter 5

Deforestation: Ethiopia in perspective

5.1- The concept of “*maknat*” and deforestation

The 2005 Report of the Commission for Africa states that “More than 70 per cent of sub-Saharan Africa’s population depends in large measure upon forests and woodlands for livelihoods and 60 per cent of Africa’s energy demand is met by forests. ...”²¹¹ In light of such dependence of sub-Saharan Africa on forests, the impact of deforestation is indeed severe. “Deforestation removes key sources of food, fuel and medicines for rural poor people as well as degrading biodiversity and wildlife – part of Africa’s comparative advantage for tourism and pharmaceuticals.”²¹²

Unfortunately, however, ‘*clearing*’ forests for agriculture, cattle grazing or establishment of villages was regarded as ‘*maknat*’ in Ethiopia until awareness towards the adverse effects of deforestation gradually developed during recent decades. ‘*Maknat*’ is an Amharic term which literally means ‘*straightening up*’; and in the context of forest clearing, it means ‘*preparing land for use*’. Such a mindset is contrary to the belief of many communities which give reverence to nature including trees. Traditional beliefs such as ‘*adbar*’²¹³ in many parts of Ethiopia, the practice of ‘*Irecha*’²¹⁴ in Oromo tradition and “*guido*”²¹⁵ (i.e. cultural forests which serve as places of worship in Sheka, Kafa) are typical concepts of reverence to nature.

²¹¹ *Our Common Interest*, Supra note 42

²¹² Ibid

²¹³ Large tree under which ceremonies and community assemblies are made. “Deddo” in Shaka Zone (Kafa) has a similar concept. See *infra*, note 216

²¹⁴ Celebration in October which has elements of reverence to nature

²¹⁵ “Cultural Forests, wetlands, riverine forest and waterfalls are traditional religious sites and hence protected by imposing resource and habitat taboos through *guido*.” (Tadesse Woldemariam and Masresha Fetene, *Forests of Sheka, Infra*, note 216 p. 12)

The change in forest cover during the last 30 years is the most severe anthropogenic catastrophe that the country has seen. Reusing (1998) estimated that the closed high forest of South West Ethiopia dropped from a 40% cover between 1971 to 1975 to only (around) 18% by 1997, which is a loss of about 60% (Tadesse et al. 2002). Conversion of forestland to other land use types is the major cause of deforestation. Around 235,000 hectares of closed and slightly disturbed forest areas were deforested between 1971 and 1997, a loss of about 10,000 hectares of forest every year (Reusing 1998).²²⁰

Tadesse and Masresha further state that in the woredas of Sheka Zone (in SW Ethiopia) “dense closed forest decreased from about 55,304 hectares in 1987 to 43,424 by 2001. On the other hand, open forest decreased from 46,494 to 35,077 hectares during the same period. Their study in four kebeles namely (Uwa, Keja-Chewaka, Welo and Beto which border a tea plantation) indicated that dense cover which was 60% in 1973 declined to 50%, 32% and 20% respectively in the years 1987, 2001 and 2005.²²¹ The decrease in dense forest cover was even worse (about 12.2 % per year) in Gemado kebele mainly owing to expanding coffee plantations. The dense forest cover which was 78% in 1973 has steeply fallen to 43% and 16% respectively in the years 1987 and 2005.²²²

Professor Sebsebe Demissew states the need for conservation of forests on the following grounds:

- *Timber*: “If properly managed, some of the forests could be used as a source of timber” through staggering timescale of production so that it can be matched with reforestation.
- *Regulation of water*: “Catchment areas well covered by natural forest provide maximum infiltration of water and a continuous stream flow. Once the forest cover is removed, the natural infiltration capacity of the soil will be impaired, and rain-water will flow on the surface, leading to a higher rate of erosion and the consequent drying up of streams and rivers.” Projects associated with rivers, such as, irrigation, hydroelectric projects, etc. “depend on continuous flow of streams and rivers which ultimately depend on the forest cover of the mountains.
- *Conservation of soil fertility*: Soil is intact in forests, and erosion is minimal.

²²⁰ Ibid, pp. 4,5

²²¹ Ibid, p. 9

²²² Ibid, p.10

desertification, droughts and recurrent famine.²²⁵ Kaba Urgessa also attributes the severe deforestation and degradation of Ethiopia’s forest cover to “heavy exploitation resulting from an escalating demand for fuelwood and land for cropping and grazing.”²²⁶

“..Depletion and degradation of the forest are a threat to ecosystem diversity and a fundamental influence on the declining standard of living of many households. ... Historical sources indicate that in the early twentieth century about 42 million hectares, or the equivalent of some 35 percent of Ethiopia’s land area, might have been covered with forest (EFAP, 1994). With the inclusion of savannah woodland, the estimate rises to some 66 percent of the country. In the early 1950s, the remaining forest covered some 19 million hectares, or 16 percent of the total land area (EFAP, 1994). By 2000, the coverage was estimated at only 4.2 percent (FAO, 2001).²²⁷

Despite the variation in figures between 2.3%²²⁸ and 4.2% as stated above, the fact that Ethiopia’s forest cover is steadily dwindling at an alarming rate is obvious. The following table²²⁹ (which unfortunately doesn’t have the data for each forest type) shows the steady decline of forest cover in Ethiopia. It is unfortunate that the relevant authority in Ethiopia has not provided FAO (Food and Agricultural Organization) with the pertinent breakdown regarding forest cover.

