DRAGON TEARS

A CRITICAL ANALYSIS ON THE POLITICAL ECOLOGY OF PLANETARY SURVIVAL

by

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Abstract

This thesis is concerned with the social systems, institutional patterns, and political dynamics, which constitute and contextualize the policy challenges relevant to China's environmental collapse and health crisis. This essay demonstrates that China's environmental pollution crisis engenders biospheric contamination, human and ecological risks, aggravating climate change, and the current geopolitical trends towards planetary extinction. This scholarly dissertation denounces the failure of neoliberalism, the cultural void of hyper-consumption, or what Dr Ignacio Valero has coined 'consumer fetishism.' Through the investigative lens of China's political structure, the country's legislative apparatus, and policy environment, this macro/micro policy analysis examines the mechanisms by which western imperialism permeates the Communist Party of China's fragmented authoritarian iron grip and Party/State economic corporatism. China's environmental collapse and health crisis are synthesized by means of three case studies: 1) The first case is the hyper-eutrophication of Lake Dianchi in Yunnan Province, Southwestern China. Water pollution threatens China's economic sustainability; 2) The second case is Liukuaizhuang village in Tianjin Municipality, in Northeast China, which epitomizes the cancer village phenomenon mushrooming nationwide. Cancer is China's leading cause of death; 3) The third case study is the Dachang Gold Project, a property and access to the richest untapped gold mine in Asia, located on ancestral land in the wetland conservation subareas of the Three Rivers Headwaters (San Jiang Yuan) Nature Reserve (SNNR) in Yushu Tibet Autonomous Prefecture (TAP) in Qinghai province on the Tibetan plateau, for which 300,000 Tibetan nomadic pastoralists have been resettled. This inquisitive researching process, includes the production of a documentary on the topic of China's environmental collapse in light of global causations, human and ecological implications. "Dragon Tears: a film on the political ecology of planetary survival," is a feature documentary I am directing, currently in production, which intends to communicate creatively to a large audience critical information on China's ecological collapse and health crisis, criticizing western consumer culture in the context of human extinction. The objective of this heuristic body of work is to radicalize the political discourse and fluidly energize public debates on the topics of ecological justice, climate change, and human evolution.

Lay Summary

The key goal of this research is to demonstrates that China's environmental and health crises are real, urgent, and requires humanity's immediate attention. Specific examples of China's environmental pollution and health crises are unravelled through the analysis of three case studies investigated within their larger socio-political, economic, both national, and global contexts. This scholarly work presents the complexity of China's environmental policy circumstances, and is critical of the global economic system. The scholarly research, as well as becoming fluent in Mandarin, has been done with the intention of directing a feature documentary film, "Dragon Tears," part of which will include the case studies analyzed in this thesis. This research represents the unfurling seeds of a much larger endeavor, that of directing and producing a feature documentary film in China on these politically sensitive topics. Please visit my website to view a preview of this film: www.neidrya.com.

Preface

This dissertation is an original intellectual product of the author, B. M. Parizeau. All projects and associated methods were approved by the University of British Columbia's Research Ethics Board [certificate #H15-01244].

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List of Abreviations

Association of Southeast Asian Nations (ASEAN)
Chinese Communist Party (CCP or Party)
Circular Economy (CE)
Communist Party of China (CPC)
Environmental Impact Assessments (EIA)
Eco-industrial Parks (EIP)
Environmental Non-Governmental Organizations (ENGO)
Greenhouse Gas (GHG)
International Non-Governmental Organizations (INGO)
Intergovernmental Panel on Climate Change (IPCC)
Institute for Public and Environmental Affairs (IPE)
Issue, Rule, Analysis, and Conclusion (IRAC)
Ministry of Environmental Protection (MEP)
China's Most Favoured Nation (MFN)
Mekong River Commission (MRC)
National Development and Reform Commission of China (NDRC)
National People's Congress (NPC)
Natural Resources Defense Council (NRDC)
Pollution Information Transparency Index (PITI)
People's Republic of China (PRC)
Politburo Standing Committee (PSC)
Three Rivers Headwaters (San Jiang Yuan) Nature Reserve (SNNR)
Tibet Autonomous Prefecture (TAP)
United Nations (UN)
United States (US)
World Heath Organization (WHO)
World Trade Organization (WTO)

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I would like to thank Professor Pitman Potter, and Rozalia Mate, Professor Julian Dierkes, Professor Shakya, Professor Abidin Kusno, and director of the Institute of Asian Research (IAR) Yves Tiberghien as well as the staff at the IAR, Karen Jew, Marietta Lao, Yoko Nagao, and Kerry Ross for your hard work and support.

Dedication

I owe all of my success to the selflessness of my dear mother, Claudette Jean-Gilles.

1. Introduction

I am an emerging French Canadian scholar, environmental activist, interdisciplinary artist, the director/producer of "Dragon Tears." "Dragon Tears" is a feature documentary film currently in production, which aims to communicate creatively to a large audience critical information on China's ecological collapse and health crisis, criticizing the economic, ecological, and cultural failures of neoliberalism in the context of climate change, and the possibility of human extinction. This film intends to unravel the network of international dynamics interweaving China to the rest of the world, unfolding the biophysical links, geopolitical patterns and socioeconomic continuum. The in-situ multidisciplinary research effectuated for the writing of this thesis, has been a key step in the preproduction of "Dragon Tears."

Dr Pitman B. Potter, my MAAPPS supervisor, is a distinguished professor at the Peter A. Allard School of Law at UBC, as well as HSBC Chair in Asian Research at UBC's Institute of Asian Research (IAR), the department under which my program of study is offered. Dr Potter is not only an accomplished People's Republic of China/Taiwan law, policy, foreign trade, and investment scholar, but he is also a respected human rights lawyer, who is fluent in Mandarin. Dr Potter is a deeply spiritual human being, talented guitarist, and well yes, a Grateful Dead fan. The depth of his knowledge and ethical dimensions of his engagements are profoundly inspiring. Dr Potter has encouraged my process and intention to direct and produce this documentary film since he became my supervisor in the Spring semester of 2013. I have been truly blessed to find such a fitting professor, I feel honored, and deeply grateful for this inspiring guidance throughout my academic program.

In 2015, I was appointed by Dr. Potter as a research assistant in China. My research consisted of gathering materials in Mandarin on the topics of China's environmental policy, law, and human rights, including interviews with officials and policy experts. This appointment was offered under the grant for the Asia Pacific Dispute Resolution Research project awarded by the Social Sciences and Humanities Research Council (SSHRC) of Canada under its Major Collaborative Research Initiative (MCRI) Program. My research proposal was approved by the UBC Ethics Committee in the summer of 2015, prior to my five months fieldwork in China. During my time in China, I was expected to start the production of "Dragon Tears" under the supervision of my host supervisor Dr Wang Xi. Dr. Wang Xi is the director of the Environmental and Resources Law Institute (ERLI) at Jiao Tong University in Shanghai. Dr. Wang Xi is one of the scholars who worked on the 2014 amendment to China's Environmental Law. He agreed to be interviewed on the recent environmental policy changes in China for this feature documentary.

Participating experts include prestigious faculty members, internationally renown scholars, environmental advocates, activists and researchers: Noam Chomsky, emeritus professor in linguistics at Massachusetts Institute of Technology (MIT); Dr Vandana Shiva, eco-feminist, activist, and director of India's seed saving organization Navyanda; Ma Jun, Director of Beijing-based NGO Institute of Public & Environmental Affairs (IPE); Dr Pitman B. Potter, UBC law professor and Chinese scholar; Dr Wang Xi,

director of Environmental and Resources Law Institute (ERLI); Dr Wade Davis, Canadian anthropologist. Other scholars, I wish to interview for "Dragon Tears" are researcher Jane Goodall, Tzeporah Berman, James Hansen, Julia Hill Butterfly, and newly appointed party secretary of the Central Socialist Institute Pan Yue.

In the spring of 2013, I had the wonderful opportunity to interview world renown scholar, linguist and political dissident Noam Chomsky in collaboration with "Dragon Tears" director of photography Reed Rickert. Reed is a talented film director and cinematographer (www.reedrickert.com), who over past five years has directed, produced, photographed, and edited various documentaries, commercials, TV programs and corporate films in the United States, Mexico, France, Morocco and Spain. Beijing Continental Bridge Corporation, the largest production and documentary film distribution in China, has shown interest in "Dragon Tears." Both the National Film Board of Canada and BC Council of the Arts are potential co-producers and funders for the project. This cinematographic production, shot in English and Mandarin, weaves experts commentaries with guerilla-style hand held camera, still photography, and an original "urban robot raga" or "trip-pop" ambient soundtrack. "Dragon Tears" music director Artemis (www.artemis.fm) is a singer, songwriter, producer, designer, improvisor, and creative polymath, whose spellbinding instantly recognizable music flows from pop, to ambient, to experimental, to electronic, without ever losing its identity, as emotive as it is beautiful. Camila Urrutia, the director of photography, creative director/sound technician/video editor, she is an activist, feminist, and a brilliant filmmaker directing her first independent feature film in Guatemala city "Pólvora en el Corazón" (polvoralapelicula.com), which received the support of Cinergia.

The purpose of producing this documentary film is to engage in the political radicalization of planetary ecological stewardship. This film intends to narrate humanity's tragic beauty, dialectically
denouncing neoliberalism invasive and pervasive structural violence. The premise of this research-based experimental documentary film is that China's critical state of ecological overshoot is a systemic crisis of planetary emergency. China's ecological breakdown is a manifestation, as well as a warning, of a much larger planetary, systemic, and spiritual crisis.

This thesis is concerned with the social systems, institutional patterns, and political dynamics, which constitute and contextualize the policy challenges relevant to China's environmental collapse and health crisis. This essay demonstrates that China's environmental pollution crisis engenders biospheric contamination, human and ecological risks, aggravating climate change, and the current geopolitical trends towards planetary extinction. The country's rigid political structure has been characterized by Lieberthal as 'fragmented authoritarianism' (Lieberthal, Lampton, 1992, p.6). This macro/micro policy analysis examines the mechanisms by which western imperialism permeates the Communist Party of China's fragmented authoritarian iron grip and Party/State economic corporatism. These seemingly contradictory ideological paradigms, the clashing of these global economic and political trends, fuels an unsustainable hyper-consumer culture, aggravating climate change, and jeopardizing the resources of future generations. The three case studies which constitute my analysis have been carefully chosen to synthesize the multilayered complexity of China's ecological landscape and policy environment. The first case study is the hyper-eutrophication of Lake Dianchi in Yunnan Province in

Southwestern China. The hyper-eutrophication of lake Dianchi emerges as a result of the last few decades of population explosion, economic growth, rapid urbanization, massive industrialization, improper management of residential wastewater, as well as the systematic overuse of chemical fertilizers and pesticides in modern horticulture. Lake Dianchi basin is home to the largest industrial flower production in Asia. The second case study is an investigation of Liukuaizhuang 'cancer village' in Tianjin Municipality located in Northeast China. As a result of severe water contamination, cancer villages have mushroomed nationwide. Cancer villages are clustered around heavily polluted rivers and their tributaries, contaminated by industrial wastewater and pollution-intensive manufacturing operations. The third case study is an investigation of the Dachang Gold Project. The Dachang Gold Project is a property located on ancestral land in the wetland conservation subareas of the Three Rivers Headwaters (San Jiang Yuan) Nature Reserve (SNNR) in Yushu Tibet Autonomous Prefecture (TAP), in Qinghai province on the Tibetan plateau, for which 300,000 Tibetan nomadic pastoralists were forcefully resettled. Other major ecological problems in China result from the country's dam construction hysteria, which has had devastating consequences on biodiversity, as well as on society by forcing resettlements and the destruction of historic sites. The Three Dam Gorges is the most dramatic example.

These three case studies are methodologically analyzed within their overlapping trending political modalities and decisive problematics. These include: China's authoritarian iron grip, formal political culture, political landscape and polity environment; neoliberal trends; biophysical reality of China's environment and health crisis, Rabinow's 'biosociality;' the chaotic reality of global warming; climate change mitigation and adaptation measures, ecological justice and the survival of the human species. The premise of my research, and of this thesis, is that China's critical state of ecological overshoot is a systemic crisis of planetary emergency requiring immediate attention. China's ecological breakdown, and the oozing of pollution outside the country's geopolitical borders are manifestations, as well as a stark warning, of a much deeper planetary, biotic, systemic, and spiritual crisis.

China's environmental crisis emerges from convoluted historical force. China's formal political culture and bureaucratic hierarchy[1], a policy environment endemic with corruption leading to weak institutional capacity, in addition to a compromised judiciary. The last several decades of open-door economic policies have seen emerging alliances between the CPC, China's Party-State, the country's top State-owned enterprises, and foreign investors. "China's policies on environment and development," as well as the country's modernization, and corporate trends, will have ecological consequences on the world (Zhang, Wen, 2008, p.1249).

[1] "A wide array of specific bureaucratic hierarchies fall within this cluster, and there are many horizontal and vertical cleavages in it." UC Press E-Book Collection, 1982-2004. http://publishing.cdlib.org/ucpressebooks/view?docId=ft0k40035t&chunk.id=d0e59&toc.id=&brand=ucpress. Accessed February 21st 2017.

1.1 China's environmental collapse, human rights and health crisis

China's natural resources have been manipulated, exploited and controlled to build the treasures of Chinese civilization for over 5000 years. China is one of the oldest and richest culture on Earth. **"**China's history is also defined by other civilizations which developed independently, and often in close contact with those of China" (Loewe M. , Shaughnessy E. L., 1999). The country is home to numerous indigenous minorities. Some of these minorities have developed a sophisticated ecological ontology[2]. This ontological paradigm will be developed in the film to clearly delineate the contrast between world views, the paradigm of a sacred relationship to Earth, versus one of the predator, mega- profiting exploiting oligarch.

The development of chinese civilization emerged from massive anthropogenic topographical transformations, as grasslands, forests and lakes were destroyed to set up farmlands and villages (Jun, 2004, p.4). Ecological ravages and the plunder of natural resources in post-Mao China have reached levels unparalleled in the country's lengthy history. Environmental pollution in China is reaching alarming levels, and is most accurately described as an ecological collapse. In *World Politics Review*, Elizabeth Economy's article "China's Growing Water Crisis," published on August 9, 2011, quotes the February 2011 commentary of China's Minister of Environment Zhou Shengxian: "In China's thousands of years of civilization, the conflict between humanity and nature has never been as serious as it is today." The title of Daniel Tovrov's article in *International Business Times,* "Pollution in China is the world's worst," says it all. China's heavily populated cities have some of the worst air quality in the world. The World Bank reports that China is home to 16 of the world's most polluted cities. In these toxic urban spaces, a full day of breathing air in the life a young person amounts to smoking two packages of cigarettes (Currell, Dongmei, 2017, p.20).

The biophysical evidences of China's environmental collapse include ecological degeneration, ecosystem disruption[3], freshwater scarcity, desiccation of rivers, acid rain[4],

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[2] The Naxi Dongba are a Chinese minority with a population of now just above 300,000 people living indigenously in remote mountain villages in southwestern China, in the provinces of Yunnan and Sichuan. They are the last people on earth to still use pictographs. The pictographic scripts are mnemonic aides employed in rituals celebrating the sacred relationship between humans and nature. "The priests of the Bön religion, a kind of shamanism that long ago spread to Naxi from preBuddhist Tibet, chant ancient legends and ceremonies using the pictographic texts as memory aids" (Ramsey, 1941). The Naxi Dongba rituals celebrate the interconnections between humans and nature, the loss of which is documented, among others, by Carolyn Merchant in The Death of Nature."Environmentalists are trying to develop an ecological ethic emphasizing the interconnectedness between people and nature" (Merchant, 1989) and they "have suggested an image of stewardship in which we are not owners of nature but rather its temporary caretakers" (Ackerman & Heinzerling, 2004).

[3] This article unearths the severity of ecosystem disruption caused by the Three Gorges Dam (TGD). "These include arable land, biodiversity, medicinal flora, and valuable topsoil, among others. [...] The Three Gorges Dam, according to some, has the potential to be one of China's largest environmental nightmares." Hvinstendahl, M. "China's Three Gorges Dam: An Environmental Catastrophe? Even the Chinese government suspects the massive dam may cause significant environmental damage," Scientific America, March 25th 2008. https://www.scientificamerican.com/article/chinas-three-gorges-dam-disaster/ Accessed April 11th 2017.

[4] "Third of China 'hit by acid rain', One third of China is suffering from acid rain caused by rapid industrial growth, an official report quoted by the state media says." BBC News. 27 August 2006. http://news.bbc.co.uk/2/hi/asia-pacific/5290236.stm . Accessed February 20th 2017.

soil contamination[5], toxic food[6], species extinction[7], health crisis[8], premature deaths[9] and child morbidity.[10] China's population is facing a water[11], air[12], soil and food crisis. Environmental pollution is the country's leading cause of illness[13], cancer[14], and deaths[15].

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[5] "Report: One fifth of China's soil contaminated, Almost a fifth of China's soil is contaminated, an official study released by the government has shown." BBC News. 18 April 2014. http://www.bbc.com/news/world-asia-china-27076645. Accessed February 20th 2017.

[6] "Farmers have coped with the toxic waters by mixing illegal veterinary drugs and pesticides into fish feed, which helps keep their stocks alive yet leaves poisonous and carcinogenic residues in seafood, posing health threats to consumers."
Barboza, David. "In China, Farming Fish in Toxic Waters," New York Times, Asia Pacific, December 15th 2007
http://www.nytimes.com/2007/12/15/world/asia/15fish.htm.l Accessed February 20th 2017.

[7] The river dolphin Baiji (Lipotes vexillifer) was announced extinct after a scientific expedition on the Yangtze. "China's Rare River Dolphin Now Extinct, Expert Announce." National Geographic News, December 14 2006. http://news.nationalgeographic.com/news/2006/12/061214-dolphin-extinct.html. Accessed February 20th 2017.

[8] "The different composition of air pollutants, the dose and time of exposure and the fact that humans are usually exposed to pollutants mixtures than to single substances, can lead to diverse impacts on human health. Human health effects can range from nausea and difficulty breathing or skin irritation, to cancer. They can also include birth defects, serious developmental delays in children, and reduced activity of the immune system, leading to a number of diseases" (Kampa, Castanas, 2008, p.364).

[9] "China's poor air quality, too, has serious implications for public health. A joint study by the World Bank and SEPA in 2007 estimated that 650,000 to 700,000 people in China die prematurely from air pollution annually." Currell, Matthew J., Han, Dongmei. "The Global Drain: Why China's Water Pollution Problems Should Matter to the Rest of the World." Environment: Science and Policy for Sustainable Development. December 20th 2016
http://www.tandfonline.com/doi/abs/10.1080/00139157.2017.1252605?scroll=top&needAccess=true&journalCode=venv20
Accessed February 20th 2017.

[10] "Acute and chronic lead poisoning is occurring throughout China and is a major cause of childhood morbidity. The Chinese government's emphasis on industrial development and poverty reduction has, over the past three decades, decreased by 500 million the number of people surviving on less than one dollar per day, but has caused significant environmental degradation that threatens public health."
Cohen, Jane E., Amon, Joseph J. "Lead Poisoning in China: A Health and Human Rights Crisis," Health and Human Rights volume 14, no. 2 December 2012,
https://cdn2.sph.harvard.edu/wp-content/uploads/sites/13/2013/06/Amon-FINAL2.pdf. Accessed February 20th 2017.