FRA 2010 Categories	Forest area (1000 hectares)			
	1990	2000	2005	2010
TOTAL (Primary forest, other naturally regenerated forest and planted forest)	15 114	14 826	12 526	

²²⁵ Policy and Strategy for the Development, Conservation and Utilization of Forests (Ministry of Agriculture and Rural Development, April 2007) N.B- Translated from the Amharic version.

²²⁶ Lisanework, N. & Mesfin, T. 1989. “An ecological study of the vegetation of the Harena forest, Bale.” *Sinet: Ethiopian Journal of Science*, 12(1): 63-63. (in kaba Urgessa, *Infra*, note 226)

²²⁷ Kaba Urgessa, Perceptions of forest cover and tree planting and ownership in Jimma Zone, Ethiopia, <http://www.fao.org/docrep/005/y9882e/y9882e04.htm> (Accessed: February 22, 2008)

²²⁸ Demel Teketay, *Supra* note 218

²²⁹ FAO, Global World Forest Resources Assessment Country Report Series Table 4a, Rome, 2008

Although the following table ²³¹ doesn't classify the various categories of forest cover, it shows the extent to which Ethiopia's forest cover is dwindling by global, regional and sub-regional standards:

Forest cover by sub-region 2005 and distribution

Region/sub-region	Forest area (1 000 ha)	% of land area	% of global forest area
1 hectare (ha) = 10 000 square meters (m ²) = 0.01 square kilometres (km ²)			
Eastern and Southern Africa	226 534	27.8	5.73
Northern Africa	131 048	8.6	3.32
Western and Central Africa	277 829	44.1	7.03
Total Africa	635 412	21.4	16.08
East Asia	244 862	21.3	6.20
South and Southeast Asia	283 127	33.4	7.16
Western and Central Asia	43 588	4.0	1.10
Total Asia	571 577	18.5	14.46
Total Europe	1 001 394	44.3	25.34
Caribbean	5 974	26.1	0.15
Central America	22 411	43.9	0.57
North America	677 464	32.7	17.14
Total North and Central America	705 849	32.9	17.86
Total Oceania	206 254	24.3	5.22
Total South America	831 540	47.7	21.04
WORLD	3 952 025	30.3	100.00

5.2- The Legal Regime on Forest Protection: An Overview

a) Waves of deforestation

Although Ethiopia had various laws on forest protection for many decades, there has been enhanced awareness about the necessity of effective legal regime since the mid-1960s. Series of Proclamations and Regulations were enacted in 1965 and 1968 that dealt with

²³¹ <http://www.greenfacts.org/en/forests/1-2/2-extent-deforestation.htm#1> (Source: FAO 2006)

Accessed: March 15, 2008

During the late 1980's there were efforts to formulate the Conservation Strategy of Ethiopia (CSE). It took "a holistic view of the natural and man-made and cultural resources, and their use and abuse" and it sought "to integrate into a coherent framework of plans, policies and investment related to environmental sustainability."²³⁹ The first phase (1989-1990) involved the drafting of Conceptual Framework of Conservation Strategy of Ethiopia (CSE).²⁴⁰ The second of CSE (1990-1995) dealt with policy and institutional framework and action plan. And the third phase (1995-1998) was the "implementation phase to finalize the development of regional state action plans and development programs"²⁴¹ mainly aiming at capacity building.

The latter phases of Conservation Strategy of Ethiopia and a stronger legal regime for forest protection and development were necessitated by a wave of illegal logging which (analogous to post 1974/75 events) occurred post 1991/92 during which change of government had created power vacuum in various rural areas until administrative entities and farmers' associations were capable of effecting forest protection. The following study by Terefe *et al* indicates the steady decline of forest cover in Western Shewa:

The highlands of Western Shewa, in the Upper Awash Basin, were ... covered with dense forest. The dominant tree species were *Tid* and *Zigba*. Nowadays, however, it has been difficult to find any dense forest in the area at all. Today, there are scattered individual trees of *Tid* and *Zigba* in remote and inaccessible places only.

(According to the study conducted through focus group discussions and interviews) population pressure and the prevailing land use are the major factors. Particularly elders said that during the reign of Haile Selassie, large proportion of the plateau in Western Shoa (Ginchi, Holetta and Addis Alem areas) were covered with dense natural forests. According to elders, it was after 1974 that the area witnessed severe depletion of forest resources. ... [T]here was stiff competition among peasants for the purpose of securing agriculture land, and wood for construction and fuel.²⁴²

²³⁹ FDRE Environmental Policy, Environmental Protection Authority (in collaboration with Ministry of Economic Development and Cooperation (Foreword, April 1997)

²⁴⁰ Ibid

²⁴¹ Ibid

²⁴² Terefe Abebe, Tsige Gebu, Wondafrash Genet and Yonas Tadesse, "Causes, Consequences and Management Aspects of the 2006 Flooding Hazards in Awash River Basin," in *Ethiopia Between the Sharp Scissors: Climate Change and Environmental Degradation* (Forum for Environment, December 2006) pp. 41, 42

indiscriminately. ... [D]uring the reign of Emperor Haile Selassie I (1930 -1974), the forest cover of the highland part was very dense.

Since forests were owned by landlords, no one was allowed to enter the forest zone let alone cause damage. In fact, the collapse of the imperial rule gave way to massive forest destruction. Consequently, the mountain remained devoid of vegetation and this in turn aggravated soil erosion.²⁴⁸

Yonas and Sinework stated that “the large-scale mass campaign of undertaking soil conservation and reforestation works supported by food-for-work in *Dengego* highland” conducted in the 1980’s “had brought significant improvement in maintaining the soil and forest status of the upland.” However, during the late 1980’s “settlers turned the forests into farmlands” and “large-scale deforestation and human settlement took place in the forest” especially in 1991 to 1995. And “consequently, the area is devoid of forests.”²⁴⁹ The study shows that these waves of deforestation were mainly attributable to lack of awareness and lack of sense of ownership on the development process, and the transitional periods during changes of government gave impetus for deforestation and the degradation of the environment.²⁵⁰

b) Deforestation, droughts, flooding and soil erosion

In spite of the meager forest cover in Ethiopia, there is still an imprudent enthusiasm to avail land (with forest and open forest covers) to ‘investors.’ In terms of short-term benefit, forest land allocation to cash crop investors might generate public revenue from land lease, production of cash crops and employment opportunities. In many instances, however, such lands slip into the hands of land speculators who seek easy money thereby rendering the *prima facie* advantages imaginary than real. And in terms of long-term benefits, such conversion of forests to modern agriculture, resettlement, etc ... clearly

²⁴⁸ Yonas Tadesse and Sinework Dagnachew, “Flooding at Dire Dawa: A Case Study of the 2006 Flash Flood,” in “*Ethiopia Between the Sharp Scissors: Climate Change and Environmental Degradation*” (Forum for Environment, December 2006) p. 55

²⁴⁹ Ibid, pp. 55, 56

²⁵⁰ Ibid, p. 56

of sedimentation, the study indicated that sediments of a bigger size were being deposited on the farmlands during 2006 flooding season. During focus group discussion “it was discovered that, usually over the previous *kiremts* (rainy seasons), only fertile sediments used to be deposited when the *Ribb* and *Gumara* rivers inundated their farmlands. ... But (in 2006) the rivers brought gravels and sand in huge amount.”²⁵⁴

The study showed that deforestation leads to rainfall droplets which fall free on land surface with a kinetic energy which causes soil erosion and loss of soil organic matter. Decrease in infiltration of water into the soil would then lead to increase in runoff and flooding.²⁵⁵ The study further revealed that soil erosion *primarily* creates gullies which affect flow of rivers by increasing or decreasing the gradient of rivers, and which *secondly* cause sedimentation that leads to decrease in the cross sectional area of rivers and the resultant decrease in the discharge of water into the outlet of rivers thereby ending up in flooding.²⁵⁶

In the night of August 6th 2006, surge of flooding in Dire Dawa claimed the lives of 256 people and damaged about 5000 houses.²⁵⁷ Floods chased nearly 36,000 people from the Fogera plains which flooded more than 6,000 hectares of cropland; and “irrigated farms and fertile lands along the Middle Awash river were also hit hard, with some 15,000 people displaced.”²⁵⁸ From August 6th to 13th 2006 “floods in Dasenech and Ngangatorn in South Omo caused more devastation, cutting off 14 villages and destroying whole settlements” during which 364 people died and 3,000 people drowned although the military managed to airlift about 1,300²⁵⁹ people out of the flooded villages.

²⁵⁴ Ibid, p. 8

²⁵⁵ Ibid, Figure 6, p. 12

²⁵⁶ Ibid, Figure 7, p. 13

²⁵⁷ *Annual Report 2006 Ethiopia*, UN World Food Programme (WFP Ethiopia, Addis Ababa), p 11.

²⁵⁸ Ibid, pp. 11,12

²⁵⁹ Ibid, p. 12

Proclamation No. 94/1994 addressed conservation and development of Forests (Part II) and Utilization of Forests (Part III) in addition to which there were miscellaneous issues. The recent Proclamation No. 542/2007 has devoted Part II to the promotion of private forest development (Art. 4) technology (Article 5) and markets (Article 6) along with corresponding stipulations (under Article 7) with regard to obligations of private forest developers. It also devotes Part III (Articles 8 to 11) to the conservation, development and administration of state forests. The legal regimes which regulate private and state forest utilization, development and administration have thus been distinctly formulated.

d) Private and state forest

‘Private forest’ refers to “a forest other than state forest developed by any private person and includes a forest developed by members of a peasant association or by an association organized by private individuals, investors and governmental and non-governmental organizations.”²⁶³ The phrase ‘by an association organized by private individuals’ raises the issue whether forest may be owned by a farmer’s association, and if so, whether such ownership can be classified into private ownership.

We can take the issue further, and inquire into whether communities can own forests, because Article 4/3 of Proclamation No. 542/ 2007 provides that

“Management plan shall be developed, with the participation of the local community, for forests that have not been designated as protected or productive forests, and such forests shall be given to the community, associations or investors so that they conserve and utilize them in accordance with directives to be issued by the appropriate body.”