[11] In the article "The Great Leap Backward?" published in the Sep/Oct 2007, Foreign Affairs,Vol. 86, Issue 5, Elizabeth C. Economy gives a sobering account of China's environmental crisis and its global impacts. "Water pollution and water scarcity are burdening the economy, rising levels of air pollution are endangering the health of millions of Chinese, and much of the country's land is rapidly turning into desert. China has become a world leader in air and water pollution and land degradation and a top contributor to some of the world's most vexing global environmental problems, such as illegal timber trade, marine pollution, and climate change. As China's woes increase, so, too, do the risks to its economy, public health, social stability, and international reputation."

[12] "A report released by the Organization for Economic Cooperation and Development (OECD) in 2007 stated that 300 million Chinese, or a quarter of the population, drank contaminated water every day, with almost two-thirds falling ill as a result." Economy, E. "China's Growing Water Crisis," World Politics Review. August 9, 2011. http://www.worldpoliticsreview.com/articles/9684/chinas-growing-water-crisis. Accessed February 20th 2017.

[13] "A report released by the Organization for Economic Cooperation and Development (OECD) in 2007 stated that 300 million Chinese, or a quarter of the population, drank contaminated water every day, with almost two-thirds falling ill as a result." Economy, E. "China's Growing Water Crisis," World Politics

China's water resources is "one forth of the world's average" (Lu, et al., 2008 p.163). China's water crisis is the country's most serious environmental policy challenge[16].

Ma Jun is a world renown environmental advocate[17], policy analyst and the director of the Institute for Public and Environmental Affairs (IPE), one of China's most dynamic NGOs. The IPE is a Beijing registered public welfare environmental research think tank. Published in 1999, Ma Jun's landmark publication "China's Water Crisis" gave rise to a wave of environmental consciousness in China and worldwide. In 2006, the IPE released China's Blue Map APP. The Blue Map APP is an Environmental Data Platform which includes real-time environmental mapping of water and air quality across China, wastewater source, gas source, and a corporate environmental performance database, which can be downloaded through android and Iphone from the IPE website http://www.ipe.org.cn/ . The same year the IPE released China's Blue Map APP, Time Magazine nominated Ma Jun as one of the 100 people who shape our world (Norton , 2006). Ma Jun views data transparency as an important starting point for public debate. China's leading environmental advocate acknowledges that information alone will not reverse China's ecological crisis. Ma Jun has accepted to be interviewed on the topics of China's ecological crisis and environmental policy for the production of "Dragon Tears."

September 21st 2006, Naomi Li interviewed Ma Jun for *China Dialogue* in "Tackling China's water crisis online." Ma Jun said: "Water pollution is the most serious environmental issue facing China. It has a huge impact on people's health and economic development. That is why we have begun to build this database. To protect water resources, we need to encourage public participation, and strengthen law enforcement. In some places, polluting factories and companies are being protected by local governments and officials. The public need to take part in water monitoring and management if the

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Review. August 9, 2011. http://www.worldpoliticsreview.com/articles/9684/chinas-growing-water-crisis. Accessed February 20th 2017.

[14] "Cancer mortality rates in China have risen 80% over the past 30 years, making it the country's leading cause of death. In cities, toxic air is a primary suspect; in the countryside, it's the water. More than 70% of the country's rivers and lakes are polluted, according to government reports; almost half may contain water that is unfit for human contact."
Kaiman. Jonathan. "Inside China's 'cancer villages': Death rates in communities near chemical, pharmaceutical or power plants exceed the national average, but residents face a wall of denial and intimidation." The Guardian, June 4th 2013.
https://www.theguardian.com/world/2013/jun/04/china-villages-cancer-deaths

[15] "Beijing's 21-million residents live in a toxic fog of particulate matter, ozone, sulphur dioxide, mercury, cadmium, lead and other contaminants, mainly caused by factories and coal burning. Schools and workplaces regularly shut down when pollution exceeds hazardous levels. People have exchanged paper and cotton masks for more elaborate, filtered respirators. Cancer has become the leading cause of death in the city and throughout the country."
Suzuki, David. "Toxic Smog Puts Cancer as Leading Cause of Death in China," Ecowatch, All Shades of Green, April 15th 2015. http://ecowatch.com/2015/04/15/china-toxic-smog-cancer/

[16] China's water crisis is the country's most serious policy challenge. Economy, E. "China's Growing Water Crisis," World Politics Review. August 9, 2011.
http://www.worldpoliticsreview.com/articles/9684/chinas-growing-water-crisis. Accessed February 20th 2017.

[17] "Ma Jun developed an online database and digital map that show which factories are violating environmental regulations across China." Goldman Environmental Prize recipient Asia. 2012.
www.goldmanprize.org/recipient/ma-jun/. Accessed February 20th 2017.

situation is to improve. The first step to get the involvement of the public is to inform them" (Li, 2006).

As China was taking part in the Paris Conference of Parties (COP) 21 in December 2015, where 190 countries met with the objective of formulating a legally binding agreement towards climate change mitigation measures, Beijing released the city's first red alert (*BBC News*, December 8th 2015). The four-tired emergency air pollution warning system is based on the four colours, "blue, yellow, orange and red (Yaoti, Ren, 2016)," each of which indicate a degree of pollution intensity. The red alert indicates the most severe levels of air pollution and is "issued for air pollution in Beijing if the city's Air Quality Index (AQI) reaches 500" (*China Daily*, 2016). People were encouraged to stay inside, effectively schools and factories were shut down, and vehicles were banned. In 2016, *China Daily* reported that Beijing's 5.7 million vehicles contribute to 30 percent to PM2.5 toxic air particulate concentration.

PM 2.5 "[the finest and deadliest particulate matter]" (Tatlow, 2016) is a byproduct of the burning of coal. China's primary source of energy is coal. Coal consumption approximates 70 percent of the country's total energy consumption (K.-m. Zhang, Z.-g. Wen, 2008, p.1257). Production technology imported by foreign corporations are generally out of date, making energy consumption for industry and manufacturing between 25 and 90 percent higher compared to other developed countries (K.-m. Zhang, Z.-g. Wen, 2008, p.1257). China's energy consumption is the largest globally mainly because of the country's colossal production capacity. China is the world's most important emitter of carbon dioxide (Stanway, 2015), and one of the main contributor to climate change. The United States Environmental Protection Agency (EPA) reports that in 2011, China's CO2 emissions topped 28 percent of global emissions. Mitigating China's GHG emissions is central to mitigating global emissions (Liu, 2015). "The vast majority of particles come from things related to human activity. If you want to sum up where most of the particles come from, this is the conclusion. 60 percent of China's PM2.5 come from burning coal or oil" (Chai, 2015). In 2015, *Nature Climate Change*, reported that in recent years there has been a reduction in CO2 emissions world wide, in great part because of China's reduction in coal consumption. Experts have also identified a growing trend in renewable energy, both in China, and on a global scale (Jackson, et al, 2015).

On February 12th 2006, UBC released a media release with the title "Poor air quality kills 5.5 million worldwide annually." Dr Michael Brauer, at the University of British Columbia's School of Population and Public Health, reports that of the worlds 5.5 million annual deaths associated to air pollution, half of those are in China and India, and are major contributing factors to global environmental risks, including climate change (UBC Media Release, 2016). Most cities in China do not meet national health standards, with PM 2.5 levels quadrupling World Heath Organization (WHO) standards. These airborne particulates are extremely dangerous because they penetrate the lungs and bloodstream, leading to severe health issues, including respiratory problems and lung cancer (Millner, 2015). "There are figures of premature deaths caused by air pollution. Some studies say about a million a year, and others say 300,000 to 500,000 a year" (Tatlow, 2016).

Environmental destruction and human rights violations in China by corporate entities without appropriate liability is a direct result of the country's political

decentralization, endemic corruption, weak judiciary and institutional infirmities. A center/periphery with provincial independence style of governance was establish to encourage the country's economic liberalization in the late 1970s. This political structure has failed to protect the environment from corporate greed because endemic corruption has lead to weak environmental law enforcement capacity in an environment where the judiciary is flaccid. "In fact, local officials rarely heed Beijing's environmental mandates, preferring to concentrate their energies and resources on further advancing economic growth" (Economy, 2007, p.39). Some scholars attribute China's weak law enforcement capacity to local protectionism. Human rights abuses and environmental injustices are the real prices which account for the cheap export goods produced in China. Customers who purchases products *Made in China* should understand that they do not pay the real and full cost of their product, someone else pays the full price with the lost of their land, their health and their life.

1.2 China's Party-State corporatism, neoliberalism, and global disparity

"A Most Peculiar Man" is a feature film directed by Niu Han, You Wang is co-writer, and Wei Shen the producer. "Is there a way out? Is there another option besides this cold, fanatical social situation? That is the kind of existential problem that links us to the rest of the world" (Wei Shen, 2016). Director Niu Han describes his experimental film as a narrative unfolding on the outskirts of Beijing, "A Most Peculiar Man" is the story of a man who transforms into a geometric form for no apparent reason. The director uses the words, "Picasso painting", "bed," "trihedron," to refer to the shapes the protagonist transforms into. Niu Han describes the film as the metaphorical search for the meaning of life, unravelling the complexity of human connections, as well as a critical perspective on contemporary Chinese society. Wei Shen discusses the paradoxical dichotomy between traditional China, and the country's massive techno-industrialism, and goes on to describe the film project as a refreshing critic on contemporary chinese society by reflecting nothing less than its "Kafkaesque absurdity" (Biennale College - Cinema, 2015).

In the last few decades, China has witnessed economic development, extensive urbanization, enormous infrastructure construction, monumental industrialization, as well as the unrestrained and overexploitation of the country's natural resources. China is now the second largest economy in the world, as well as the world's largest energy consumer and carbon dioxide emitter (Hua-qing Wua, et al, 2014, p.163). China's 1.3 billion people represent 22 percent of the world's population, and only a few decades ago the country's "per capita GDP was less than US$300" (Zhang, Wen, 2008, p.1249). According to the World Bank in 2016, China's economic growth has raised 800 million people out of poverty since Deng Xiaoping's open-door economic policies. China sustained a GDP averaging 9.9 percent a year, the highest sustained economic growth in history (World Bank, 2016). Colossal industrialization and urbanization has facilitated the establishment of "a booming middle class" (Albert, Xu, 2016), craving consumption.

"China's engagement with international regulatory standards also involves consideration of neo-classical approaches to economic development that tend to give primacy to dynamics of accumulation and consumption" (Potter, 2013, p.92). For decades the Chinese leadership prioritized economic development over environmental sustainability (Lora-Wainwright, 2010, p.93). Today, economic development continues to be on CPC's

top priority list, as is evident in China's 13th Five-year Plan (2016-2020), which is tailored towards a sustained economic growth goal of 6.5 percent a year, aiming to double the country's 2010 "gross domestic product (GDP) and per capita income" (Reeves, He, 2015) by 2020. Deputy secretary of the Environmental Protection Pan Yue, as vice minister of China's State Environmental Protection Administration (SEPA) in 2005, warned: "The [economic] miracle will end soon because the environment can no longer keep pace" (Economy, 2007). China's ecological collapse is intricately interweaved to the failure of the global economic apparatus and trading legislative system to include the reality of the biophysical limits of the Earth. The causes of China's environmental collapse and high morbidity rates are linked to a global economic system of international trade that is embedded in greed, the tyrannic compulsions of oligarchs, the pulse of the neoliberal ideology, which includes the psychotic and vicious reality of never ending wars, overexploitation of natural resources, both narcissistic destruction and hyper-consumption patterns. The consumption of "80% of the world's resources are used by a minority of the world's population 17%" (Worldcentric.org, 2004-2017). "Neo-liberal market fundamentalism was always a political doctrine serving certain interests. It was never supported by economic theory" (Stiglitz, 2008). Just yesterday Trump unleashed the "Mother of all Bombs" (democracynow.org, April 14th 2017), perhaps the perfect title for a peaceful revolution.

1.3 Transnational pollution, climate change, and the survival of the human species

Climate change is the greatest threat humans have ever faced[18]. In the 2014 Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), the United Nations scientific body warns humanity of the imminent impacts of greenhouse gas (GHG) emissions. "Human security will be progressively threatened as the climate changes (robust evidence, high agreement)" (IPCC 2014 Report, p.758). In discussing the finding of the report, Rajendra Pachauri, IPCC chairman, declared that everybody on the planet will be impacted by climate change (Tompson, 2014). Climate scientists agree now that keeping global warming below 2 degrees Celsius (or 3.6°F) above pre-industrial temperatures, which is what was agreed upon by world governments at the 2009 Copenhagen Climate change Conference (COP 15), GHG emissions will have to be radically reduced on a global scale. "We have already emitted two thirds of the total carbon allocation to the atmosphere that would ensure at least a 66% chance of limiting global temperature increases to below 2 °C" (Jackson, el at, 2016, p.7). While GHG emissions will have to be reduced globally between 40 to 70 percent by 2050, coal-burning activities will have to be eradicated by 2050, and GHG emissions, by the end of the century (Thompson, 2014). In the spring of 2013, during Canadian environmental activist Tzeporah Berman's honorary degree acceptance speech at the University of British Columbia, in her address to her cohort and the general assembly, she recalled a moment of disbelief: "Five years ago, I sat in the audience at the United Nations Climate Change Conference in Bali, and the secretary general said: "We either reach an

[18] "Many climate and emissions milestones were reached over the past year. Fourteen of the fifteen hottest years on record have occurred since 2000, with 2015 on track to be the first year to top 1 °C average warming globally. This year, the Earth also topped 400 ppm in average monthly atmospheric CO2 concentration for the first time in at least 800,000 years." (Jackson, el at, 2016, p.7).

agreement to quickly reduce our dependence on fossil fuel or we doom humanity to oblivion" (Berman, 2013). "Climate change is undeniably an immediate, global threat and unless some radical moves are taken, the earth will be largely uninhabitable within 50 to 100 years" (Kin Chi, 2011, p.241).

In the article published in *Foreign Affairs,* "Choking on China, The Superpower That is Choking the World" written by Thomas N. Thompson*,* the journalist details: "The dangers of China's environmental degradation go well beyond the country's borders, as pollution threatens global health more than ever" (Thompson, 2013). "Made in China: Our Toxic, Imported Air Pollution" written by David Kirby for *Discover Magazine* issue April 2011*,* reveals that poisonous air particulates circumnavigate the planet. Director of the China Environment Forum at the Woodrow Wilson International Centre for Scholars, Jennifer Turner was quoted in this article. She said: "What's different about China is the scale and speed of pollution and environmental degradation," Turner says. "It's like nothing the world has ever seen" (Kirby, 2011). China now emits more mercury than the United States, India, and Europe combined." "About 42 per cent of Canada's mercury pollution now comes from China" (Sandborn, kyle, Jacobs, 2014). "China is dumping more plastics into the ocean than any other country" (Nordrum, 2015), a destructive trend that has been predicted to increase.

According to World Wildlife Fund, China is the most important polluter of the Pacific Ocean (Economy, 2007). "A group of researchers found that trans-Pacific air pollution is a hidden price of the goods sent abroad from China" (Wong, 2014), toxic airborne particulates cross the Pacific Ocean transported by powerful winds called "Westerlies," reaching the West coast of America in a few days (Richard, 2014). On April 15th 2014, in a special report for the Vancouver Sun written by Calvin Sandborn, Kyle Mcneill, and Rosie Jacobs, the authors disclose that "disturbing new studies have found that on some days, up to 25 per cent of Vancouver's air pollution already comes from China, largely from coal-burning plants." China is heavily polluting the west coast of North America[19].

The burning of coal releases toxic airborne particulates into the air, including both sulphur and nitrogen dioxide, which cause acid rain, and are poisonous to the human body. Acid rain falls on the ground as sulphuric and nitric acid. "Acid rain now affects about one-third of China's territory, including approximatively one-third of its farmland" (Sanders, Chen, 2007, p.21). Atmospheric particulates travel within the ASEAN countries from eastern China to Japan and South Korea[20], from Shenzhen to Hong Kong and Taiwan. Acid rain deposit from sulphur dioxide (SO_2) emissions, of which China is the world's leading contributor, causes destruction in both Japan and Korea (Reklev,

[19] "The U.S. Environmental Protection Agency estimates that on some days, 25 percent of the particulates in the atmosphere in Los Angeles originates form China. Scientists have also traced rising levels of mercury deposits on U.S soil back to coal-fired plants and cement factories in China. Mercury is poisonous to the human body, can cause serious health problems as well as birth defects. Reportedly, 25-40 percent of all mercury emissions in the world come from China" (Economy, 2007, p.44).

[20] "In South Korea, local media have called recent smog an "air raid", while in Japan, residents of Chiba prefecture have been told to stay inside as toxic fine-particle pollution blanketed parts of the region to the east of Tokyo."
Yoo, A., Ryall, J., South China Morning Post, November 6th 2013. Accessed April 5th 2017.
http://www.scmp.com/news/china/article/1348605/japan-south-korea-concerned-chinas-smog-will-affect-them

Macfie, 2014). Today, 10 percent of China's agricultural land is contaminated by heavy metals. China is now turning to other countries to grow food (Shiva, 2015). South Korea is also affected by sandstorms originating from China's worsening desertification and soil erosion (Van Rooij, 2011, p.583).

Figure 1

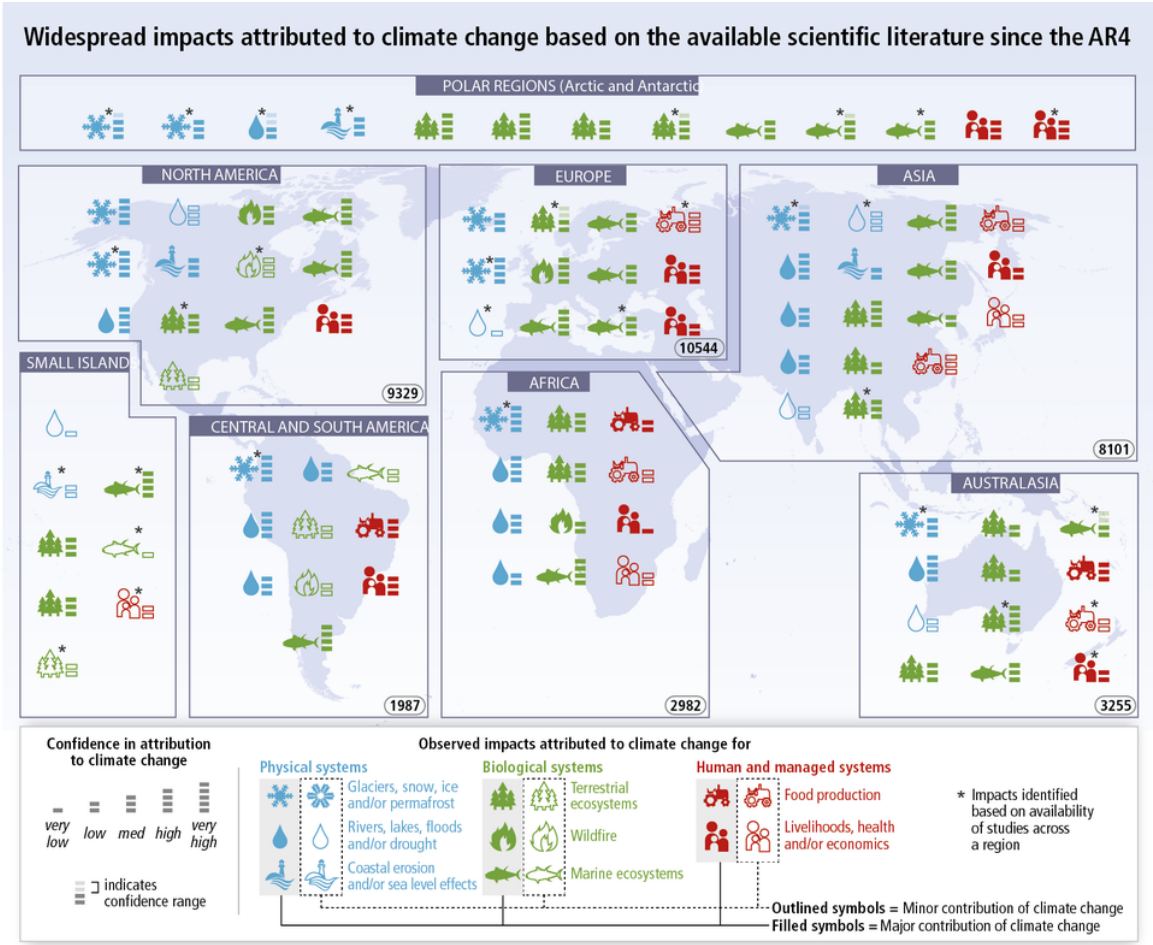

Figure SPM.8 from Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. [Core Writing Team, Pachauri, R.K. and Meyer, L. (eds.)]. IPCC, Geneva, Switzerland.

"The earth and its inhabitants are facing a crisis of an unprecedented scale. Survival no longer depends only upon political stability and the control of means of mass destruction; it is now also dependent upon our ability to restore a balanced biosphere and ecosystems. The list of environmental perils is familiar: ozone depletion, climate change, desertification, deforestation, air pollution and acidification, toxic waste, water pollution, exhaustion of non-renewable resources, loss of biodiversity, species extinction" (Taylor, 2008, p.1).

In *Talk to Al Jazeera,* January 12, 2013, in the episode *The Responsibility of Privilege,* Rosiland Jordan interviews world renown political dissident, linguist and author Noam Chomsky. In this interview Noam Chomsky warns humanity about the possible collapse of the financial system and human extinction: "Actually I should say there are much worse cases than systemic risks and bringing down the financial system. That's bad enough. But there is another externality that's much more severe. The destruction of the species. And that's not a joke! It's imminent that global warming will cause major catastrophe. You can argue about the details, but there is not much doubt that it's coming."

In Spring of 2013, I interviewed world renown scholar and political dissident Noam Chomsky at MIT in Cambridge on the topics of the human ecological crisis and possibility of human extinction. In this interview, Chomsky describes the world's current geopolitical trends, and acknowledges the severity of the human environmental crisis, the possibility of human extinction or rather of decent existence on Earth. Following is a brief overview of some parts of our conversation.

During our conversation Noam Chomsky explained the disturbing truth, and striking dichotomy, in the overall reactions in response to the urgency of the planetary environmental crisis. Chomsky explained that the most powerful countries in the world, Canada and the US, are accelerating the crisis. "Indigenous societies, first nations, aboriginal, tribal people, whatever you want to call them, in the countries where they are a large part of the population, and where they are actives, they are doing something about it, they are working hard to protect Mother Earth from destruction" (Chomsky, 2015). Professor Chomsky gave the example of Bolivia, the poorest country in South America, which has a large indigenous population, and has instituted rights of nature at the constitutional level. More recently, on March 20th 2017, a high court in the Uttarakhand, India, gave the Ganga and Yamuna Rivers, the same constitutional rights as a human being (Quartz India, 2017). This is a remarkable achievement, even if only in the ways in which it elevates the ecological consciousness globally. IN our conversation, Chomsky explained that Ecuador was trying to get help from the European Union to keep the country's oil in the ground. He explained that the same patterns of indigenous people leading the struggle to save the planet was happening everywhere. In Australia indigenous people are trying to protect the land from uranium and other mining activities. Professor Chomsky was involved in Southern Columbia, were gold mining is the worst that there is. "Gold mining is the most destructive of extractive industries, corporations are attacking poor communities with impunity, destroying their water sources, and ultimately there lives." Chomsky specifically referred to Canadian mining companies as a lethal growth around the world. He also discussed Magna Carta with me, the foundation of anglo american law. Half of Magna Carta is suppose to grant rights, and the other half is the charter of the forest, the common, nurtured and cultivated in commons, the source of foods, and fuel. He continued to say that woman's rights, and old images of the women collecting food in the forest go back to the bible, and that the charter of the forest was an effort to protect the commons from predatory actions by the King. He referred to the Robin hood legends evoking the mythology of this struggle. Chomsky said that the political move towards privatization whipped out the commons, and turned people in wage labourers. Now we have a concept of the tragedy of the common. He defined tragedy of the commons in western doctrine as the idea that things

need to be privatized to be protected, which is absolutely false he said. Chomsky explained that traditional societies exemplify the exact opposite of that, they live in balance with nature, and are stewardship of the natural world.

On December 5th 2016, for the 20th anniversary of Democracy Now!, in his address to the crowed, Noam Chomsky warned the public: "We should never overlook the fact that the threats that we now face are the most severe that have ever arisen in human history. They are literal threats to survival, nuclear war, environmental catastrophe. These are very urgent concerns, they cannot be delayed. They have to be face directly and soon if the human experiment is not to prove to be a disastrous failure" (democracynow.org, 2016). Human extinction by the end of this century is possible if war-mongering imperialism, nuclear armament, fossil fuel corporatocracy, agrochemical farming[21], zombie pharmacopeia-complex (modern pharmacology), the war on drugs and consciousness expending substances[22], mind-control, media manipulation, scientific suppression (Duck, 2015), attack on activists[23], indoctrinating narcissistic hyper-consumption patterns, and megalomaniac oligarchs carry on unabated.

[21] "According to a new report published by the United Nations Food and Agriculture Organization, the livestock sector generates more greenhouse gas emissions as measured in CO2 equivalent – 18 percent – than transport. It is also a major source of land and water degradation." "Livestock a major threat to environment," FAO, Newsroom, 2006. Accessed April 5th 2017. http://www.fao.org/Newsroom/en/news/2006/1000448/index.html

[22] Albert Hoffman is one of the most important chemist of our times. He ingested LSD-25 unintentionally on 16 April 1943. On that day during his bicycle ride home from his lab, Albert Hoffman experienced the beginning of which was in effect the first psychedelic journey on LSD-25. Three days later he ingests 250 microgram of LSD intentionally. For his 100th birthday, there was a international conference organized in which more than 2000 participants attended. I was one of them. Albert Hoffman said: "LSD is the most efficient and probably also the most valuable pharmacological therapeutic aids in the examinations of the human consciousness, getting off the ground worldwide." Albert Hoffman, The Spirit of Basel, www.lsd.info, Conference on the occasion of Hoffman's 100th birthday, January 13th to the 15th 2006, Basel Switzerland. Accessed April 5th 2017.

[23] "Natural Resources Minister Joe Oliver was circumspect when he spoke with this newspaper's editorial board in late October. He did not specifically endorse the pipeline, but said he would respect the regulatory process evaluating the project. Now, though, as that evaluation is beginning in B.C., he denounced "environmental and other radical groups" who "threaten to hijack our regulatory system to achieve their radical ideological agenda." Globe and Mail, January 10th, 2012. Accessed April 5th 2017. http://www.theglobeandmail.com/opinion/editorials/pipeline-rhetoric-is-a-radical-attack-on-due-process/article554332/

2. Methodology

This macro/micro policy-analysis unravels the complexity of China's environmental collapse and health crisis. This thesis explores the ways in which China's Party-State authoritarian iron grip, institutional corporatism, and bureaucratic infirmities, interlock with neoliberal market fundamentalism in the context of climate change, jeopardizing decent existence for future generations and the possibility of human extinction. This essay is a critical examination of the failing ideological doctrines in which is embedded the violent normalization of localized morbidity and ecological destruction in China, as it interrelates to global trade, and uncovers the geopolitical and biospheric links between the East and the West.

The legal writing style IRAC, an acronym for Issue, Rule, Analysis, and Conclusion, is employed for the analysis of the following three case studies. This analytical style of writing offers the topic a comprehensive methodology to unearth the complexities of China's environmental collapse, as the various intrigues, and political dynamics overlap and collide. Through this investigative process, this thesis deconstructs the ways in which the macro/micro policy elements, global/local, East, West, problematize each other. This thesis examines the policy and legislative environment, in China and internationally, contributing to the ongoing reality of environmental injustices and human rights abuses in China. The polemic lies in the illogical and dangerously decadent contradictions of the human enterprise, as we continue to abide to a failing global economic system which supports war-mongering elite oligarchs, while racing towards ecological destruction. For anyone in their right mind, right smack in the middle of the Trump era, it is simply hard to deny. By illustrating the overlapping ecological and political boundaries between China and the rest of the world, the unsustainable dimensions of the techno-industrial neoliberal apparatus are revealed, as well as the planetary implications of our zombie culture.

The three case studies synthesize the reality of China's environmental collapse, and health crisis. These case studies demonstrate the utter failure of the neoliberal doctrine as an ideology from a biophysical and human rights perspective. These specific examples illustrate the trends in China's political economy, weak judiciary, Party-State corporatism, and general policy trajectory, as well as the ways in which the country's political culture strangely interlocks with the neoliberal realm. The recent meeting between President Trump and Xi Jingping is a good example of the bewildering strangeness of it all. Finally, these case studies also show that the environmental crisis unfolding in China is symptomatic of a complex global systemic crisis, which requires immediate attention. China's environmental collapse and health crisis are urgent global issues.

In "China's Water Warriors," written by Andrew C Mertha, the author describes the characteristics and role of policy entrepreneurs, as being individuals deeply passionate about the ideologies they are involved in promulgating. Policy entrepreneurs work in NGOs, government offices, and often have ties to the media. The goal of these individuals is to actively participate in the framing of the political discourse for the purpose of influencing policy decision-making processes by organizing a target audience toward the goal of policy change. The policy entrepreneur arranges "information in a

manner that conforms to the structure of a good story" (Mertha, 2008, p.12)[24]. The special role and responsibility of the policy entrepreneur is that of shaping the contours of political discourses through good storytelling, which essentially represents the role of the media and primary motivation behind this research process and the documentary film production of "Dragon Tears." Investigative journalist Amy Goodman, executive director and broadcast journalist for the New York city independent news media platform *Democracy Now!,* in her address to the LaBiennale di Venezia All the World's Futures 2015 Creative Time Summit The Creative Time Summit: "The Curriculum" at the 56th Venice Biennale expressed the importance of independent media: "I believe that media can be the greatest force for peace on Earth. Instead, it is all too often wilded as a medium of war. And that's what we have to challenge" (Goodman, 2016).

"Dragon Tears: a film on the political ecology of planetary survival" is my first experiment in directing and producing a feature documentary. For the purpose of highlighting my experiences, challenges, and obstacles as a Canadian filmmaker directing a documentary film in China, I will be including my personal experiences, struggles, creative processes, and spiritual transformation, an auto-ethnographic dialectical critic, in the film. "When you hear someone speaking from their own experience, there is nothing more powerful" (Goodman, 2016). The narrative approach is an important dimension of the cinematographic language.

2.1 Policy context, Conceptual framework, and Thesis Road Map

This thesis is a macro/micro policy-analysis of localized morbidity[25], and ecological collapse in China, as it relates to the global economy. The analytical roadmap of this study is structured around the following elements in tandem: China's environmental collapse, and area-specific morbidity (ecological, human rights, health crisis); China's political landscape, Communist Party of China Party/State, the country's notoriously deficient enforcement capacity, weak juridic apparatus, and; China's political apparatus as it interlocks with the neoliberal machinery. Ecological collapse in China emerges as a result of convoluted political forces. To briefly recapitulate the policy context of China's ecological collapse, the major political dynamics involved are: the country's historical processes, China's political culture, global inequality, and the violence embedded in neoliberal extremism rooted in oligarchic fundamentalism or what the political theorist Sheldon Wolin coined inverted totalitarianism (Hedges, 2015). This thesis concludes with climate change adaptation measures and planetary ecological stewardship general guidelines. This conceptual framework facilitates the investigation of

[24] "China's Water Warriors, Citizen Action and Policy Change," synthesizes Andrew Mertha's two years of in situ field research in China. This research is a landmark analysis of China's water politics and political behaviour albeit the ever-changing fluidity and complex modalities of China's political landscape. Mertha, A., China's Water Warriors, Cornwell University Press, 2008.

[25] "Acute and chronic lead poisoning is occurring throughout China and is a major cause of childhood morbidity. The Chinese government's emphasis on industrial development and poverty reduction has, over the past three decades, decreased by 500 million the number of people surviving on less than one dollar per day, but has caused significant environmental degradation that threatens public health." Cohen, J.,E., Amon J.,J., "Lead poisoning in China: a health and human rights crisis," Health Human Rights. 2012 December 15th 14 (2), p.74-86. Abstract.

the systemic failure of the neoliberal doctrine, as well as the exciting new opportunities for the recreation of emerging localized sustainable cultures across the globe.

2.2 Research objectives, data source materials and potential challenges

My research objectives are to elucidate to the reality of China's environmental collapse, as well as the biospheric links, pollution, and toxic contamination between the East and the West. My contribution to this field of research is the inquisitive reporting process, including the production of a documentary film on the topic of China's environmental collapse in light of global causations, human and ecological implications. This research contributes to the literature by investigating the geopolitical and socioeconomic multidimensional continuum between China and the rest of the world. The more challenging aspect of this research has been the fact that environmental discourse in China is extremely politicized, and that this tension varies constantly.

The objective of this heuristic body of work is to creatively radicalize the political discourse, and fluidly energize public debates on ecological justice, climate change, the possibility of human extinction, cultural rebirth, and the evolution of human consciousness. This work aims at encouraging a social momentum towards a more ecological and spiritual perspective, understanding the contemporary ethical responsibilities of privilege, and establishes the core elements of politicized resistance. My three case studies are synthesized from secondary sources in preparation for the film production process. The cinematographic medium invites a potential large audience to engaged in the political process. Through the production of a documentary film, my goal is to create a new wave of political awareness, within the ocean of planetary activism, bringing light to these urgent socio-economic and political problems, including vicious oligopolistic neoliberal trends leading the world towards a global ecological catastrophe. At the forefront of this ecological and spiritual mess, my personal goal is to continue to learn, and try to understand the ways in which to resist oligopolistic war-mongering and ecologically destructive anthropogenic activities through the creation of art, films, media, writing, activism, and other forms of resistance, and critics.

The research objectives of this thesis are to demonstrate that China's environmental collapse is real, and that both China's, and international ecological resilience capacities are decreasing rapidly. Water sources are depleting in China, threatening the country's economic sustainability and the health of the Chinese population. This research aims at demonstrating the unsustainable dimensions of the techno-industrial neoliberal apparatus, as well as the negative human and ecological implications of a failing globalized ideological system. The polemic lies in the illogical and dangerously decadent contradictions of the human enterprise, as we continue to operate within an economic system supporting elite megalomaniac oligarchs, while racing towards planetary destruction.

3. The Chinese Communist Party (CCP or Party), and China's policy landscape

The disciplining texture and populous sentiments of the Cultural Revolution (1966-1976) are beautifully exemplified by contemporary chinese filmmaker's Chen Kaige in his 1993 masterpiece "Farewell My Concubine," a feature film portraying the dramatic life of orphans trained to become traditional chinese opera performers. The coercive cultural and economic militarization of the Cultural Revolution (1966-1976) ended with the death of Mao Zedong on September 6th 1976. Chen Kaige's 1984 film, "Yellow Earth," unfolds after the end of the Cultural Revolution, representing civil discontinuity with a radically different cultural undertone.

"Yellow Earth's portrayal of its rural setting bears the imprint of China's "Cultural Fever" (Wenhua re) of the 1980s, a movement that saw the enthusiastic embrace of Western ideas, philosophy and literature by Chinese urbanites after decades of cultural isolation under Mao. Alongside this interest in all things foreign, there was a wide-ranging, critical debate about Chinese culture following the perceived disaster of Maoism and the Cultural Revolution. These debates centred on the question of why China's attempts at achieving modernization had repeatedly failed" (Edwards, 2015).

In the cultural chaos of post-Mao China, China transitioned from a centrally planned economic system to a market economy with Deng Xiaoping's 1978 open-door economic policies. Provincial governance independence was establish to incentivize economic growth, in this way modifying the country's political trajectory and ecology permanently. Although the Communist Party of China (CPC) has continuously ruled since the establishment of the People's Republic of China (PRC) founded by Mao ZeDong in 1949, these historical events represent major ideological transitions for the CPC and the political culture of contemporary China.

China's first Constitution, the 1954 Constitution of the People's Republic of China, this is the pre-Cultural Revolution Communist Constitution, was designed as a foundational document for the political transition towards a socialist democratic dictatorship. The 1982 State constitution refers to China as a socialist democratic dictatorship[26]. According to the 1982 State Constitution, China's political system emerges from the political theories of Marxism-Leninism[27], Mao Zedong Thought, and Deng Xiaoping Theory. In 1989, in what is know as the June Fourth incident, with student lead demonstrations in the capital of Beijing as well as around the country, Deng

[26] "The people's democratic dictatorship led by the working class and based on the alliance of workers and peasants, which is in essence the dictatorship of the proletariat, has been consolidated and developed." Constitution of the People's Republic of China (Full text after amendment on March 14, 2004), Preamble http://www.npc.gov.cn/englishnpc/Constitution/2007-11/15/content_1372962.htm

[27] "True to its Leninist roots, the Chinese Communist Party dominates state and society in China. Its power rests on four pillars: its control of China's approximately 2.25 million person-strong military, the People's Liberation Army (PLA), its 1.5 million person-strong paramilitary force, the People's Armed Police, and its 800,000 other internal security forces; its control of personnel appointments across all political institutions, the military, state-owned corporations, and public institutions; its control of the media; and its control of the judiciary and the internal security apparatus. The Party's leadership role is referenced five times in the preamble to the PRC's 1982 constitution, but is not mentioned in any of the articles of the constitution, creating ambiguity about the legal basis for the Party's vast powers" (Congressional Research Service, p.3). Lawrence, S., V., Martin, M., F., "Understanding China's political system," Congressional Research Service, March 20, 2013. Accessed April 6th 2017. https://fas.org/sgp/crs/row/R41007.pdf

Xiaoping, China's leader, ordered the National Liberation Army to use force to evacuate protesters from Tiananmen Square. The decision to use force against protesters has "undermined the Party's legitimacy and severely damaged China's standing in the world" (Lawrence, Martin, 2013, p.13).