The rights embodied in Article 4 Sub-article 3 relate to ‘conservation’ and ‘utilization’ of forests that are not designated as protected ²⁶⁴ or productive ²⁶⁵ under the conditions

²⁶³ Article 2/9 of Proclamation No. 542/2007

²⁶⁴ “*Protected forest* means a forest designated ... to be conserved and developed free from human or animal interference for the purpose of water shade management and the conservation of genetic resources, biodiversity and the environment in general as well as for the purpose of training and research.” (Article 2/7 of Proclamation 542/2007)

²⁶⁵ Forest designated for the production of industrial, construction and other forest products (Art. 2/8 of Proclamation 542/ 2007)

- The right to use and transfer holding rights of forestland (Article 4/6);
- Entitlement to forestry capacity building schemes stipulated under Article 5; and
- Support in the enhancement of marketing skills and opportunities of forest products (Article 6).

The corresponding duties of private foresters are embodied under Article 7 which, *inter alia*, requires them to replace trees when harvested and protection of forests from pest, fire and other hazards.

f) The issue of community land-holding in the Ethiopian context

The concept of *res nullis* (things never owned) implies a master-owner relationship between humans and the environment. The concept regards natural resources not hitherto ‘owned’ susceptible to acquisition of ownership. Needless-to-say, there is the instinct of territoriality in all animals and birds. However, the modern concept of ownership requires title deeds as proof of ownership or possession (in the Ethiopian context), and an entire community technically does not have title over lands and forests as long as it does not possess the title deed to that effect. The question thus becomes whether indigenous communities who have lived in a certain area from time immemorial and who consider themselves not only as possessors and owners, but also as integral members of that particular ecosystem do not have ownership and possessory rights over the resources.

According to Article 3 of Proclamation No. 31/1975²⁶⁶, all lands are “the collective property of the Ethiopian People.” In technical terms, every Ethiopian has around eighty millionth ownership right over every inch of Ethiopian land. This explains why land could only be possessed (*usus* and *fructus*) and not be sold, i.e. disposal (*abusus*) through sale. The Proclamation had recognized four forms of possession: individual farms, co-operative farms, state farms and lands possessed by pastoralist communities. In other words, land was publicly owned while the right to use it and exploit it was allocated under the various possession modalities.

²⁶⁶ Proclamation to Provide for the Public Ownership of Rural Lands

in accordance with the constitution of a region to ensure that a system of rural land administration and utilization is realized in the region.”

With regard to ownership, Article 5/3 provides that “Government being the owner of rural land, communal rural land holdings can be changed to private holdings as may be necessary.” This clearly indicates that the Proclamation considers only one form of ownership of rural land: i.e. *government ownership*, whereas the Constitution under Article 40/3 bestows ownership of land on the state as a *political-administrative entity* and peoples as a *social collective* which may take the form of nations, nationalities and the Ethiopian people in general. It is to be noted that Article 89/6 of The Constitution provides that “Government has the duty to hold, on behalf of the People, land and other natural resources and to deploy them for their common benefit and development.” In other words, the provision doesn’t entrust ownership to the Government.

Article 5/3 of Proclamation No. 456/2005 is thus clearly unconstitutional because it considers the government (not the state) as the owner of rural land and disregards the status of peoples (which by extension seems to include communities) as co-owners of rural land. It is to be noted that the term ‘government’ has a narrower scope than ‘state’, and thus Article 5/3 of the Proclamation ought to have been in conformity with Article 40/3 of the FDRE Constitution which recognizes public ownership by the ‘*state and people*’ which is clearly different from mere ‘government ownership’.

Moreover, Article 5/3 of Proclamation No. 456/2005 contravenes Articles 13 to 17 of the ILO Convention No. 169 of June 1989.²⁷⁰ The Convention requires governments to “respect the special importance for the cultures and spiritual values of the people’s concerned of their relationship with the lands or territories”²⁷¹. It also recognizes “the rights of ownership and possession of the peoples concerned over the lands which they

²⁷⁰ Convention (No. 169) concerning Indigenous and Tribal Peoples in independent countries (Adopted on 27 June 1989 by the General Conference of the International Labour Organisation at its seventy-sixth session; *Entry into force* 5 September 1991) <http://www.unhchr.ch/html/menu3/b/62.htm> Accessed: March 20, 2008

²⁷¹ Article 13/1

community as “a grouping of families and individuals, living in a territorial area that is at the level of a locality or smaller, which seeks to safeguard their common interests through the protection of areas of habitation or agriculture, whether cultivated or lying fallow, forests, places of cultural importance, pastures, water sources and areas for expansion.” Land is the property of the State²⁷⁵ and the right of title holders is the right of land use (*usus*) and benefit (*fructus*) under authorization or through occupancy²⁷⁶ along with rights to transfer these rights for heirs and upon lease in accordance with the law.

Unlike the Ethiopian legal regime, Mozambique’s Land Law does not recognize communities as co-owners of land in par with the State. However, it recognizes the right of communities as title holders through occupation of community lands. According to Article 1/7 of Mozambique’s Land Law, occupancy is a “form of acquisition of the rights of use and benefit of land by national individual persons who have been using the land in good faith for at least ten years or by local communities.”