China's Party-State corporatism is embedded in its formal political culture, military power and rigid ideology. In the last few decades, the ideological transition towards neoliberal private property regime appears as a political paradigm shift mirroring fundamental changes from Maoist-Marxist Communist ideology of the Communist Party regimes' earlier stages. Capitalism with chinese characteristics is seemingly contradictory to the socialist collective land ownership system, which is at the heart of the constitutional mandate of the Party. These ideological changes were paralleled with the integration of positive law, major initiatives and developments in China's legal system. China has one of the most sophisticated environmental legislative body in Asia.

The Communist Party of China operates a unitary political system (Lawrence, Martin, 2013, p.10). At the nexus of the CPC political culture exists a network of dynamics including China's top-down bureaucracy[28], vertical and horizontal hierarchy, institutional ranking, the State Council (the Party-State), the National People's Congress (NPC), which is China's unicameral legislative body, a permanent organ ultimately controlled by the CPC, dictatorial judiciary, "environmental governance" (Xi, 2014, p.3) and the military. CPC uses propaganda for political indoctrination (Lawrence , Martin, 2013, p.6), and to promote cultural ideologies which legitimates the CPC's political power. More recently, the CPC has seen the emergence of a dominating Xi Jinping's personality cult (Nathan, 2016).

The People's Republic of China is under the dictatorship of the CPC, lead by seven core Politburo Standing Committee (PSC) members, "also known as the Political Bureau Standing Committee." China's formal political culture is embedded in the Party's highly hierarchical ranking bureaucratic structure. Of these seven leaders, "each man has a rank, from one to seven" (Lawrence, Martin, 2013, p.5). "Today, although the Party is committed to maintaining a permanent monopoly on power and is intolerant of those who question its right to rule, analysts consider the political system to be neither monolithic nor rigidly hierarchical." (Lawrence, Martin, 2013, p.1). CPC operates ranks among members of the PSC, and all other governmental, and non-governmental actors, and institutions. Four of the seven core PSC members are princelings, including "Communist Party General Secretary Xi Jinping, the son of revered early revolutionary Xi Zhongxun" (Lawrence, Martin, 2013, p.12).

[28] "During China's 11th five-year plan (2006-10), bureaucrats began to take substantial actions on environmental protection, making major investments in pollution control infrastructure and forcing the shutdown of thousands of outdated facilities and production lines. This was not accomplished through meaningful reform of a notoriously weak environmental law regime. Rather, Chinese authorities turned to cadre evaluation – the system for top-down bureaucratic personnel assessments -to set high-priority, quantitative environmental targets designed to mobilize governors, mayors and state-owned enterprise leaders in every corner of China's massive bureaucracy" (Wang, 2013, p.6).

3.1 China's political dictatorship and bureaucratic apparatus

China's political power is structured on a one-party rule. Scholars have identified the PRC's judiciary as a tool of the Party (Potter, 2013, Re-viewing China scholar), "law as a tool for governance—but not rule *of* law," (Lawrence, Martin, 2013, p.17) with a weak regulatory capacity (Wang, 2013), and a political system essentially embedded in corruption (Re-viewing China scholar, 2016). Lieberthal describes the political structure of the People's Republic of China as 'fragmented authoritarianism' (Lieberthal, Lampton, (eds), 1992, p.1). Lieberthal's theoretical instrument was explored by various scholars to further analyze China's political structure, including Andrew C Mertha in "China's Water Warriors."

As a result of Deng Xiaoping's open-door economic policies of 1978, the CPC endowed provincial governments with independence, decentralizing China's political power structure to encourage economic growth. This centralized/periphery political architecture has enabled catastrophic levels of environmental damages because of endemic corruption, and the prevalence of economic growth and industry at the expense of environmental protection and human rights, as well as local protectionism. To understand the notion of patrimonial sovereignty brings the conversation a little deeper into the concept of human rights and the country's environmental governance weaknesses.

"In contrast, norms of governance in China suggest a typology of patrimonial sovereignty, by which regulators are accountable primarily to their bureaucratic and political superiors, and as a result have few obligations to heed the subjects of rule in the process or substance of regulation. Under the dynamic of patrimonial sovereignty, political leaders and administrative agencies have responsibility for society but are not responsible to it. This helps to set an ideological context by which protection of individual human rights is relegated to secondary status, behind the primacy of the state" (Potter, 2006, p.391).

3.1.1 China's socialist democratic dictatorship pluralistic polity

China's socialist democratic dictatorship decentralized political climate has been favourable in many respects to the national pluralistic democratic deliberation on the topic of the environment. Under the umbrella of the Party/State, and through the dynamic ongoing negotiations of Environmental Non-Governmental Organizations (ENGO), International Non-Governmental Organizations (INGO), the Chinese and international media, as well as the increasing number of internet users, a democratic environmental movement has been taking shape. The strength of this movement is based on the fundamental belief in the human right to a safe environment, access to freshwater, air and food. These emerging voices function primarily because they operate within the limits of the PRC Party\State. China's water, air pollution crisis, and the growing national health concerns engendered by catastrophic pollution levels has increasingly motivated large numbers of protestors nationwide. The environmental problem is a genuine concern for the leadership, it represents a serious threat to social stability, and consequently to the Party/State's legitimacy (Shapiro, 2012, p.136).

This political platform has enabled ENGOs to become a key voice in the national environmental sustainability movement. The success of the ENGOs are that they operate under the authoritative structure of the PCR Party/State. The power of the ENGOs comes

from a form of political struggle that is non-confrontational, by reclaiming constitutional rights to demand environmental justice. This respect for authority when necessary, as well as the concept of natural justice, are advocated by "Greek philosopher Aristotle 2500 years ago" (Rolwing, 2004. p.300) in the 4th century BC: "In the first comprehensive treatise on advocacy [which can be said about nearly every work he wrote], Aristotle distinguishes between the written law, the rules governing a particular community, and the unwritten law, those equitable principles 'suppose to be acknowledged everywhere' (Rolwing, 2004. p.300).

ENGO's operate under the umbrella of the Party. Although ENGOs function under the political wing of the CPC's leadership, they are nevertheless influencing the political texture/reality of China. One of China's most powerful environmental advocates is Ma Jun, the director of the IPE, who has been working in collaboration with the Chinese leadership to promote water data transparency for many years now. Ma Jun gave a talk entitled "Environmental Challenges & China's Green Choice," at the Wilson Centre, on April 1st 2011, in which he emphasized the interconnection of western hyper-consumption patterns and China's water pollution crisis.

A growing number of student unions, ENGOs, INGOs, the media and an increasing number of internet users are significantly changing the reality of the political sphere in regards to environmental justice and human right in China. These actors are not being confrontational, but rather, working within the authoritarian boundaries. Part of their work is to provide environmental awareness to the public, through different platforms: education, legal support, online environmental health websites, blogs, etc. This dynamic process is also the nexus of ENGOs, INGOs, the green media and the internet. Chinese activists, lawyers, intellectuals, the common people, as well as the international community are engaging in a struggle to uphold the values of environmental justice in China. They are doing this by mobilizing, coming together to demand social justice, and upholding the CPC to the Constitution and well established body of environmental laws.

3.1.1.2 Media, NGOs, and Internet

"Twitter According to the popular netizen Michael Anti, Twitter is the most important political organizing force in China today" (Economy, 2011, p.4). The Chinese media has received more independence to cover environmental issues, allowing the opening for a more pluralistic political climate discourse beneficial to change. The CPC understands the importance of what needs to be a strategic collaboration with the media in order to really be able to promote environmental awareness throughout the country. ENGOs and INGOs have also had the ability to share sensitive scientific data about water and air quality in China. In the article "China has made strides in addressing air pollution, environmentalist says, " published in the *New York Times*, published on December 16th 2016, and written by Didi Kirsten Tatlow, Ma Jun's words are quoted: "We see huge progress in tracking pollution sources. Ten years ago, in 2006, when we first started collecting such information, we could only get about 2,500 records of violations a year. Today, it's more than 290,000" (Tatlow, 2016).

3.2 Provincial protectionism

A few years after the Cultural Revolution, China's leadership put forth a series of economic reforms, concurrently opening the country to the global market for the first time in history. Political authority was delegated to individual provinces. This move allowed local economies to develop rapidly. As CFR's Yanzhong Huang writes, from this decentralization of government authority emerged the "proliferation of township and village enterprises (TVEs)" (Albert, Xu, 2016). Regional governance often ignored environmental laws favoring economic growth over environmental protection. This trends continues today, even though China's central authorities have emphasized environmental protection as a national policy. Provincial agencies operate by horizontal preferential relationships. These political dynamics favor kinship and immediate superiors. With the support of local officials, an important number of factories continue to operate illegally, sometimes running at night, dumping coal powered industrial wastewater into nearby rivers and lakes, polluting the water, soil, and contaminating local food crops.

4. China's water/health crisis threatens the country's economic sustainability/political stability

A former prime minister, Wen Jiabao, once said water shortages threaten "the very survival of the Chinese nation" (*The Economist*, 2013). "Of particular concern is the fact that water scarcity has reached a critical threshold" (Morton, 2009, p.4). Extreme levels of water pollution in China have engendered biodiversity loss, adverse health effects, as well as significant economic losses (Qin, et al, 2006, p.2401). "A World Bank report from 1997 estimated the cost of air and water pollution in China to between 3.5% and 8% of GDP (World Bank 1997)" (J. Naustdalslid, 2014, p.304). China's water and air crisis threatens economic sustainability, political stability, as well as the legitimacy of the Party's model of governance. It has been estimated that "more than 300 million people rely on hazardous drinking water sources" (The Lancet, 2010, p.1115). In 2013, Human Watch reported no less than 300-500 protest daily. As Judith Shapiro reports in her book "China's Environmental Challenges," environmental mass protests have been estimated to "5000 a year (Ma, Tianjie 2008, 2009), with some reports putting the figure much higher" (Shapiro, 2012, p.9). "In the past few years, it has been estimated that more than 100,000 'mass incidents' (protests) have occurred in China, many of which are related to appropriation of land and environmental degradation" (Cohen, J. E., Amon, 2012, p.76). Environmental security, water, air, soil safety, are fundamental to the political stability of the CPC. China's international reputation as well as relentless public pressure has motivated the leadership to find solutions to the country's growing environmental crisis.

Economic growth of the last few decade has lead to the "irrational exploitation of water resources " (Qin, 2002: Le, 2010, p.662). The rapid increase of pollution-intensive anthropogenic activities has provoked China's lake eutrophication crisis (Liu, Qiu, 2007, p.781). China's ecological and health crisis, water scarcity, lake eutrophication epidemic, and the collapse of aqueous ecosystems, represent the country's most complex multifaceted policy challenges. Lake eutrophication is the most serious threat to China's economic sustainability. At the current pace, scholars have predicted that all urban lakes in China will be eutrophic or hyper-eutrophic by 2030 (Liu, Qiu, 2007, p.783). Public awareness of the eutrophication epidemic has increased.

4.1 Case study N.1: Hyper-Eutrophication of Lake Dianchi in Yunnan province, Southwestern China

This first case study brings us to the Yunnan-Guizhou Plateau of southwestern China. Lake Dianchi is the largest lake in Yunnan province, the sixth largest lake in China (Xiangcan, et al, 2006, p.159), and one of China's most polluted lakes. This case study epitomizes the proliferation of lake eutrophication across China. The scholarly article "Mini-review Water Eutrophication in China and combating strategies," written by Wei Liu and Rongliang Qiu, and published in *Journal of Chemical Technology and Biotechnology,* September 2007, is an analysis of the 'Three Lakes,' China's most polluted lakes, Lake Dianchi, Lake Taihu, and Lake Chaohu. They attribute the lakes severe pollution to "constantly increasing industrial wastewater and domestic sewage discharge concurrent with the rapid development of manufacturing and the expansion of cities."

Lake Dianchi is located south of the city of Kunming, which is the capital of Yunnan province. Lake Dianchi is Kunming's primary water source. The city suffers from water scarcity. The lake's water is also used for industrial and irrigation purposes (Huang et al, unknown date, p.1). The population of the Greater Kunming Metropolitan area is one of the world's ten fastest growing metropolitan area, and is expected to undergo an increase of 1.9 million from today's 2.6 million citizens (Trujillo, Parilla, 2015). Lake Dianchi has a total area of 297.9 km^2. Lake Dianchi basin, in which Kunming is located, covers an area of approximately 2920 km^2, much larger than the lake itself, and is "under the jurisdiction of the Municipality of Kunming" (Xiangcan, et al, 2006, p.163). Lake Dianchi is part of the Jinshajiang River system of the Yangtze River Basin (Liu, et al, 2016, p.40). The lake is separated by a dike in two distinct bodies of water. The northern part of the lake is called Caihao, is shallow and in a more advanced eutrophic state than the much larger and deeper southern part, which accounts for 96.7 percent of the entire lake and is called Waihai (Zhang, T, et al., 2014, p.1495). According to the 2012 SEPA's "China's Lakes Diminish: Report," most of lake Dianchi's biodiversity has disappeared. When compared to the number of plants and fish species living in Lake Dianchi in the 1950s, there is less than one fifth of that remaining biodiversity in the lake today[29].

4.1.1 What is eutrophication?

Anthropogenic activities accelerate the naturally slow processes of trophic stages in lakes. The five trophic stages are respectively: "ultra-oligotrophic, oligotrophic, mesotrophic, eutrophic and hyper-eutrophic" (Leira, et al, 2009, p.7). The ultra-oligotrophic and oligotrophic stages are characterized by a balanced ecosystems, thriving wildlife, rich biodiversity, water transparency, a diversity of submerged plants, dispersed growth of algae and a high concentration of diffuse oxygen in the water. Ultra-oligotrophic and oligotrophic freshwater lakes are healthy sources of drinking water. Polluted lakes are classified as eutrophic. Eutrophication is most common in shallow waters. A common method to measure trophic states is the computation of phosphorous, nitrogen, chlorophyll a, as well as water transparency. Lake water eutrophication "increases the productivity (or the rate of photosynthesis) of the aquatic ecosystem" (Qin B Q, Gao G, Zhu G W, et al., 2012, p.1). Accumulated excesses of phosphorous and nitrogen in the water from agrochemical waste, herbicides and pesticides, alters the biophysical properties of the lake water and engenders abnormal response in lake ecosystem (Le, et al, 2010, p.662). The increase levels of phosphorous and nitrogen in the water can engender abnormal response in phytoplankton (microscopic aquatic plants) biomass, subsequently causing degradation in water quality, which has a direct impact on biodiversity. Abnormal levels of plant nutrients in lakes cause the proliferation of blue-green algae commonly referred to as cyanobacterial bloom, impacting negatively water supply availability (Le, et al, 2010, p.662). Algae bloom in turn depletes oxygen in the lake, and oxygen depletion engenders biodiversity loss. This degeneration of the lake's biotic systems, and changes

[29] "Take the Dianchi Lake in Yunnan Province for example, scientists have found only 19 species of water plants according to the recent survey, while in the 1950s more than 100 water plants lived in the lake." China's Lakes Diminish: Report, SEPA, Ministry of Environmental Protection, The People's Republic of China. January 17th 2012. Accessed April 7th 2017.
http://english.sepa.gov.cn/News_service/media_news/201201/t20120117_222664.shtml

in chemical process "increases the productivity (or the rate of photosynthesis) of the aquatic ecosystem" (Qin B Q, Gao G, Zhu G W, et al., 2012, p.1). Due to the lack of oxygen in the water aquatic species and submerged plants disappear. Eutrophied lakes become inert. They are considered dead lakes.

Lake Dianchi's water is hyper-eutrophic[30]. In the 1950s, Lake Dianchi was oligotrophic. People use to enjoy swimming in it (Medilanski et al, 2006, p.355). Lake Dianchi drainage basin was a fertile landscape where farmers use to grow organic food. In the 1960s, lakes in China were mostly clear and a healthy source of drinking water. In the 1970s, the water quality of Lake Dianchi was grade III, the lowest grade for drinking water. Unfortunately with economic growth, urbanization and industrialization, "more than $200 \times 10_6$ m_3 of industrial wastewater and domestic sewage have been discharged into Dianchi Lake every year" (Liu, Qiu, 2007, p.782). Agrochemical synthetic fertilizers used in industrial horticulture has been a major contributor to water hyper-eutrophication of Lake Dianchi (Van Rooij, 2011, p.582). As a result, in the 1980s water quality in Lake Dianchi began to deteriorate and a decade later worsened significantly (Liu, Qiu, 2007, p.1). Today, the lake is hyper-eutrophic, fetid with frequent blue-green algae bloom between April and November each year (Qin et al., p.2). Algae bloom disrupts water supplies availability, causes water scarcity and costs billions of yuan (Le, et al., p.663). Until several decades ago Lake Dianchi had thriving small-scale fisheries (Scally, 2016).

4.1.2. China's environmental regulatory body

It wasn't until 1973, right after China held its first conference on the environment, that environmental governance really began in China. Since then, there has been tremendous efforts in the development of China's environmental regulatory and legislative body, as well as the establishment of environmental policies to solve the country's worsening water and air pollution crisis (Zhang, Wen, 2008. p.1250)[31]. Scholars have referred to China's environmental regulatory body as one of the most comprehensive in Asia. "The process of obtaining effective implementation of environmental laws is a process of 'environmental governance.'" Law, including environmental laws and other fields of law related to environmental law, is essential to frame, facilitate, and foster the major parties to correctly play their role"(Xi, 2014, p.3).

The Prevention and Control of Water Pollution Law of the People's Republic of China, "(Adopted at the Fifth Meeting of the Standing Committee of the Sixth National People's Congress and promulgated by Order No. 12 of the President of the People's Republic of China on May 11, 1984, and effective as of November 1, 1984)" (Ministry of Water Resources the Peoples Republic of China, 2017), and amended on May 15, 1996, is regarded by some scholars as China's most environmental law (Li, Liu, 2011). This

[30] "As a result, over the past 30 years its Class III water grade has declined to the more inferior Class V. Correspondingly, the state of eutrophication of Dianchi Lake has gone from eutrophic in the 1980s to seriously eutrophic in the 1990s and finally to hypereutrophic today" (Liu, Qiu, 2007, p.1).

[31] "In the early 1970s, China started to really take action to fight environmental pollution. When China held its first national conference on environmental protection in 1973, nearly all the major rivers faced deteriorating water quality conditions; river sections near cities and ground water supplies were considerably polluted (Zhang et al., 2002; many large cities were blanketed with choking air and smog; large tracts of farmland were degraded and quickly worsening; and the industrial and pesticide pollution had become especially serious. In light of these facts, China started its environmental protection with the primary emphasis placed on pollution control and prevention" (Zhang, Wen, 2008, p.1250).

was the first legislation designed to manage industrial pollution in China (Li, Liu, 2011). "This law includes all measures for the standard prevention and control of water pollution, the protection of drinking water, management of pollution accidents, violations of discharge standards and legal liability" (ECOLEX). This code of law regulates water protection, upgrades water monitoring strategies and imposes higher fees for industrial water pollution accidents (Li, Liu, 2011; ECOLEX). The Environmental Protection Law of the People's Republic of China was adopted on December 26, 1989. The Law of the People's Republic of China on the Promotion of Clean Production was adopted on June 29th 2002 and entered into force on January 1, 2003 (ECOLEX). These laws protect people from ecological hazard, as well as legally framing the development of China's socialist democratic dictatorship with Chinese characteristics.

In 1995 the Standing Committee of the National People's Congress recognized the ecological recovery of the 'Three Lakes' (Lu et al., p.1) as a national priority (Gao, Zhang, 2010). At the Fifth Plenary Session of the 14th CPC Central Committee, the State Council established that the restoration of the "Three Lakes" under the supervision of the central government would be a part of the 9th Five-Year Plan (FYP) (1996-2000). The 'Three Lakes' refer to China's largest and most eutrophic freshwater lakes, namely Lake Dianchi, Lake Taihu and Lake Chaohu. Lake Taihu and Lake Chaohu are both located in eastern China. They are the 3rd and the 5th largest lakes respectively (Liu, Qiu, 2007, p.783). This represents the beginning phase of policy instruments developed by the chinese government specifically targeted to mitigate China's water eutrophication crisis. Other core aspects of the 9th FYP were to eliminate poverty and establish China's transition into the second phase of modernization. The FYP is a Soviet inspired centralized economic planning system (Shapiro, 2012, p.vii). The first FYP was adopted in 1953-1957, four years after the establishment of the People's Republic of China by dictator founding father Mao ZeDong. The FYP was China's first medium-term socio-economic development strategy including long-term planning under a socialist market economy. The 12th FYP promotes a new wave of industrialization and urbanization (Wu et al., 2014, p.163).

The Circular Economy Promotion Law came into force on January 1st 2009 (ECOLEX). Although the Circular Economy Promotion Law was adopted on August 29th 2008 "at the 4th session of the Standing Committee of the 11th National People's Congress of the People's Republic of China," the concept of Circular Economy (CE) emerges in the 1990s in China, as a response to environmental degradation resulting from Deng Xiaoping's open-door economic policies established after the death of Mao Zedong (Su et al. 2013; Wan 2013: Naustdalslid, 2014, p.303). China is following the lead of Japan and Germany in "institutionalizing industrial recycling initiatives" (Moriguchi, 2007: Wu et al., 2014, p.164). CE was integrated in China's Five-Year Plan (2011-2015), and in this way, is the first country in the world to integrate CE in its national strategy (Mathews, Tan, 2011, p.438). The National Development and Reform Commission of China (NDRC) integrated CE into China's national strategic policy. The CE model has been established under the leadership of the NDRC with the aim of "promoting the development of the circular economy, improving the resource utilization efficiency, protecting and improving the environment and realizing sustainable development" (ECOLEX, 2017). China's legislative model for the CE was inspired by Japan's "Basic Law for Establishing a Sound Material-cycle Society passed in 2000, and the Closed

Substance Cycle and Waste Management Act enacted in 1996 in Germany" (Mathews, Tan, 2011, p.438).

"China's policy of developing an ecologically based CE" (Naustdalslid, 2014, p.303) is an intricate aspect of the leaderships vision for an 'ecological civilization,' grounded in resource conservation, bio-recycling, as well as integrating the emergence of Eco-industrial Parks (EIP) and industrial symbiosis according to Japanese environmental engineer Yuichi Moriguchi. "The EIP concept by the United Nations Environment Program was introduced in China in 1997 (Hashimoto et al., 2010; Shi et al., 2010)" (Yu, et al., 2014, p.339). The EIP alters the conventional economic mode of production from "resources-products-pollutions" into "resources-products regenerated resources" (Mathews, Tan, 2011: Wu et al., 2014, p.164). The EIP is based on the concept that enterprise can benefit from mutual "industrial symbiosis" (Yu, et al., 2014, p.340). The Circular Economy Promotion Law aims to institute rigorous authority on the sustainable usage and recycling of water by requiring enterprises and industrial operations to have advance water monitoring technologies in addition to water management and conservation strategies (China Water Risk, 2017). Eco-industrial parks are still at an early experimental stages, and it will take some time to make the necessary transitions. This is a complex policy process to implement.

"The literature on industrial ecology (IE) is concerned at the macro level with bringing the industrial economy and the environment—or the economy and its natural limits—into some form of harmony; at the micro level it is concerned with the identification and analysis of a wide variety of "eco-industrial initiatives" that reduce the energy and resource intensity of industrial activities, largely through converting wastes from one process into inputs to another industrial process" (Mathews, Tan, 2011, p.436).

The core concepts of the CE are fundamental in industrial ecology and ecological economics. These ecological principles are grounded in the integration of industrial processes with the limits of the Earth. The CE model is a bio-economic integrated system. It functions on sustainable water management, natural resources conservation, the reuse and recycling of waste. Eco-industrial parks are closed systems in which water, energy and industrial by-products are shared between local enterprises. Industrial inorganic waste by-products are transformed into inputs for other engineering systems (Dick van Beers, et al, 2007, p.56). These ecological symbiotic parks have emerged in Kalundborg in Denmark, Kwinana and Gladstone in Australia, Ulsan in Korea, Kawasaki in Japan, and all over China. In 1989, a plant manager called this process "industrial symbiosis," because of the similarity he perceived with nature (Kalundborg Symbiosis, 2017).

China's first legislation on the disclosure of information, Measures on Open Environmental Information (for Trial Implementation), came into force on May 1st 2008. "The Measures highlight the central government and Communist Party leadership's increased attention to environmental issues in recent years" (Congressional Commission on China, 2017). It makes public access to environmental pollution information mandatory and governmental disclosure time sensitive. This legislation establishes environmental legal rights, as well as transparency protocols for environmental protection agencies, government ministries, administrative divisions and enterprises (China Water Risk, 2017).

In May of 2009, a year after the measures where passed, China Dialogue published a transcript of a roundtable discussion on the topic of the implementation of the

measures. This roundtable was organized by China Dialogue in collaboration with Sohu.com, and the Natural Resources Defense Council (NRDC). Ma Jun was one of the experts invited to participate in the discussion. He explained that a year later none of the major polluters were made accountable and that this shows a serious problem (China Dialogue, 18th May 2008). Non-disclosure or secrecy, is an institutional problem, and a core tenet of China's formal political system, engrained in rigid tradition and ideology, as well as decades of institutionalized officialdom. Again, it will take some time to transition (China Dialogue, May 18th 2009). In the IPE's 2015-2016 Pollution Information Transparency Index (PITI), results show a trend in the expansion of information disclosure, "yet there is enormous potential for disclosure to expand on the basis of China's new Environmental Protection Law that is still waiting to be tapped" (2015-2016 PITI Report). In a May 22nd 2007 commentary for the Central People's Government website, Pan Yue as the SEPA Vice Minister explains the importance of transparency when it comes to the disclosure of environmental information. The public needs to be informed in order to take action. Pan Yue added that the worst polluters cover up their illegal activities and lack of transparency by classifying information as trade secret (Congressional-Executive Commission on China, 2017).

Interim Measures of Public Participation in Environmental Impact Assessments (EIA) was enacted on February 22nd 2006 (Ge, et al, 2009, p.4). The EAI is a civil society framework for the participation in environmental litigations. This is China's first legislation promoting public participation in environmental protection. Under the EIA there are disciplinary consequences for negligent officials, and fines established for offending investors (China Water Risk, 2017). There has been instances where enterprise fake public participation to fulfill EAI legal requirements. "Fake public participation violates Chinese law and undermines the credibility of project proposals," said Xie Xinyuan, Green Beagle" (IPEN, 2017). Green Beagle (GB), Nature University (NU), IPEN and Arnika, are Chinese NGOs actively involved in educating civil society on the ways in which to engage in environmental litigations. For this outreach, they collaborated to publish the "Action Manual for Public Participation in EIA."

Water Law of the People's Republic of China was adopted at the 24th Meeting of the Standing Committee of the Sixth National People's Congress on January 21, 1988, and revised at the 29th Meeting of the Standing Committee of the Ninth National Peoples Congress on August 29, 2002 (ECOLEX, 2017). It came into force on October 1st 2002. This legislation is centered on the sustainable management and protection of water, as well as the prevention and strategic response to water disasters. Soil and Water Conservation Law entered into force on June 1991, and amended in 2010, protects from irrational use of water and soil. China's policy environment, environmental regulatory and legislative body, have developed considerably since the country's open-door economic policies of the late 70s. Although China's environmental legislative body is comprehensive, the practice of environmental governance continues to suffer from bureaucratic structural failures and political infirmities. Obstacles to China's environmental governance includes the rigidity of China's authoritarian iron grip's formal political apparatus, and institutional fragmentation (vertical and horizontal), ineffective hierarchical officialdom and institutional ranking system, problematic cross institutional cooperation and legal enforcement capacities (Zhang et al, 2014, p.1493, *Abstract*).

Lake Dianchi has been referred to as a localized ecological catastrophe (Scally, 2016) . "This degradation impaired the lake's pristine aquatic animal and plant communities, drastically reduced its biological diversity and caused an ecological crisis of the entire ecosystem" (Liu, Wang, 2016, p.44). Eutrophication of lake Dianchi has caused major economic losses to local communities. "While commercial fisheries which have multiplied in the recent decades, contributing heavily to the eutrophication problem because of the excess nutrients contained in fish feed, small fisheries have almost completely collapsed" (Liu, Qiu, 2007, p.874). There has been various bio-remediation efforts as part of national and provincial attention to the rehabilitation of the lake without achieving desired results. These efforts include but are not limited too, sediment dredging projects, water flushing, and trees were planted. In the chinese language academic journal *Resources and Environment in the Yangtze Basin*, Vol. 21 No. 12, December 2012, there is an article written by Tan Liang, Liu Chunxue, Yang Shuping, Li Farong,"Assessment of the economic loss caused by water pollution of the Dianchi lake," in which lake Dianchi's economic lost for 2010 was determined to be 7.275 billion yuan by the Kunming Environmental Monitoring Center. Lake water eutrophication is one of the most important treats to economic sustainability in China (Le , et al, 2010, p.662).

Lake Dianchi drainage basin is the most economically developed region in Yunnan. This region is home to the leading horticulture industry and flower export base in Asia (SICAS, n.d.). The Kunming city Dounan village flower market is the largest wholesale flower market in China. This mushrooming multi-million dollar export industry, US$260 million (Canada-China Agriculture and Food Development Exchange Centre, n.d.), has lifted 20,000 chinese peasants out of poverty (Mackie, u.d.). The massive industrial production of local and imported breeds, includes roses, water lilies, orchids, daisies and carnations (Yang, 2013). The overuse and substantial discharge of agrochemical synthetic fertilizers employed in industrial floriculture have contributed heavily to the eutrophication process of Lake Dianchi. Agrochemical synthetic fertilizers are one of the three major non-point source pollution, with heavily contribute to a significantly large percentages of nitrogen and phosphorous run-offs. Run-offs leak through the soil, infiltrate the lake, and cause ecosystem instability (Liu, Qiu, 2007, pp.874). [32]The usage of agrochemical synthetic fertilizers undergo an increase of "more than 1.5 × 106 t each year" (Liu, Qiu, 2007, p.784).

In recent years new environmental regulations outlaw floriculture and agriculture on 27.8 thousand mu of land in the Lake Dianchi catchment. In 2009, new policies established through the Environment Protection Bureau of Kunming banned the operation of the most polluting industries which includes "papermaking, leather making, dyeing and printing, dyestuff, coke making, sulfur production, arsenic production, oil refinery, mercury production, electric plating, chemical fertilizers, chemical pesticides, asbestos, cement, glass, iron and steel, and power plants" (Liu, Wang, Zhang, Ni, 2015, p.3776).

Another major non-point source pollution to Lake Dianchi water eutrophication crisis is Kunming's dysfunctional residential wastewater treatments plants. Eco-efficiency engineering technologies to manage residential sewage is necessary. The

[32] "Research shows that 55 – 75% of the nitrogen and 75 – 90% of the phosphorus in fertilizers are left in the soil and subsequently get into the water environment by run-off.4 It is estimated that nearly 40% of the nitrogen and phosphorus in Dianchi Lake, 50% in Taihu Lake and an even higher proportion in Chaohu Lake are from such non-point source pollution" (Liu, Qiu, 2007, p.874).

wastewater treatment plants built for the Greater Kunming Metropolitan Area mostly in the 1990s, were so inefficient that one quarter of the wastewater was ever reaching the recycling plants (Medilanski, et al., 2006, p.355). Although the building of residential wastewater recycling plants has "increased substantially to 45% by the end of 2005," population growth and ongoing urbanization in the region contribute heavily to increase pollution (Liu, Qiu, 2007, p.783). This is an especially serious problem considering the fact that the population of Kunming Municipality is quickly expanding. In 2000, 70 percent of wastewater was still untreated in China[33]. "Construction of environmental infrastructure (e.g., municipal wastewater treatment plants, waste collection and disposal facilities, etc.) should be accelerated" (K.-m. Zhang, Z.-g. Wen, 2008, p. 1256).

The reductions of harmful fertilizers, transfer of agrochemical industries, the increase efficiency in sewage disposal treatments, are all key elements to the elimination of non-point source pollution from the catchment basin, and central to mitigation and prevention strategies for the recovery of Lake Dianchi. A transition to permaculture flower-growing practices, and the adoption of organic fertilizers, to adequately mitigate threats associated with agrochemical fertilizers and pesticides, will be vital to the health of the lake ecosystems and economic vitality of local enterprises.

"The prevention of the further eutrophication of lakes and the eventual recovery of the ecosystems of eutrophic water bodies are complicated and long-term systematic engineering tasks requiring the cooperation of many scientists and engineers in related fields such as ecology, biology, chemistry, environmental science and environmental engineering, along with the support of social, economic and legislative activities" (Liu, Qiu, 2007, pp.874).

Ecosystem recovery technologies have been carried out for over a decade with insufficient improvement (Liu, Qiu, 2007, p.785). [34]The Yunnan Research Institute of Environmental Sciences has come to the conclusion that only a comprehensive approach integrating legal administration, ecosystem recovery technology, as well as coordinated efforts between political constituencies will enable the ecological rehabilitation of Lake Dianchi. Solutions to these complex multifaceted problems require efficient collaboration between major actors, stakeholders, agencies, and institutions to effectively control non-point source pollution. Rehabilitating Lake Dianchi will require long-term strategic planning, creative and multi-disciplinary approaches.

Further policy research will contribute to the cultivation of the institutional framework vital to lake recovery strategies. It will be crucial to continue the process of investment in policy research on coordinated compliance in international trade, as well as strengthen China's institutional capacity to improve implementation of environmental policy, environmental compliance and enforcement capacity (Potter, 2009, p.678). Environmental protection requires transparency and the systematic enforcement of China's environmental legislature. Finally, as a result of three decades of national and

[33] "Until late 2005, 278 of the 660 cities in China did not have any wastewater treatment facilities, and more than half of all wastewater treatment plants in 30 large cities were running at less than 30% of treatment capacity. Some plants never even began operations after being constructed" (Liu, Qiu, 2007, p.783).

[34] "Over the last 14 years it has cost US$0.5 billion to deal with eutrophication problems in Dianchi Lake, but the results are still far from the anticipated outcome." (Liu, Qiu, 2007, p.785).

provincial pollution control policies, water management and remediation strategies, in the last few years the water quality of Lake Dianchi has slightly improved.

5. The mushrooming of cancer-villages

Cancer villages have mushroomed in every Chinese province with the exceptions of Qinghai. There are no cancer villages in the occupied province of Tibet (Shapiro, 2012, p.7). In these rural villages, also know as 'Aizheng Cun,' water, and air related diseases, as well as various forms of cancers have increasingly skyrocketed. Experts have mapped out a cancer village belt on China's eastern coast from the northern Province of Hebei to the southern island of Hainan. "The belt includes 396 cancer villages – 86.3 percent of the country's total – and 203 officially reported cancer villages – 84 percent of the country's total" (Liu, 2010, p.12).

The cancer villages phenomenon has developed mostly in rural regions where it can be difficult for the farming population to get organized and stand up to local State, enterprise and polluters (Simral, 2016, p.192). Since the 1990s, these poverty-stricken villages have developed into newly industrial zones, with the rapid proliferation of low-tech factories, and industrial operations that utilize outmoded technologies. Although the cancer village phenomenon was noticed for the first time in 1998, it wasn't until 2013, that the Ministry of Environmental Protection (MEP) released a list of cancer villages, and for the first time acknowledged their existence.

Cancer villages are characterized by localized high morbidity rates. The morbidity rate in cancer villages is above China's national average, and above the global average (Kaiman, 2013). In some cases, the cancer rates exceed the birth rate (Simral, 2016, p.192). Experts believe that the number of cancer villages is increasing (Guangwei, 2014). "There is no consensus on the extent of cancer villages in China due to lack of availability of official records and censorship. Health in China is a National Secret" (Simral, 2016, p.192). In "China's Growing Water Crisis," Elizabeth Economy reports that cancer is the leading cause of mortality in China. She explains that only recently have experts increasingly started linking cancer villages to water pollution[35].

"The success of the Opening and Reform policies in stimulating economic growth required extensive bilateral cooperation, which was fostered and encouraged by foreign governments, particularly the United States, which was in a position to fundamentally shape the nature of the trade relationships underpinning China's new economic model" (Currell, Han, 2017, p.20). This transformation was promoted by the U.S. government, endorsed by Wall Street, Washington, and favored U.S financial institutions. It was U.S. trade agreements backed by the International Monetary Fund and the World Bank, who established the economic framework to transfer polluting factories and outdated technologies to China. As a result of the rippling effects of the neoliberal doctrine and the last few decades of bilateral cooperation, low-tech factories using outdated technologies have multiplied in poverty-stricken rural China. After China joined the WTO, between 2000 and 2007, exports skyrocketed by 390 percent (Currell, Han, 2017, p.20).

[35] "Chinese scholars and activists have only recently begun to document the linkages between the country's growing pollution and its rising public health challenges. Cancer is now the No. 1 cause of death in China, and researchers have started to study in earnest the potential links to water pollution. In 2010, Lee Liu, a professor of Geography at Central Missouri State University, documented a total of 459 "cancer villages" throughout China, most often clustered around rivers with the worst grade of pollution. Some of these villages had cancer rates more than 17 times as high as the national average " (Economy, 2011).

Today China is home to some of the most polluting petrochemical industries and techno-industrial operations in the world. The most damaging industries include low-tech coal powered factories, the textile and dyeing industries, paper-making facilities, pharmaceutical drug manufacturers, steel mills, power plants, as well as industrial agriculture, aquacultures, which employ excessive amounts of antibiotics, steroids, agrochemical synthetic fertilizers, herbicides, and pesticides. Farmers are compelled to use chemical synthetic fertilizers for their competitive economic benefits. However, the runoff of these overused synthetic agrochemicals contributes heavily to water contamination. Toxic chemicals that are banned in most part of the world continue to be used in China.