The insecurity of communities in the continuity of using a certain land and its resources brings about neglect to its preservation and protection. Moreover, such insecurity causes conflict between neighbouring communities with competing claims. The situation in Afghanistan illustrates this point. “Various terms regarding the loci of rural community life exist in Afghanistan, such as *qarya* (often translated as ‘village’), *quishlaq* (usually meaning settlement) and *montequa* (meaning something like area).”²⁷⁷ Dr. Stanfield discusses the rangeland tenure of communities in rural Afghanistan. “Rangeland is a public land which cannot be privately (held). Families, clans and tribes, as well as nomadic groups use rangeland for feeding livestock, for gathering fuel, as a source of

²⁷⁵ Article 3 of Mozambique’s Land Law No. 19/97 of 1st October 1997

²⁷⁶ Ibid, Article 1/17

²⁷⁷ J. David Stanfield, *Community Land Administration: Focus on Afghanistan*, Terra Institute (October 28, 2007), p. 10

form of productive resources –timber, firewood, better pasture), and as means of protecting natural resources ...”²⁸¹

5.4- Remarks on problems of forest protection and development

a) Some observations on Proclamation No. 542/ 2007: Strengths and Pitfalls

The Ethiopian legal regime indeed gives due focus to forest protection and development. According to Article 7 of Proclamation No. 542/2007 private forest owner is required to obtain a prior forest products movement permit before harvesting and transporting forest products.²⁸² Article 7/2 further imposes duties regarding the replacement of harvested trees, the protection of forest from pest disease, fire and other hazards, and requires compliance with pertinent directives issued to protect the environment.

Article 9 deals with the conservation, development and administration of state forests with areas of focus such as:

- allocation of the necessary budget, manpower and materials and putting in place administration and management compatible to a given forest’s level of development;
- allowing community participation in the development, conservation and benefit sharing;
- preventive and curative measures against pests, disease, disasters (natural or man-made);
- protection from unauthorized acts of settlement, deforestation, mining;
- protection from forest fire; and
- evacuation from forest areas (and settlement in other areas suitable for living) where habitation within a state forest obstructs forest development.

²⁸¹ Ibid, pp. 13,14

²⁸² Article 7/1

accomplice²⁸⁶ is more severe than that of the principal offender²⁸⁷ because Article 20 sub-Article 5 of the Proclamation states that providing “assistance in any form to those who illegally cut forest trees or transport forest products to hide or take away the forest products” is punishable with *5 years imprisonment* (and a fine of Birr 5,000). The basic penalty for the principal offender is one year, while that of the accomplice is five years.

The gravest penalty of ten to fifteen years of rigorous imprisonment is imposed on offenders who cause damage to a forest by setting fire or in any other manner.²⁸⁸ Moreover, settlement or expansion of farmland in a forest area without permit or any act of construction of any infrastructure in a forestland without having the necessary permit is punishable with not less than two years of imprisonment and with fine of Birr 20,000.²⁸⁹ And finally, Article 20/6 of the Proclamation provides that ‘faults’ which do not fall under those stated in Articles 20/1 to 20/5 shall be punishable with six months to five years of imprisonment and with a fine of Birr 30,000. The term ‘*fault*’ seems to mean ‘*offence*’ because ‘*fault*’ is a term used in the context of civil wrongs.

The penalty clauses seem to be incongruent with the 2004 Criminal Code in usage of terminology. The provisions use imprisonment (sub-Articles 1, 4, 5 and 6 of Article 20) while the words ‘rigorous imprisonment’ are used under sub-Articles 2 and 3. This doesn’t seem to be an intentional distinction meant to classify the penalties into ‘simple imprisonment’ (as defined in Article 106 of the 2004 Criminal Code) and ‘rigorous imprisonment’ (defined under Article 107).

²⁸⁶ According to Article 37 of the 2004 Criminal Code, an accomplice is a person who intentionally assists a principal offender either before or during the design or the commission of the offence. The assistance may be “by information, advice, supply of means or material aid of any kind.”

²⁸⁷ Article 32 of the 2004 Criminal Code states the types of principal offenders among which the principal material offender is the person who actually commits the offence either directly or through non-human agent (i.e. an animal or natural forces (Art. 32/1/a).

²⁸⁸ Ibid, Article 20/3

²⁸⁹ Ibid, Article 20/4

law, behavioral change, being ubiquitous, will undoubtedly occur.”²⁹³ The three crucial questions that can be raised in relation to the critical state of deforestation in Ethiopia are:

- i. “why people behave the way they do” with regard to deforestation,
- ii. whether there are alternatives for people to act otherwise, and
- iii. the extent to which the law can be used as one of the instruments for behavioral change towards reforestation.

Individuals and group of persons “act by making choices within a range of constraints and resources thrown by their social, political, economic and physical environments.”²⁹⁴ And the challenge of every law is the extent to which it can induce behaviors which will positively contribute towards forest conservation, development, reforestation and prudent utilization. “The rule, the implementing agency’s expected behavior, and the ‘non-legal’ factors in the addressee’s arena of choice, determined by the constraints and resources in their place-specific, non-legal environment ... interact to influence a person’s behavior in the face of the law.”²⁹⁵

The reason why persons involved in deforestation act the way they do is their desire to benefit from forest clearing. Where, for example, a forest is privately owned and effectively guarded, the arena of choice does not allow people to be involved in acts of deforestation. Even under periods of weak law enforcement such as periods of political turmoil, the communities in *Sheka Zone*²⁹⁶ acted differently than communities in Eastern *Hararge*, Ghibe-Omo Basin, uplands of *Fogera* and Western *Shoa*²⁹⁷ because *Sheka* forest (see note 215, above) has greater significance to the communities in the area while the latter communities related forest clearing with the immediate ‘benefits’ of additional farmland, *fuelwood*, income from sale of wood, and other material returns.