As a result of western hegemony, globalization, and China's so-called economic progress, the Chinese population has experience intense human suffering[36]. "Already a decade ago, researchers stated that cancer deaths "have doubled since the 1970s, and are now the leading causes of mortality in rural China" (Wu et al. 1999, p.252). The most vulnerable are children, elderly, and those who live in abject poverty. Endemic corruption cause disempowered communities to suffer silently, as if China's environmental collapse and health crisis was an inevitable part of life.

The multilayered complexity of the phenomenon of cancer villages has been brought to light brilliantly by researcher Anna Lora-Wainwright who spent two years in rural Sichuan province interacting with citizens directly affected by the health crisis endemic to cancer villages. In her article "An Anthropology of 'Cancer Villages': villagers' perspectives and the politics of responsibility,"
published in the *Journal of Contemporary China*, Anna Lora-Wainwright explains the deeply rooted dynamics which make environmental performance and litigation in China extremely difficult, especially for impoverished communities. She describes specific accounts in which communities claiming environmental justice were faced with verbal intimidation and prison threats by local officials. To engage in litigation and demand environmental justice in China continues to be politically sensitive and even dangerous. CPC's decentralized political architecture, deep-rooted culture of Party-State secrecy, endemic institutional corruption and lack of judicial independence, are all contributing factors to the complexity of this ecological crisis.

China's worsening health crisis, the symptoms of which are exemplified in the cancer village phenomenon, has been reported with increasing frequency by the international media, as well as and by "well-known Chinese media sources, including Nanfang Dushi (Southern Metropolis) Daily, People's Daily, Xinjin (Beijing) News, China Youth Daily, CCTV, provincial Tvs and newspapers, and government and media Internet sites" (Liu, 2010, p.10). In 2010, *Environment: Science and Policy for Sustainable Development* published an article, "Cancer Villages: Made in China," by researcher Lee Liu. Liu explains that in April 2009 a Hong Kong publication, the *Fenghuang Zhoukan (Phoenix Weekly),* published a cover story on cancer villages which provoked intense responses from officials. "There is no know national ban on cancer-village reporting, though new cancer-village reports are rare after May 2009. There are

[36] "The five leading causes of cancer death in China today are lung, stomach, liver, esophagus, and colorectum cancer - the first of which can be linked to air pollution (and smoking), and the next three to water pollution" (Currell, Han, 2017, p.23).

reports that local government agencies and polluting factories threatened, harassed, and assaulted investigators and reporters" (Liu, 2017, p.10).

5.1 Case study N.2: Liukuaizhuang cancer-village, Tianjin municipality, Northeast

Liukuaizhuang village is located 75 miles south east of Beijing in Tianjin municipality (Yu, 2006). A few decades ago Liukuaizhuang was a rural landscape covered in rice and cotton fields (Lynch, 2005). Liukuaizhuang and neighboring Xiditou villages are typical new industrial zones on the Hai River in Northeast China. New industrial zones have undergone rapid economic developments over the last two decades. The villages are now home to pollution-intensive low-tech factories. Rubber factories, chemical industries, and paint plants poison the air and water (Economy, 2011, p.88). Poisonous chemicals exceeding national standards found in Liukuaizhuang's water consist of mercury, lead, sulfuric acid, hydroxybenzene, fluoride and bacteria (Lynch, 2005).

As a result of the rapid multiplication of pollution-intensive industrial, and manufacturing operations, excessive amounts of toxic chemicals have been released in Liukuaizhuang's water supply, and this has engendered the proliferation of various forms of cancers and related deaths in the local population (Lora-wainwright, 2010, p.82). The local population is suffering from "bone, lung, liver and breast cancers, while a handful of children are suffering from leukemia" (Yu, 2006). Bilateral joint ventures mushroomed in the frantic hysteria of cheap goods, "partly offsetting the stagnation of wage growth in the U.S. economy in this period" (Currell, Han, 2017, p.20). In 2008, after an escalation of cancer diagnostics, the water and air pollution crisis was reported by the local media, as well as cancer rates 30 times the national average. "The water is terrible," says Li Baoqi, 41, a veterinary medicine salesman. "Drinking this kind of water is basically like suicide" (Lynch, 2005). Those who could afford to leave the village moved away.

Savannah Cox, the managing editor of the online magazine *All That Is Interesting,* and author of "Chinese Cancer Villages Show The High Human Cost Of Industrialization" published online on January 22, 2015, brilliantly critics China's authoritarian administrations response to the national human ecological crisis. Cox accordingly explains that in 1998 when the Ministry of Environmental Protection first used the term "cancer villages," the officialdom was scandalized. This lead to the crisis being swept aside, and mostly ignored, until China's 2013 Five-Year Plan (2016-2020). Consequently, during this time period millions of people lost their lives (Cox, 2015).

"The plan outlined a crackdown on the use and production of 58 types of toxic chemicals; it criticized enterprises for inadequate pollution risk control. Ma Jun, author of China's Water Crises and probably China's most authoritative critic of national water policies, said the acknowledgement reflected greater environmental transparency"(Simral (eds), 2016, p.195).

There are several overlapping key issues encapsulated within the whole phenomenon of cancer villages contained within the notion of "biosociality" (Rabinow 1996)—the ways in which citizens engage with the local state, with the market-oriented economy, and with the type of development it entails" (Lora-Wainwright, 2013, p.92). Rabinow's conceptual topography allows for a rounder and more complex analysis, the treads of which will be intricately layered for a comprehensive overview of China's environmental policy challenges. Liu Mengqin and Fu Chen suggest that cancer villages

emerge as a result of overlapping forces including economic disparity, local protectionism and absence of environmental awareness, and they the phrase 'trade-off between development and poverty,' to describe the dynamic underlying the cancer village phenomenon (Lora-Wainwright, 2010, p.82). The complexity of the problem reveals itself by analyzing the key forces responsible for the growing crisis.

Throughout the 1990s, and specifically during its annual review of China's Most Favoured Nation (MFN) status, the U.S. government established U.S-China trade policies benefiting Wall Street multinational corporations at the expense of the poorest people on earth and the ecology of the Earth. A China's rising middle class offered new markets (Currell, Han, 2017, p.20). "China's environmental challenges are thus tied to domestic political structures, rapid economic growth, and an intense phase of globalization in which the entire planet is involved" (Shapiro, 2012, p.10).

Judith Shapiro correctly describes the environmental and human rights abuses associated with the global expansion of neoliberal capitalism as environmental racism and displaced environmental harm. Environmental displacement and environmental racism are interconnected to environmental justice advocacy. The crisis in ongoing in Liukuaizhuang because factories continue to operate illegally even after they have been shut down by the central authorities, as is often the case in China (Cocolacec, 2015). There is a political dichotomy between in centre-periphery relations, which is expressed by local protectionism and endemic corruption. The morphology of China's political system as it interacts with the global neoliberal apparatus enables massive environmental and human rights abuses.

Factories provide employment, which are key aspects of modernization and governance. Providing employment is meant to eradicate poverty as prescribed by China's national strategic economic development targets. There is a profound aberration in the neoliberal transnational trading system, and China's so called economic progress, as these political and economic forces are fueling unsustainable consumption patterns. The miserable deaths of the poorest communities on earth enables an unsustainable lifestyle for less than 20 percent of the world's population.

Social progress is inherently inclusive, creative, includes environmental protection, the respect of the limits of the Earth. As we begin deconstructing the moral failure underlying neoliberal oligarchic culture, we uncover its human and environmental costs. "When water resources are limited or contaminated, or where economic activity is unconstrained and inadequately regulated, serious social problems can arise. And in China, these factors have come together in a way that is leading to more severe and complex water challenges than in almost any other place on earth" (Gleick, 2009, p.79).

Due to the decentralization of the political architecture of China there is a major gap between national priorities and provincial practices. GDP growth continues to be a priority for officials who rely on provincial governments for their professional advancement, and therefore remain accountable to the political priorities of local officials rather than national environmental targets. From the *Hong Kong Law Journal* article, "Coordinating Corporate Governance and Corporate Social Responsibility," published in 2009, Dr Potter points out the environmental governance challenges of coordinating norms of corporate social responsibility (CSR) and corporate governance, which are in various ways related to those of coordinating norms of trade and human rights compliance (Potter, 2009, p.676).

"The continuation of rapid economic growth could result in insurmountable difficulties for energy security, air protection, and CO2 emission reductions (Li, 2003); but a large potential exists to mitigate carbon emissions-among others-in China in the form of energy efficiency improvements (with large co-benefits) and measures in the electricity sector (Detlef et al., 2003). To ensure that there is enough energy to meet the needs of economic growth and sustainable development more emphasis should be given to energy efficiency, renewable energy, and new technologies for both energy end-use and supply (Chen and Robin, 2000; Ni and Thomas, 2004)" (Zhang,Wen, 2008, p.1257).

In "China's environmental challenges" published in 2012, China environmental policy scholar Judith Shapiro points out that environmental law enforcement in China has immediate repercussions on the future of humanity and the planet as a whole. The "staggering human costs of development and the deeply uneven distribution of costs and benefits" (Lora-Wainwright, 2013) of the cancer-village phenomenon are fundamental human rights issues. It is important to keep in mind the transnational origins of the free market associated anthropogenic activities and oligopolistic trade policies which gave shape to this socio-political, economic and spiritual mess.

6. Human Rights on the Tibetan Plateau, trans-boundary water politics, mining, and climate change

The Qinghai-Tibetan Plateau, or Tibetan Plateau, is know as the 'roof of the world' because it has an average elevation of 4,500 meters above sea level with 95 peaks higher than 7000 meters into the troposphere (Hughes, 2011, p.981). The Tibetan Plateau covers a geographic area of 2.5 million square kilometres, which includes the Tibetan Autonomous Region (TAR) or Tibet, most of Qinghai, and certain areas in Sichuan, Gansu and Yunnan province in western China. The green vibrant grasslands and vast expanse of the Tibetan Plateau is the motherland of Tibetan nomads, Uyghur Muslims, Naxi Dongba, Drung people as well as many other fascinating indigenous ethnic minorities. In fact, three quarters of chinese ethnic minorities live in southwestern China.

As the water tower of Asia, the Tibetan Plateau is the source of Asia's major rivers, including the Yangtze, Yellow, Mekong, Salween, Brahmaputra, Indus and Ganges Rivers (Hughes, 2011, p.981). Making this region essential to water security for one billion people in China, India, Pakistan, and South-East Asian riparian countries. The Tibetan Plateau is an abundant source of untapped mineral reserves, fossil fuels, and natural resources. The Ministry of Land and Resources incentivizes China's top State-owned enterprises to build joint venture partnerships with foreign corporations in the extractive industries on the Tibetan Plateau (Tibet Net, 2005). Industrial mining activities destroy the natural environment. Gold mining is particularly damaging to water resources.

The Tibetan Plateau is exceptionally rich in biodiversity, one of the richest areas of biodiversity on Earth. This biodiversity is fragile. There are a number of endangered species in this region including the snow leopard. The Tibetan Plateau is composed of sensitive ecosystems that require ecological protection in the context of global warming temperatures mitigation efforts. The climate on the Tibetan Plateau has been linked to the global climate. Climate change and the warming of temperatures precipitate the melting of glaciers and the melting of glaciers have a direct impact on downstream river water flow. Environmental protection on the Tibetan Plateau is key to international mitigation efforts and adaptation strategies to combat global warming and climate change.

6.1 Environmental Injustice and harmful displacements

Scholars have used the phrase sinicization to describe the coercive assimilation of agro-pastoral nomadic Tibetan Buddhists into chinese mainstream society. The Dalai Lama has called it a cultural genocide (The Economist, 2016). This ongoing coercive assimilation certainly falls under the umbrella concept of environmental injustice, described by the Central European University Center for Environmental Policy and Law in 2007 as follows:

An environmental injustice exists when members of disadvantaged, ethnic, minority or other groups suffer disproportionately at the local, regional (sub-national), or national levels from environmental risks or hazards, and/or suffer disproportionately from violations of fundamental human rights as a result of environmental factors, and/or denied access to environmental investments, benefits, and/or natural resources, and/or are denied access to information; and/or participation in decision making; and /or access to justice in environment-related matters (Shapiro, 2012, pp138).

China's Great Western Development is a campaign launched by Jiang Zeming in June 1999 which targets economic development in Western China (Clarke, 2007, p. 323). The strategic targets of this policy are the integration of Western China into the global economy, to boost economic development through the construction of infrastructure, intentionally attracting foreign investments by promoting joint ventures in the extractive industries. One of the preeminent goals of this campaign is the reduction of economic inequality between China's developed rich coastal east with the country's underdeveloped western hinterland counterpart. Establishing 'ecological construction' projects on the Tibetan Plateau is another tenet of the soft policy, which has been described as 'amorphous,' by its critics to describe stakeholders varying agendas. In the name of development, as part of the Great Western Development campaign, ancestral nomadic grasslands have been seized by the chinese authorities and turned into nature reserves. For the establishment of the Three Headwaters Nature Reserve, in which the Canada-China join venture Dachang Gold Project property at the headwater of the Yellow River finds itself, potentially the largest untapped gold mine in Asia, local chinese authorities have forcibly displaced 90 percent of all existing nomads from their ancestral land for resettlement in Qinghai. "Human rights activist John Isom says Qinghai Province once had about 600,000 nomads (Voa News, 2009)." The article "China Intensifies Resettlement of Tibetan Nomads," published online on November 02, 2009, by an unknown author for in Voa News, describe the situation on the Tibetan Plateau very well.

This socio-political assimilation of an ethnic group by another is a violent colonial process of cultural racism. In this particular case, the Han chinese views itself as entitled to the ancestral land of Tibetan nomads. Through coercive force and military occupation the Han are imposing a new paradigm to the Tibetans. Cultural coercion is ethically reprehensible. The nomadic lifestyle has been blamed for the deterioration of the grasslands. They are excluded from the geopolitics of their homeland. This type of societal assimilation is highly problematic for a number of different reasons, the most immediate of which are the desecration of human and environmental rights, threats to fragile ecosystems and rich biodiversity of the Tibetan Plateau, destruction of Buddhist religious sacred sites, and therefore represents a key dimension of this analysis.

6.1.1 Ecological Stewardship Mythos

The powerful ontological paradigm of Buddhist Tibetan nomadic life is non-materialistic. From this metaphysical space emerges the lotus of ecological consciousness. Nomadic life flows with the dynamic rhythm of seasons. Traditionally, nomads perform intricate patterns with their herd within the territories they occupy. Tibetan Buddhists have use surface minerals in a sustainable fashion for various purposes, among others for trading and religious paraphernalia, for thousands of years. Digging into the earth to extract minerals is discouraged in Tibetan Buddhism because Earth's body is held sacred. This ontological paradigm is at the heart of Buddhist religious mysticism. There exists a symbolic ontological dichotomy between the ways in which the Tibetan plateau has been reckoned repetitively by the chinese government as wasteland unless mined. This is in sharp contrast with the religious Buddhist beliefs of Tibet's mountains as being the abode of deities, and the scientific fact that the third pole is crucial to the planets global climate

(Lafitte, 2013, p.30). For tibetans, the vast expanse is a sacred landscape, a locus to dance, perform religious rituals, pray and meditate.

The whimsical reverence for nature embodied in Buddhist religious ontological symbolism functions as ecological stewardship mythos. Dr William Rees, former director of the University of British Columbia's School of Community and Regional Planning in Vancouver, the originator of ecological footprint analysis, discusses the key function of myths. Dr Rees explains that myths exist in every culture as a 'social construction of reality' (Rees, 2007, p.8). Buddhism mythologizes earth stewardship, as in the wildly poetic example of the spiritual belief in the sacredness of lakes and mountains as divine dwellings or supernatural sanctuaries. The sharp symbolic contrast within these phenomenological relationships is consumed through each individual actors interactions with the wilderness, useless unless exploited versus nature as sacred. As conscious living beings we have the responsibility to protect that which is sacred.

When interviewed about the connection between the people and the land, one Tibetan told Tibet Watch: "Tibetans do not learn the value of the earth through science but through our religion and the way our ancestors protected our land over thousands of years. They saved the land for the next generation to enjoy as pure land, the beauty of nature and to have a clean and peaceful environment to live in. Therefore destruction of the land, the mining of sacred mountains and holy lakes, are more than pollution and destruction of the environment. It is a violation of our tradition, religious beliefs and the destruction of our forefathers' legacy" (Tibet Watch, 2015, p.2).

6.2 Case study N.3: The Dachang Gold Project: Gold Mining in Yushu on the Tibetan Plateau

This case study is of particular interest to me as a Canadian environmental and human rights activist because the Dachang Gold Project is a Canadian-China joint-venture, 87 percent Inter-Citic Minerals Inc., and 13 percent owned by the Qinghai Geological Survey Institute (QGSI). The Dachang Gold Project is a 279 km property located in the Wetland Conservation Subareas of the Jiang Yuan Three Rivers Headwaters Nature Reserve (SNNR) at the headwaters of the Yellow River (Machu in Tibetan) in Qumalai County, (Chumarleb in Tibetan), in Yushu Tibet Autonomous Prefecture (Yushu TAP; Jyekundo TAP in Tibetan). SNNR was established in 2000 to protect the headwaters of Asia's major rivers, the Yellow, Yangtze and Mekong Rivers. The Dachang gold mine is one of the richest gold mine in Asia, with an estimate of 300 tones of untapped gold (Els, 2011).

In 2006, the State Administration of Industry and Commerce of the People's Republic of China ("SAIC") granted Inter-Citic Minerals Inc., a federally incorporate Canadian public company listed on the Toronto Stock Exchange (TSE), a permit allowing Inter-Citic Minerals Inc. access to the Dachang gold mine until December 2033. In this last case study, the ecological and socio-political consequences of the harmful displacement of three hundred thousand nomads from their ancestral pasturelands in Yuegu Zonglie (Tibetan translates as Yos gi slang leb chu, ཡོས་གི་སྐྱང་ལེབ་ཆུ་) in wetland conservation subarea of the Jiang Yuan Three Rivers Headwaters Nature Reserve, in Qinghai province (Amdo in Tibetan) on the northeast of the Tibetan Plateau in western China is analysed. This investigation scrutinizes the legality of the Dachang Gold Project

and associated human rights violations under international law, analytically criticizes China's authoritarian central polices of green development by denouncing the endemic cultural racism towards Tibetans, the harmful displacements and coercive societal assimilation of nomads, with an emphasizes on immolations and the negative ecological impacts of gold mining activities on water. Lastly, this analysis integrates patterns of environmental destruction identified with gold extraction in the context of the immediate impacts of warming temperatures and the acceleration of the melting of glaciers, global climate change adaptation and mitigation measures.

There are about 200 nature reserves in China, SNNR is the largest (Tibet Watch, 2015, p.20). Yushu Autonomous Prefecture has been entirely integrated into the SNNR, the most controversial of the 70 nature reserves established by the chinese government between 1980 and 2003 on the Tibetan Plateau (http://www.meltdownintibet.com/, 2017). Some nature reserves in China exist only on paper (Shapiro, 2012). The nebulous characteristics of the soft policies established by the central authorities have fostered the policy environment to guarantee the mega-profiting of Chinese state-owned, joint ventures, and foreign corporations on the Tibetan Plateau at the expense of the environment and the human rights of the Tibetans. Canadian gold mining companies have a legacy in South America and Africa of destroying indigenous communities water resources. Canadian mining corporations are a lethal growth around the world (Chomsky, 2013).

6.2.1 China's Great Western Development, infrastructure building, and foreign direct investments

China's Great Western Development establishes the policy framework to weave the Tibetan Plateau into the global economy. One of the core tenets of this campaign aims at reducing the economic interprovincial disparity, especially between the costal east, and the hinterlands of western China. In 2000, the west was defined by the central government as comprising the Qinghai-Tibetan Plateau, Shaanxi and Guizhou provinces, Chongqing Municipality, the autonomous regions of Ningxia, Xinjiang, Inner Mongolia and Guangxi (Goodman 2004). The building of infrastructure has been crucial to the program to facilitate transportation related to extractive industries on the Tibetan Plateau. Infrastructure building is necessary to attract foreign investments, central to the economic growth of the region. Canadian corporations have formed joint ventures with China's top state-owned enterprises to exploit the rich reserves of untapped minerals and raw materials, like copper, gold, silver, coal, oil, gas, and water. Raw materials like lithium and chromium are abundant in Tibet, and increasingly used in modern day life objects like smart phones (Tibet Watch, 2015, p.5).

6.2.2 Eco-Governance Doctrine

The second tenet of China's Great Western Development campaign is based in the doctrine of eco-governance and incorporates the concept of 'ecological construction.' Construed as green governance, this central policy has been designed for the benefit of China's most powerful state-owned enterprises, which have deeply entrenched ties with the Party-State. In order to boost the country's more recent stagnant economic trends, and in an effort to invest large amounts of money into China's economy, the CPC is granting state-owned and foreign corporations mining access to the wildest and most

pristine ecosystems on earth. The aim is to significantly increase GDP growth to an unprecedented goal of 6.5 percent growth rate per year by 2020 (Elk, 2015). There is an inherent contradiction between the goal of environmental sustainability and increasing economic growth.

6.2.3. China's 13th Five-Year Plan (2016-2020)

In tandem, at the Fifth Plenary Session of the 18th Central Committee of the Communist Party of China, China's 13th Five-Year Plan (2016-2020) was outlined. The 12th Five-Year Plan which integrated elements of sustainability in the manufacturing process, dam building to harness hydropower, the development and building of nuclear plants, was China's greenest medium-long strategic plan according to some policymakers (Shapiro, 2012, pp63). The 13th Five-Year Plan delineates China's focus for the next five years (Jianfeng, 2015). The top priorities include the establishment of a socialist society with chinese characteristic to be achieved through strategic policies focused on economic growth, alleviation of poverty and ecological conservation. The characteristic of these strategies are characterized by innovation, applied coordination, openness in the policy process, collaboration, and sustainable development.

The use of renewable energy, energy conservation and the establishment of a low carbon economy are core aspects of eco-governance under the 13th Five-Year Plan (CCTV, 2015). And although the 13th Five-Year Plan delineates immediate priorities as consisting of establishing a more democratic rule of law, additional independence for research institutions and universities, a special focus on food security, water protection, environmental conservation, the plan reiterates the decentralization of China's technocratic bureaucracy, which remains at the core of China's endemic corruption, weak environmental law enforcement and environmental degradation. The 13th Five-Year Plan establishes the groundwork for the building of a modern military with chinese characteristic by 2020 (An, 2015).

To justify the displacement of Tibetan nomads from their motherland for the establishment of nature reserves, the tactic of the chinese government has been to blame nomads for the deterioration of the pastoral grasslands environment on the plateau, even though the scientific community has brought forth evidence of the importance of nomadic herds pattern for the regions ecosystem health. Nomads have textured the landscape of the roof of the world, living in balance with their environment and acting as pastoral stewards by rooming the landscape with their herd in a sustainable fashion for millennia. As a result of this unbalanced power dynamic and environmental injustices, local communities become scapegoats for environmental degradation at the transnational level, while the government manoeuvres to exploit the regions natural resources. Once nomadic communities are displaced, the government develops economic structures to enable growth, the building of infrastructure in remote areas is followed by exploitation of natural resources, dam building, extractive industries, and more recently the rush to bottle the Tibetan Plateau's water.

The scientific fact is that the deterioration of ancestral pastoral grasslands results from climate change and the quickly intensifying pollution associated with extractive activities including mining and transportation. The forced resettlement of " 2 million people - more than two-thirds of the entire population of the TAR - were moved into new houses or rebuilt their own houses between 2006 and 2012" (Tibet Watch, 2015, p.4), for

the establishment of nature reserves, China's ongoing destructive trends in ecological construction. This process has been done without cultural sensitivity or environmental consciousness. This represents major affront to human rights and is an ecological disaster. China is avoiding the ratification of the International Covenant on Civil and Political Rights, which China signed on 5 October 1998. With the current situation on the Tibetan Plateau, China would be violating "Article 1. All peoples have the right of self-determination. By virtue of that right they freely determine their political status and freely pursue their economic, social and cultural development."

James J. Moore, Inter-Citic President & CEO, announced in a Press Release on August 9, 2006, that the 27-year license granted by the State Administration of Industry and Commerce of the People's Republic of China , for gold extraction in Yushu Autonomous Tibetan Prefecture in southwestern Qinghai province, is the longest business permit ever granted to a foreign mining company. Minerals cluster nearby rivers. In this case, the gold reserve is located at the headwaters of the Yellow River. Gold mining extractive industries pollutes heavily the environment, and is water-intensive. In their March 10th 2004 technical report, Inter-citic acknowledged that the Dachang Gold Project was near an ecologically sensitive area at the source of the Yellow River. However, in their March 2009 report, the Inter-Citic property was mapped outside the boundaries of the Sanjiangyuan National Nature Reserve. So, what happened?

6.2.4 Ties to state

Inter-Citic's Dachang Gold Project China Joint-Venture Company has deep roots with the CPC Party-State. Larger mining companies in China are either owned by the Party-State or part of a network which has close channels to the State. The corporation has well established ties with one of China's top State-owned enterprise Minmetals International Non-ferrous Metals Trading Company, with whom it worked in close partnership in a previous rare-earths joint venture. The Party-State has recognized Minmetals International as a vital part of China's economy. Inter-Citic Minerals Inc. is one of several Canadian mining companies involved in extractive industries on the Tibetan Plateau, a few of these corporations headquarters are based in Vancouver. Seven of these extractive corporations are Canadian and two British. This Canadian-British corporate cluster on the Tibetan Plateau should be a red flag to anyone with an inquisitive and critical mind, and of interest to all Canadians concerned in human rights.

The Dachang concession is in fact located at the source of the Yellow River which is the exact area that the SNNR was establish to protect. The border of the SNNR was effectively modified to accommodate gold mining activities. Modifications (where they official?) to the periphery of SNNR occurred conveniently after Inter-Citics March 2004 technical report and before the State Council authorized the Sanjiangyuan Nature Reserve Environmental and Development Plan on January 26 2005 (tibet.org). The State Council acts as the technocratic apparatus of the country (Shapiro, 2012, p.60). It has been reported that in order to engage in illegal activities, fake project approvals documents from the central government have been issued. Has it been done in this case? This kind of ongoing endemic corruption is highly problematic and correlates with China's judicial instability.

"While significant parts of Inter-Citic's exploration site were intended to be in the SNNR in 2004, by 2005 the boundaries were redrawn so exploration and mining could go

ahead" (meltdownintibet.com). With these facts and this evidence in mind, it seems highly likely that the Nature Reserve buffer zones are regions rich in minerals and other natural resources explicitly set aside for natural resource exploitation as nature reserves are established for the private profits of exclusive state-owned corporations at the expense of Tibetan nomads. As such, this Great Western Development soft policy environment incentivizes provincial authorities to endorse the construction of local infrastructure and green development projects as part of their ecological construction strategy, without engaging in any form of communication or dialogue with local communities directly impacted by these projects. In most case, local communities are completely opposed to large-scale mining projects. The extractive activities are done without sensitivity to spiritual significance or environmental protection. "Majority of Tibetan protests against environmental destruction has occurred in the SNNR region, thus supporting local Tibetans' contention that Chinese miners in collusion with local authorities are engaging in illegal mining activities in environmentally protected area" (tchrd.org).

There has been strong resistance to this project and other mining projects in Yushu by the local Tibetan community. Environmental destruction is one of the main reasons for Tibetan immolations. In the global efforts to combat climate change, the establishment of nature reserves gives the international appearance of environmental conservation projects, as well as providing China with carbon credits, reaffirming its commitments to mitigating climate change. The destruction of the environment which has provoked a wave of Tibetan immolations on the plateau is a disturbing living expression of the ongoing cultural coercion, human rights and environmental injustices unfolding on the Tibetan Plateau.

6.2.5 Nomadic resettlement

"Discourses of environmentally sustainable development focus their 'investigative lens on rural peoples and environments in which they inevitably find degradation, mismanagement, poverty and backwardness' which must then be fixed through new codes of behavior that are mapped onto particular units of space (ibid.:183). In this way 'environmentally sustainable development' becomes a new technology of government" (Yeh, 2005, p.14).

As part of China's eco-governance ideology, ten of thousands of pastoral nomads have been resettled. This harmful displacement has been justified by chinese central authorities as national strategic efforts to engage in ecological construction. Xinhua, the mainstream chinese media, reported forced nomadic resettlements as follows: "China named Sanjiangyuang a nature reserve in 2005. About 100,000 herders left the grassland completely around that time and another 700,000 reduced their herds to help restore the grassland." In this case specifically, SNNR has been executed for the protection of ecosystems at the source of the Yellow River in Yuegu Zonglie. The chinese government has blamed nomadic herders and animal grazing for grassland degradation on the Tibetan Plateau, although experts have demonstrated scientifically that herds movement on the territory facilitates the protection of the ecology, with one beneficial characteristic being the alleviation of the impacts of warming temperatures. "Traditional Tibetan farming techniques have protected the grasslands for hundreds of years" (Tibet Watch Thematic Report, 2015, p.4).

The chinese authoritarian paradigm fails to recognize grassland pastoralism as the sophisticated earth stewardship lifestyle that it actually is. "While often ridiculed as primitive or even 'incomplete' by outsiders, [nomadism] is in fact a highly sophisticated adaptation for exploiting energy captured in the grasslands of the region" (R. Merkle, 2000: Norbu 2012). China is missing green development opportunities.

"In the end, protecting China's beleaguered environment will require the government to reach beyond its comfort zone and confront the limits of its economic and political model. It will require the courage of the central leadership to face down vested interests in the state and industry that oppose the creation of impartial administrative and judicial institutions to regulate pollution. It will also require the good sense to allow society the genuine freedom to act as environmental watchdog without fear of repercussion" (Rooij, Wang, 2014).

True cooperation with indigenous communities, and an integrative approach to traditional knowledge for the establishment of economic sustainability, ecological protection, environmental and human rights is mandatory. China has to address the systemic failure of its political structure and guarantee an independent judiciary and proper enforcement of the rule of law. The business as usual economic paradigm based on an outdated economic model of unrestrained natural resource extraction with no conscious regards for the limits of the earth may not be sustainable for China and the rest of humanity much longer.

As a result of ecological construction, globalization, the resettlement of nomads, the rush to extract gold and other minerals, the promotion of a consumer society and urban development, the pastoral nomadism subsistence lifestyle is on the brink of extinction, with 90 percent of nomads resettled. Forced into modern dwellings, which are basically shacks, nomads become social outcasts and are left destitute. Nomadic pastoralism is a sustainable lifestyle that has evolved over millennia, and because of its environmental sustainable characteristic should be protected from globalization and resource exploitation. In view of the current climate challenges associated with global warming, the chinese government would benefit from collaborating with nomads to establish climate change mitigation and adaptation measures which take into account traditional knowledge.

6.2.6. Immolations

The chinese government has established nature reserves to allegedly protect ecosystem, wildlife and natural resources on the Tibetan Plateau, however based on the analysis of secondary sources the facts demonstrate fraudulent cover up of extractive industries operations in ecologically sensitive regions. These projects are systematically opposed by local Tibetan communities. Many Tibetan have gone as far as immolating themselves in direct response to the destruction of their land. Self-immolation has been documented by Tibetan writer Tsering Woeser, and Thubten Samphel, Director of the Tibet Policy Institute, as directly linked to ecological destruction on the Tibetan Plateau. Samphel adds an emphasis on the environmental destruction done specifically by mining. According to Tibet Watch, anti-mining protests have been documented in August 2013 in Dzatoe, and the same month in 2014 in Nangchen County, Yushu TAP (Tibet Watch 2015, p.2).

Since 2009 over 130 Tibetans have set themselves on fire in protest against China's occupation and repressive policies in Tibet. Many of the self-immolations have taken place in regions that have also experienced environmental exploitation. In an article about self-immolations, Tibetan writer Tsering Woeser lists the "destruction of the environment on the Tibetan plateau" as one of the key grievances behind the protests. Similarly, Thubten Samphel, Director of the Tibet Policy Institute, notes that "rampant mining and the damage done to the environment have driven several Tibetans to register their protest by setting themselves ablaze" (Tibet Watch, 2015, p.12).

6.2.6. Tibet's influence on global climate

Scientists have described the Tibetan Plateau as a third pole in global climate regulation, as temperatures on the roof of the world have a direct influence on the Asian monsoon and climates as far as North America, East Africa and Europe (UNESCO, 2011, p.3). Building infrastructure on the Tibetan Plateau and the burning of fossil fuel for transportation related to extractive industries are ecological footprints which contribute to the quickening rate of the Himalayan glaciers melting, as well as intensifying climate instability in the region. Gold mining, as well as dam-building, the hydropower of which is used to power industry on the plateau, jeopardizes the pristine quality of water at the source of one of Asia's major rivers. Mining activities, hydropower dam construction, and water diversion projects on the Tibetan Plateau threatens China's national security by tempering with a fragile environment, as well as water security for South-East Asian riparian countries, including those in the Ganga-Meghna-Brahmaputra basin, as well as Thailand, Vietnam and Afghanistan. These glaciers and high altitude mountains are the source of Asia's most important rivers, including the "Indus, Ganges, Brahmaputra, Irrawaddy, Salween and Mekong rivers" (Lovelle, 2016). Almost 2 billion people rely on water flowing out of Tibet's rivers for their survival (Jha, 2011). China's ecological construction policies on the Tibetan Plateau work against ongoing international efforts to combat, mitigate and adapt to global climate change. According to Hari Bansh Jha, in his article "Tibetan Waters: A Source of Cooperation or Conflict?," published on September 30, 2011 in the Institute for Defense Studies and Analyses (IDSA), these rivers provide water for the needs of close to 2 billion people, accounting to 29 percent of the worlds population. Water provided from the great rivers originating in Tibet is used for human consumption, farmlands irrigation and food production, to generate hydropower for the rapidly increasing population and expanding economies across Asia, including India and China, the fastest growing economies of the 21st century. "These countries make up 47 percent of the global population" (Chellaney, 2007).

On December 10th 1989, in Oslo, during his Acceptance Speech for the award of the Nobel Peace Prize, the 14th Dalai Lama's commented: "Both science and the teachings of the Buddha tell us of the fundamental unity of all things. This understanding is crucial if we are to take positive and decisive action on the pressing global concern with the environment" (Frängsmyr, Abrams, (eds), 1997). Tibetan Buddhism and indigenous traditional knowledge are important paradigms to consider in addressing the very complex challenges of climate change in this unique bioregion. It will be crucial for humanity to preserve nomadic knowledge and protect this sustainable lifestyle developed over millennia as well as engage in dialogue with these communities for adaptation and mitigation strategic measures.

7. Conclusion

In "The Search for Sustainable Legitimacy: Environmental Law and Bureaucracy in China," published in the *Harvard Environmental Law Review* in 2013, Alex L. Wang refers to China's political structure as imbued with 'institutional pathologies' (Wang, 2013, p.423). The desecration of the environment and human rights abuses arise from the interplay of Lieberthal's 'fragmented authoritarianism' imbued with 'institutional pathologies,' intermingling with neoliberal extremist factions, ideologically rooted in oligarchic fundamentalism[37]. This is really at the heart of the matter.

In the article "Coordinating Corporate Governance and Corporate Social Responsibility," published in the Hong Kong Law Journal in 2009, Dr Potter discusses the potential for coordinated compliance in the trade and human rights sector. Research in co-ordinated compliance with international trade and human rights standards can offer a range of best practices to facilitate international co-operation in a wide array of socio-economic and political relationships (Potter, 2009, p.678).

7.1 WTO: The role of international law

Fragmented authoritarianism, weak environmental law enforcement capacity, technocratic infirmities, the lack of judiciary independence are some of the major causes of China's environmental collapse and health crisis. The three site-specific case studies chosen for this thesis illustrate the central role played by vested interests, weak social institutions and dysfunctional environmental governance. "The process of obtaining effective implementation of environmental laws is a process of "environmental governance." Law, including environmental laws and other fields of law related to environmental law, is essential to frame, facilitate, and foster the major parties to correctly play their role" (Xi, 2014, p.3). As previously touched on, environmental injustice and human rights aberrations in China, in their contemporary form, emerge as a result of open-door economic policies of the late 70s and political decentralization, which have given a tremendous amount of independence and self-governance capacity to provincial governments. In tandem, China's democratic dictatorship authoritarian iron grip, motivated by power and Party-State interests, exemplifies the same asymmetric benefits (oligopolistic) as the ideology of Western imperialist hegemony (Longxi, 1998, p.17). Their strange entanglement has outpoured case after case of environmental catastrophes across China. China's environmental crisis is endangering the survival of the planet.

It is important to recognize the role of the WTO and the international legal regime to protect the environment and the most vulnerable people on the planet from the unequal consequences of globalized corporatism. The legally or illegally maneuvered exploitation of natural resources continues to destroy ancestral land, threatening indigenous

[37] "Reckless dumping of industrial waste is everywhere in China. But what caught the attention of The Washington Post was that the Luoyang Zhonggui High-Technology Company was a "green energy" company producing polysilicon destined for solar energy panels sold around the world. Indeed, it was a major supplier to Suntech Power Holdings, then the world's leading producer of solar panels, and Suntech's founder, Shi Zhengrong, topped the Hunrun list of the richest people in China in 2008."
Smith, R., "China's Communist-Capitalist Ecological Apocalypse, " Real-World Economics Review no. 71. June 21, 2015. Accessed April 12th 2017.
http://www.truth-out.org/news/item/31478-china-s-communist-capitalist-ecological-apocalypse.

communities, old growth forests, polluting the air, soil and water. China's environmental, health and biosociality crisis are enabled by an neoliberal economic doctrine favoring corporate mega-profits over the protection of the world's remaining ecology, the most vulnerable communities on the planet, gambling with the resources of future generations and the survival of the species. "The very rules of globalization, whether imposed by the World Bank and the international Monetary Fund (IMF) or by the WTO, have been written undemocratically, without the participation of the most affected countries and communities (Shiva, 2015, p.6).