²⁹³ Ann Seidman, Robert B. Seidman and Nalin Abeysekere (2001) *Legislative Drafting for Democratic Social Change: A Manual for Drafters* (London: Kluwer Law International) p. 14

²⁹⁴ *Ibid*, p.15

²⁹⁵ *Ibid*, p. 17

²⁹⁶ See Section 5.1, paragraph 3

²⁹⁷ See Section 5.2 above

However, involvement of communities as active participants and beneficiaries of forest protection and development, enhancement of popular awareness, and getting local elders, spiritual leaders, etc on board will gradually create a stronger foundation towards the culture of forest preservation and development.

The most crucial factor in this regard is the task of availing alternatives for fuel wood and facilitating alternatives of subsistence which can serve as means of earning a living in lieu of the scramble for more and more farmlands to the detriment of forest cover. This seems possible only if Ethiopia manages to leapfrog towards modern agriculture which can relieve its mountains from farming and grazing, and if sustained development in ICT, tourism, industrial production and services are realized thereby gradually reversing the ratio of Ethiopia's rural and urban dwellers.

Meanwhile, legal prohibitions against deforestation might not be as effective as they ought to because "conflicts between human needs and wilderness preservation are not inconceivable."³⁰⁰ As Janna Thomson remarked, human beings "are endowed by nature with certain inalienable needs – like the need for food and shelter – and if the population is great enough, these elementary needs are bound to come into conflict with the goal of preservation, however respectful are people towards nature."³⁰¹

c) Institutional issues in the implementation of Ethiopian forest legal regime

Professor Ann Seidman is of the opinion that laws which are in the passive form and which lack details as to who does what in the implementation process are difficult to apply.³⁰² Although this statement was made on laws in general, it throws some light with regard to the major problem of ambiguities and overlapping functions in the implementation of the legal regime on forest protection in Ethiopia. Proclamation No. 542/ 2007 clearly lacks details of implementation and its enforcement remains to be difficult until it is reinforced by regulations.

³⁰⁰ Janna L. Thompson "Preservation and Wilderness and the Good Life", in *Environmental Philosophy* (Edited by Robert Eliot and Arran Gare) Open University Press: 1983, p. 102

³⁰¹ Ibid

³⁰² Discussion with Professor Ann W. Seidman, March 24th 2008

The issue of decentralization cannot be considered to have been addressed until the protection, prudent utilization and development of forests devolves to the grassroots through the crucial task of their active involvement according to local contexts. In due course of awareness enhancement at the grassroots, communities can ultimately realize the adverse effects of deforestation so that they can be involved in the process of reversing the trend of environmental degradation and desertification.

d) Observations on the legal regime of Regional States

Although the Federal laws on Rural Land Use (Proclamation 256/2005) and on Forest Development, Conservation and Utilization (i.e- Proclamation 252/2007) do not recognize community land-holding, Article 3 of Forest Proclamation of Oromia³⁰⁹ lists down three forms of forest resource ownership as state forest, private forest and community forest. Article 6 (sub-Article 1) of the Proclamation provides that “state owned forest (or) patches of forests outside the boundary of state forest may be handed over to organized local community” subject to the conditions stated in the provision. The provision recognizes the right of communities to use forest products sustainably (Art. 6/2/a) and meanwhile requires the community to protect the forest from human encroachment (Art. 6/2/b). Moreover, Oromia Rural Land Use and Administration Proclamation³¹⁰ recognizes community rights of access to land (Article 5, sub-Article 3).

Tigray National State Rural Land Use Proclamation No. 23/1989 (Eth. Cal)³¹¹ recognizes the right of farmers to own trees which they have planted on the plots that are under their possession (Art. 10/1), and meanwhile Article 10/2 of the Proclamation prohibits plantation of trees such as eucalyptus trees (presumably owing to their adverse effects of on soil fertility and underground waters). The possessor of land is required to care for the trees on the land (Article 10/5) and is prohibited from cutting the types of trees stated under Article 10 sub-Article 3.

³⁰⁹ Proclamation No. 72/2003 (*Megeleta Oromia*, 15/1993)

³¹⁰ Proclamation No. 56/2002 (*Megeleta Oromia*, 27/ 1994)

³¹¹ *Negarit Gazeta* (Proclamation N0. 23/ 1989 Eth.; 6th Year No. 23, Mekele)

Core Findings and Conclusion

The first four chapters of this study have briefly addressed *carbon emissions* and climate change in relation with *national interest* (in perpetual quantitative economic expansion) and *relentless consumption* (and wastage) of finite natural resources. And, the fifth chapter has highlighted *deforestation* (with focus on Ethiopia) which is the second human activity which contributes to global warming by reducing sinks in addition to which it is source of carbon emissions. The core findings and conclusions that can be drawn from the foregoing are briefly forwarded below.

a) The poverty – population growth – deforestation nexus

Community participation in forest utilization, conservation and development, and secondly, reversal of the rural-urban dweller ratio in Ethiopia through economic development (which should go far beyond oxen-driven plough and rain-fed agriculture) seem to determine the fate of our forests which have dwindled from 35 (or 40) % to 2.3 % of Ethiopia's land cover. Poverty, according to Sengupta, has at least two dimensions. "The first is income poverty, which relates to what percentage of a country's population subsists below a minimum level of income or consumption. The second is the capability of the poor to come out of poverty in a sustainable manner by having increased access to facilities like health, education, housing and nutrition."³¹⁴ As long as the predominantly one-way traffic in global trade, imprudent government policies, weak work ethic, low productivity, etc. make it difficult for least developed countries to come out of poverty, the problems of deforestation and desertification are bound to continue.

Demographic factors "such as rapid population growth ... exacerbate the severe state of underdevelopment."³¹⁵ Ethiopia's population "increased fourfold between 1900 and 1988. At the beginning of the present century the crude rate of natural increase was

³¹⁴ Arjun Sengupta, "On the Theory and Practice of the Right to Development" in *Reflections on the Right to Development*, Sage Publications: New Delhi, 2005, p.98

³¹⁵ *National Population Policy of Ethiopia* (Addis Ababa, April 1993), p. 23

are envisaged under Kyoto Protocol doesn't include upcoming giants in carbon emissions such as China and India, whose emissions even at claimed 'survival emission levels' per capita can steadily grow unless low-carbon technological leap comes to our rescue.

This is so, at a time when the levels of expected carbon reduction envisaged under Kyoto Protocol have been found to be inadequate because scientists estimate that "global greenhouse gas reductions of 80% are needed before 2050 to avoid the worst and irreversible impacts."³¹⁹ However, the roadmap of the Bali Conference and upcoming prospects of environmental consciousness are indeed encouraging because many European countries seem to be committed to deep carbon emission reductions thereby encouraging others to follow suit.

c) Convergence of national interests in combating climate change

Industrial countries are at crossroads which necessitate rethinking certain concepts which are currently taking new contents in due course of objective developments. The *Trail Smelter (trans-boundary pollution) Case*,³²⁰ for example, involved two countries: Canada and the United States of America. "The case was decided by a Special Arbitral Tribunal" and the "arbitration grew out of air pollution from sulphur dioxide fumes emitted by a smelter plant at Trail, British Columbia, owned by a Canadian corporation." Canada was held responsible and subjected to injunctive relief and payment of an indemnity on the ground that "no state has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another or the properties or persons therein, when the case is of serious consequence and the injury is established by clear and convincing evidence."³²¹

It was Canada's national interest to encourage industrial production on her part of the border while this clashed with US national interests in protecting the health of its citizens.

³¹⁹ Ibid

³²⁰ US. v. Canada (3 U.N. Rep. Int. Arb. Awards 19 1 (1941)

³²¹ United States v. Canada, 3 RIAA, 1907 (1941)

- c) the increasingly expanding world trading system which is in the process of imposing its effects on the national economic bond in the realms of resources, production, exchange and circulation.

It is to be recalled that there are three features of nation-states stated in the introduction which currently seem to be under gradual but steady transformation. *Primarily*, the feature of the nation-state as “a *civil society* with socio-cultural and historical togetherness and shared values, fraternity, needs and aspirations” is currently in the course of convergence with civil societies at sub-regional, regional and global levels.

Secondly, the feature of the nation-state as “a *political entity* with a politico-legal superstructure and juridical personality,” is also currently sharing many overlapping functions with sub-regional, regional and global transnational institutions and is subjected to obligations *erga omnes* (i.e. obligations owed to humankind as a whole) thereby making it difficult (if not impossible) for states to claim ‘sovereignty’ as a justification against violations of international law. And the *third* feature of nation-states as a *national economic bond* which constitutes resources, production, exchange and circulation is progressively converging itself with sub-regional, regional and global trade and economic systems accompanied by trade liberalization.

It is, however, to be noted that economic nationalism may take the form of pursuits to dominate international markets to the detriment of fair trade and equitable reciprocity in sharing benefits. It is against such convergence of interests and interdependence of resources that the notion of national interest ought to be revisited so that the national interest of every state can accommodate equally legitimate interests of other states and global environmental concerns at large.

e) Redefining ‘national interest’ and ‘well being’

Reclusive national interest is usually the aggregate expression of value systems of the majority of the population although it can also be manipulated by the strata which can influence national policies and public opinion. This study has made a modest attempt to

being than the height of a pile of dollars.” We all are thus looking forward to “a different sort of society, one emphasizing quality of life before the raw statistics of economic growth and relentless consumerism.”³²⁸

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³²⁸ Mark Lynas (2007) *Six Degrees: Our Future on a Hotter Planet*, (Fourth Estate: London) p. 300

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UN Climate Change Conference Roadmap (2007), Bali, Indonesia

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Constitution of the Federal Democratic Republic of Ethiopia

The 2004 Criminal Code of Ethiopia

Proclamation to Provide for the Public Ownership of Rural Lands (Proclamation No. 31/1975)

Proclamation to Provide for the Conservation, Development and Utilization of Forests (Proclamation No. 94/1994)

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Proclamation No. 456/ 2005

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Although negotiated through a separate process, the Climate Convention is often viewed as one of the UNCED agreements. The convention was opened for signature at Rio, and its negotiations were deliberately concluded in time to be ready for UNCED.

The document collection includes draft versions of the agreements, reports by experts, and a variety of other inputs to the negotiating process. The collection also has a subset from the 100 national environmental reports submitted to UNCED and speeches of national leaders at the conference. (<http://www.ciesin.org/datasets/unced/unced.html>, Accessed: February 8, 2008)

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Postscript

This postscript is a summary of some of the issues discussed during oral defence of the thesis. Questions ‘a’ to ‘f’, ‘g’ and ‘h’, and ‘i’ and ‘j’ were forwarded, respectively, by my readers Ato Tsegaye Regassa (Asst. Professor) and Dr. Khushal Vibhute (Professor) and by my Supervisor Ato Mellese Damtie (Asst. Professor).

a) *What is the identity or category of the Thesis?*

Research questions which involve issues beyond the law *per se* inevitably require a wider perspective of ‘*Law in context*’. The thesis falls within the category of international environmental law with elements of domestic Ethiopian laws, and other relevant disciplines such as philosophy.

b) *How would national interest be possibly rethought in the international law of the future?*

New trends in international law are in the course of broadening the concept of *national interest* beyond political boundaries, in effect, leading towards a new synthesis of local interest at grassroots level, national interest and transnational concerns. It is indeed a challenge for international law to strike the appropriate balance between ‘national’ and ‘transnational’ interests when the former is inconsistent with sub-regional, regional or global common good, or on the contrary, where globalization becomes a *laissez faire* contest among unequals. “*Glocalization*” is a word I read in recent literature, which I would like to use for the balance between local benefits, national interest and globalization so that the latter would not become a subtle promotion of the economic nationalism of few industrialized (or rapidly industrializing) countries. Regional or sub-regional integration based on mutual benefits require comparably positive development patterns among neighbouring countries. This in turn requires conducive government policies, strong work ethic, shared national values, and global fraternity in the realization of the right to development. In the absence of positive development patterns of neighbouring countries, one-way flow of goods (or

to go transnational from a stage of nation-statehood than from a state of pre-nation statehood. Various subjective and objective setbacks might thus be encountered in the path towards sub-regional and Pan-African integration. For example, nations which consider their neighbours as security threats can hardly climb onto economic integration unless they primarily address such factors of tension and disharmony. Many African states seem to overlook the fact that ‘security’ against threats includes non-military insecurity against droughts, floods, poverty, severe utility supply shortages (such as the current water and electricity rationing in Addis owing to delayed rainfall), and many other challenges.

e) Where is the legal analysis in the thesis?

Legal research may involve descriptive, diagnostic and projective elements in addition to critique and legal analysis per se. The core theme of the thesis is not exploratory of descriptive analysis of the laws addressed (FCCC, Kyoto Protocol, Ethiopia’s forest legal regime, etc.) although a brief discussion thereof is indispensable. The thesis has rather focused on why it has become difficult to bring USA on board in the implementation of the commitments embodied in Kyoto Protocol, and why Ethiopia’s forests are dwindling despite the various laws which embody stipulations on forest protection, utilization and development. The thesis is thus mainly analytical diagnosis of why the addressees of the laws stated above behave the way they do, and it also has a projective perspective regarding the need to revisit the reclusive conception of ‘national interest’ and relentless consumerism. To reiterate a line from the introduction of the thesis, the study has attempted to raise “some big questions although we might not at this stage be able to come up with answers which are as big.”

f) Wouldn’t modern agriculture aggravate deforestation (as is the case in many countries) in contrast to the image it has in the thesis?

The thesis envisages that mountainous and substantially sloppy parts of Ethiopia are not conducive to modern agriculture. With modern agriculture, our mountains can be relieved from parceled settlements and overgrazing. Moreover, some of

The thesis has attempted to give due focus to individuals without meanwhile losing track of socio-political entities. Families, neighbourhoods, communities and the nation at large are constituted of individuals. The unit-*cum*-system pyramid thus refers to individuals, communities and nations (both as the sources and victims) of carbon emissions, deforestation and the resultant climate change.

i) Should poverty be invariably equated with level of income?

We might use terms such as pre-agrarian communities or pre-industrial societies. But this doesn't imply poverty merely because the per capita income of members was below the figures we now consider as middle income. Various qualifiers might of course be used regarding education, technology, social system, etc. However, a person of those periods can't be regarded poor unless he/she belongs to the category considered as poor in the context of those societies. In fact, pre-agrarian communities had no income even if they managed to produce, hunt, gather and barter basic necessities. If poverty is invariably equated with income, every member of such societies will be classified as poor thereby negating the very notion of the poor, moderate and rich spectrum.

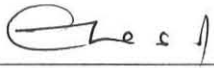
j) Do agro-fuels positively contribute to Ethiopia's forestation endeavours?

Experts in the field need to do adequate research regarding the impact of agro-fuels on biodiversity and the ecosystem before a developing county like Ethiopia jumps into ambitious projects such as agro-fuels and flower farming in an extensive scale. True, we are in need of every foreign exchange that can be earned. However, the cost-benefit analysis need to be prudently examined before irreversible damage is done to sustainable development and the environment. Crops planted for fuel create ecologically barren monocultures and have entailed devastating harm in various developing countries. Bio fuel (or agro fuel) plantations encourage deforestation thereby raising the level of greenhouse gas emissions. Apart from such environmental damage, agricultural undertakings that target at fuel production are diluting the traditional purpose of producing crops for food thereby causing meteoric rise in food price owing to the growing demand for


Declaration

I, the undersigned, declare that this thesis is my original work, and has not been presented for a degree in any other university, and that all source of materials used for the thesis have been fully acknowledged.

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Place and date of submission

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31 March, 2008