In the article, "The Global Drain: Why China's Water Pollution Problems Should Matter to the Rest of the World," written by Matthew J. Currell and Dongmei Han, published in *Environment: Science and Policy for Sustainable Development,* the authors point out the central role of the U.S. government in shaping trade policies with China in the 1990s: "the Clintons-both Bill as U.S. president and Hillary as a board member for Walmart championed and implemented these trade policies, including China's admittance to the WTO"(Curell, Han, 2017, p.20). Profiting Wall Street interests, these policies moved manufacturing jobs to China and doing so provided the manufacturing of cheap goods which protected the U.S. economy from a looming economic crisis (Curell, Han, 2017, p.20). "Today China is the factory of the corporate world. It is where all production is taking place. If you pick up anything...you will find *Made in China*. And this would of not happened without China joining the WTO because it allows the Wall-marts of the world, the Apples of the world to produce cheaply in China and enlarge their profit margin" (Shiva, 2015). Communities and villages are paying the full price with their land and their lives.

I had the privilege and wonderful opportunity to travel to Paris during the December 2015 Paris Climate Conference - United Nations Framework Convention on Climate Change (UNFCCC) COP 21, to interview Dr Vandana Shiva, world renown scholar, eco-feminist, physicist, and director of the seed saving organization Navyanda. The subject of this interview with Dr Shiva was biodiversity, globalization and water security. In this interview Dr Vandana Shiva delineates the catastrophic flaws of the WTO as international legal body and trading apparatus from an environmental justice and human rights perspective. She describes the connections between war chemicals and agrochemical corporations, explaining that war chemical corporations reinvented themselves as agrochemical multinationals after World War II.

"Monsanto wrote the intellectual property rights, Cargill wrote the agreement on agriculture. So basically you have, the two biggest corporations from agrochemicals and from trade, write the WTO rules of so called free trade. Free for them to grab markets everywhere in the world, and free for us because we lost our food sovereignty. We lost our farmers, we lots our children. Half of India's children today are malnourished and waisted because of this free trade agreement that puts the right to profit higher then the rights to health and food" (Shiva, 2015).

The implications of China's political reality, environmental and social conditions, Party-State power, and the current unstable state of environmental law enforcement, as it all converges with international trade, and the WTO legal regime, with the influence of xenophobic foreign investors, have an immediate impact on the planet and the future of humanity. The current regime of international trade law, the GATT/WTO/TRIPS agreements fail to protect communities and the environment.

"One need only compare the complex and vast array of international, regional, and national environment laws with reports such as the United Nations' Millennium Ecosystem Assessment, to conclude that we are fast reaching the limits of this law and the biosphere. It is time to take a different path: to create a legal framework that explicitly recognize that humanity is an interdependent part of the larger ecological order and that overall condition of that order is of paramount importance" (Taylor, Grinlinton, (*eds*), 2011, p.18).

Oligopolistic proto-facist transnational free market capitalism denies humanity the right to freedom, health and life. "Neo-capitalism itself is the new *modus operanti* of capitalism," an economic model which is unsustainable from an ecological, human rights and socio-political perspectives. Eight of the wealthiest individuals in the world own more wealth than the 3.6 billion people who are the world's poorest half of humanity (Oxfam Report, 2017). This form of wealth concentration is viciously unbalanced, ethically inadequate and fundamentally pathological. Oligopolistic crony capitalists are literally (creepy ghosts) viciously feeding on human decay and death.

As a result of the neoliberal ideology, the WTO rules and globalization, across the globe in China, Africa, South America, North America, the Middle East, and elsewhere, communities are living in an environment that has either been destroyed by war, or severely damaged by anthropogenic activities and exploitation, and live in dire misery with the fear of endemic sickness and the reality of death, and who's lives are destroyed by the terrors of wars, environmental collapse or ecological disasters also referred to as climate apartheid (Shiva, 2013).

Neoliberal corporatism derives its power from political influence, based on militarized control and neocolonial jurisdiction over natural resources. This transnational economic dictatorship allows elite oligarchs hegemonic control, reaping mega-profits from war, murder, death and destruction, while promoting xenophobic fear to justify a trumped militarized monopoly of the world's natural resources and enrich themselves at the expense of entire communities, indigenous cultures, the environment and planetary survival. The core underlying political instrument of the neoliberal program lies in the pathological violence embedded in its patriarchal structures. Only vicious and heartless monsters can live ridiculously lavish lifestyles unfettered by the humanitarian and ecological crisis resulting from their money flipping monkey-making activities.

The death of neoliberalism and decline of the global economic apparatus lies in the failure of the neo-capitalist ideology and the extreme levels of global disparity. Ongoing wars, global economic disparity, unrestrained economic growth, unsustainable natural resource extractions, are fundamental to the proper functioning of the neo-capitalist machinery and free market fundamentalist doctrine. "War does not bring peace. As the saying goes, "Fighting for peace is like f**king for virginity." War never serves any individual or group, except a powerful elite few — the oligarchs who perpetuate and manipulate tribal, feudal, nationalistic and fascist war-mongering the world over, generating trillion dollar profits from death and destruction, while touting their own patriotism, and encouraging your support." (Waking Times, 2016). This delusional model of never ending economic growth is a wheel of self-annihilation, destruction and death. Climate change, warming temperatures, rising sea levels, the melting of glaciers and intensifying weather events emerge in tandem with the apparent systemic failure of globalized corporatism and the neoliberal program. The oligarchic war mongering power

structure benefits a class of ridiculously wealthy elites. Ultimately, whether it is from the terrors of war or environmental pillage, communities worldwide endure massive destruction of their socio-cultural and spiritual knowledge, sacred sites, ecological and/or natural resources, suffering misery, sickness, and death for the profit of the few elite oligarchs. The reason is that freedom, health and peace are simply not profitable. Climate apartheid, as well as the terrorism of war, inflicts misery on civil society and communities worldwide. Neoliberal doctrine is void of any sense of morality. It is through engaging in ongoing wars, coercion and the intense exploitation of humans and nature that this spiritually weak paradigm attempts to control the uncontrollable powerful spiritual forces of the mighty *Heart* of the *Wild*, the *Feminine*, and the *Other* (Longxi, 1998, p.55).[38]

Consumer culture is rooted in extreme individualism. This spiritual crisis is induced by social confusion, ignorance, the illusion of separation, all of which are anchored in a delusional sense of reality. The hypnotizing quantum field of materialistic commodity fetishism is void of cultural substance. William indicates that the very old-dated meaning of consumption is to destroy spend and waste (Featherstone, 2008: 23: Firat, et al., 2013, p.183). In the absence of spiritual substance, consumer culture thrives on the chaos of social confusion, decadence, greed, selfishness, vanity, as well as the prevalence of racial, cultural, and sexual discrimination. Social confusion, cultural and spiritual void leads to consumable violence. "Parts Unknown Undercover ethnography of organs-trafficking underworld," written by Nancy Scheper-Hughes from the University of California, is a monograph and political mapping of postmodern transnational organ trafficking. Violence is consumed through the desiccation of Earth, cultures, and Other human beings. This schizophrenia had lead to complex social obstacles that will need to be addressed for the survival of our species on Earth. Hyper-consumption as a life pursuit and social ideology is disconnected from joy and the celebratory essence of life. Commodity fetishism is spiritually disembodied from the human spirit. It is time to retell the wisdom of Earth, to celebrate and explore the science of a focused consciousness, the exuberance found in freedom, mystery and joy of the human spirit.

The planetary ecological urgency of climate change requires an incredible amount of open mindedness to the visceral quality and experience that is life, creativity, initiative, public engagement, momentum and transparency in the policy decision-making environment, as well as a new approach to the web of life and Mother Earth. The paradigm transformation is the creation of a new culture, a culture that understand its position in the universe and as emerging from Mother Earth.

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[38] "History is, of course, both continuity and change, but in the polemical gesture of radical breaks and transformations, which may be seen as a major characteristic of the contemporary and postmodern discourse, affinities and continuities based on similar principles and modes of thoughts are often neglected, even deliberately overlooked, by advocates of new theories and new historical movements. In talking about China and the West, what seems to have persisted and thus made the continuity possible, as we have seen, is a dichotomous opposition between the self and the Other, the West and the East. How the Other is viewed, whether it is regarded with admiration or looked down upon with contempt, does change from one form of the dichotomy to another, and from one historical period to the next as well as within the same period, but the perennial dichotomy itself seems seldom to relax its grip on peoples minds in the perpetuation of cultural myths."
(Longxi, 1998, p.55).

7.2 The post-growth era

"The less national constitutions and parliamentary governance remain capable of securing the well-being of national citizens, the stronger the need for promoting new forms of democratic self-government, 'transnational justice' and international rule-making for the collective supply of international public goods" (Petersmann, 2007, p.532).

The industrial revolution (from late 18th to mid-19th century) marked the beginning of the Anthropocene, a new geological epoch characterized by substantial transformation of the biosphere by human activities. As a filmmaker, environmental activist, China policy analyst, and writer, I am interested in understanding this era, and in particular our ecological footprints, as it relates to the future of humanity and planetary survival. On April 30th 2013, I interviewed Noam Chomsky at MIT in Cambridge. During our conversation, the scholar referred to the Anthropocene as "the geological era in which humans may in fact destroy themselves." The global environmental crisis is reaching catastrophic levels. Through hyper-consumption patterns, the human specie is destroying the biosphere it depends on. The environmental threats humans are now facing are manifestations of the greatest challenge humanity has ever faced (Chomsky, 2016). Chomsky emphasized that only an informed and organized public demanding human rights, environmental protection and a redistribution of planetary wealth can provoke progressive and radical change. My intention throughout this heuristic body of work is to uncover the seductive illusions permeating the collective psyche, thereby stimulating planetary transformations.

7.2.1 Neoclassical economics and the enclosure of the commons

The European middle age (5th to 15th century) was the origin of colonialism and patriarchal domination (Valero, p.2). Western expansionism, imperialism, and religious fanaticism, are the root causes of the dissemination of alternative kinship systems, prohibition of sacred indigenous rituals in the Americas, the massacre of Indian natives, as well as the slaughtering of massive amounts of animals (Davis, 1996, p.81). Neoclassical economics emerged during the Enlightenment (late 17th to late 18th centuries). During that period the commonwealth was transformed into the enclosure of the commons, with the establishment of land ownership and property rights (Valero, p.2) and the concomitant emergence of capitalism.

7.2.2 The illusion of Private Property

Hyper-individualism and property rights are central to capitalist ideology. "The capitalist dream of individual freedom is embodied in the right to own private property. The property regime itself as it stands now in New Zealand and throughout advanced capitalist societies is unsustainable" (Bosselmann: Grinlinton, Prue Taylor, (eds), 2011, p.24). The illusion of property rights is unearthed by property law scholar Kevin Gray. Private property "does no really exist: it is a mere illusion," was published in "Property in Thin Air" (1991), in an article which recalls Karl Marx's critique of the paradigm of modern property rights as "the illusion of jurisprudence" (Grinlinton, Taylor, ed., 2011, p.153). "With private property, as with many illusions, we are easily beguiled into the error of fantastic projection upon the beautiful, artless creature that we think we see. We are seduced into believing that we have found an objective reality which embodies our

intuitions and needs. But then, just as the desired object comes finally within reach, just as the notion of property seems reassuringly three-dimensional, the phantom figure dances away through our fingers and dissolves into a formless void" (Grey, 1991, p.252).

Dialectically, capitalism equates to a kind of delusional zealotry. In "What We Want Is Free, Generosity and Exchange in Recent Art," edited by Ted Purves for SUNY series in Postmodern Culture, in the article "How free is free? Property, Markets, and the Aesthetic(s) of the common(s)," written by Dr Ignacio Valero, the scholar brilliantly describes the ethnocentricity of colonialism: "Roman law and Christian theology are enlisted to discern whether the indigenous habitant have a soul, and thus are fully human or not. This is a key question, for if they are not, or if they are less than humans, they may not have a right to own, in fact they may even be owned. As such grabbing their lands is an act of mercy, a favour, extended to the "heathens" and "barbarians" in exchange for the protection of the Christian kings and queens and their God" (Valero, 2004, p.87).

7.2.3 Jurisprudence Paradigm Shift

"Roman law hominum causa omne jus constitutum est *all law is created for the benefit of human beings*" (Frederick M. Abbot, Christian Breining-Kaufmann, Thomas Cottier, (eds), 2006, p.98). The procedural steps to include the interrelationship between humans and nature in international law is researched at the edge of academia. "One need only compare the complex and vast array of international, regional, and national environment laws with reports such as the United Nations' Millennium Ecosystem Assessment, to conclude that we are fast reaching the limits of this law *and* the biosphere. It is time to take a different path: to create legal framework that explicitly recognize that humanity is an interdependent part of the larger ecological order and that overall condition of that order is of paramount importance."

Economic principles of exponential growth are irreconcilable with a finite planet defined by limited renewable resources. Embedded in an ecocentric economic model, etched in Mother Earth's ecological carrying capacity, the ontological cosmology of this post-growth, post-materialistic culture, integrates the infinite interconnections of all earthlings to each other, to Mother Earth and the cosmos. This new culture will have a new legislative body tailored to promote collective human and non-human ecological rights[39], a global economic system with environmental integrity based on local economies, endowed with a socio-ethical responsibility towards the most vulnerable communities on planet Earth and future generations as established in the Brundtland Report[40]. The new social goals includes more tolerance, compassion, nonmaterialistic, humane and health focused lifestyles, with a legal system that preserves the sacredness of life, "human freedom and ecological resilience" (Grinlinton, Taylor, 2011, p.9).

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[39] "A high court in India has granted the Ganges and Yamuna rivers the same legal rights as human beings. The ruling comes after the New Zealand Parliament passed a law granting the Whanganui River full legal rights last week." "Indian Court Grants Ganges & Yamuna Rivers Legal Rights of Human Beings," Democracy Now Headlines, March 21st 2017. Accessed April 10th 2017.

[40] "The term sustainable development was articulated in 1987 in the United Nations World Commission on Environment and Development's report, Our Common Future (also known as the Brundtland Report) and is commonly defined as meeting the needs of present generations without endangering the ability of future generations to do the same (WCED 1987)" (Shapiro, 2012, p.11).

7.2.4 Ecological economics

In the Journal *Ecological Economics*, Dr Rees analyzes mainstream economics from an biophysical perspectives, demonstrating that the global economic system is a subsystem of ecology. Economic growth, a fundamental element of capitalism, is biophysically restrained by the Earth's carrying capacity. Rees establishes that "techno-industrial society is inherently unsustainable"(Rees, 2006, p.221). He advocates for an economic system integrating the limits of Earth's natural resources. *Ecological Economics* is an emerging transdisciplinary field of research. Georgescu-Roegen was the European founder. "Georgescu-Roegen characterizes physiocratic doctrine (referring specifically to Quesnay's (Tableau Économique) as an 'analytico-physiological approach', meaning a manifest endeavour to submit the economic phenomena to a physiological analysis akin to that of biology" (Burkett, 1975. p.24).

Ecological economist Herman E. Daly writes that a steady state economy is a necessity (Burkett, 1975. p.23). This is a stable economic system based on the management of renewable natural resources remaining below Mother Earth's carrying capacity. In contrast, mainstream economics is based on the illusion of perpetual economic growth (Burkett, 1975, p.23). The post-growth era is defined by a paradigm shift in the world's economic and judicial systems, as well as values, goals, and lifestyles. From "River of the Mother of God" "[a]s Leopold noted: conservationists "are just beginning to realize that their task involves the reorganization of society, rather than the passage of some fish and game laws" (Grinlinton, Taylor, 2011, p.5).

7.2.5 Paradigm shift: re-imagining culture

"Many scientists, policy analysts, and even politicians have asserted that sustainability will require a 'paradigm shift' or a 'fundamental change' in the way we do business, but few go on to describe just what needs to be shifted or the implications for the *status quo*" (Rees, 2003, p.31). Dr Rees recognizes myth-making as 'social construction of reality' (Rees, 2007, p.8), as well as a strategic tool for planetary survival (Rees, 2002, 2003). Mythologizing reality by envisioning the eccentric and radical possibilities of an ecocentric post-growth paradigm for planetary survival is deeply interconnected to re-imagining culture, making use of new and old ideas, or rather reviving ancient ways of knowing, as well as reviving the sacredness of life on Earth as it is weaved into the mysteries of the cosmos. Humanity is called to intentionally engage in the creation of a new form of culture, consciously redesign social dynamics and formulate new social goals[41], an-all inclusive paradigm established on the ontological belief in freedom, equality, diversity, inter-species kinship, as well as humanity's intricate relationship to the Earth, and the mysterious universe.

The global nature of this ecological crisis requires a paradigm shift at the global and local levels, which include international cooperation, coordinated eco-logical strategies, climate change adaptation and mitigation procedures, and the application of locally-oriented sustainable practices. Decentralized self-sufficient economies, natural resource conservation measures, permaculture and organic sustainable agriculture are essential activities for planetary survival. We are interconnected to the natural world, and

[41] "If it chooses the provision of human well-being through the promotion of healthy and economically viable ecosystems, then new forms of economic activity will need to be developed, supported by appropriate legal change" (Grinlinton, Taylor, 2011, p.13).

all living beings! Isn't this wonderful? Saving seeds and growing organic food are subversive acts promoting resistance to corporate economic dictatorship and state control.

7.2.6. The indigenous paradigm

The indigenous paradigm is a holistic paradigm in which human societies are interweaved into the cosmological fabric of the Earth and the cosmic universe. Traditional knowledge is ancestral knowledge, ecocentric spiritual wisdom, and which holds an incredible wealth of information on endemic biodiversity, natural rhythms of ecosystems and ecological cycles. This ancestral wisdom may well be vital to humanity's survival, as modern humans learn to live in balance and within the Earth's biophysical carrying capacity. Traditional indigenous knowledge holds a deep understanding of the importance and protection of biodiversity for ecological health, environmental sustainability and life on planet Earth.

7.2.7 Neo-shamanic Dragon Culture (Adaptation mythos)

Culture is constantly created, and it is people who create culture. The hypnotizing materialistic trance of consumer fetishism is void of any psycho-spiritual substance, a mind control tool which utilizes media cult image making, vanity, egocentric trends, all of which lead to a loss of cultural identity. This materialistic fantasy la la land protrudes with the death of the shamanic. Commodity fetishism will never replace the experiential divine human-nature interconnection embodied through entheogenic sacred rituals found in ancient societies and indigenous cultures around the world. "Two of the most pervasive and influential cultures the planet has ever seen, that of Hellenistic Greece and Aryan India, contained at their very core inspirations derived from the indigestion of psychedelic concoctions. For two thousand years before its eradication by Christians in the fourth century A.D., the celebration of the Eleusinian Mysteries was the peak-experience of the ancient Greeks [...] enhanced by the drinking of Kykeon, a grainy beverage believed to contain barley ergot. Among notable initiates were Socrates, Plato, Sophocles, Aristotle, Aeschylus, Cicero" (Hayes, 2000). The ingestion of psychedelic substances have the potential to provoke mystical states, intricate feelings of oneness which can lead to spiritual awareness of planetary ecological interconnections.

Expansionism and the corporatocracy, as coined in "Confessions of An Economic Hit Man," a presentation by John Perkins, corporate mega-profits depend on the dissemination of indigenous cultures, and the destruction of their motherland. This culture of exploitation is on the rise worldwide, in Canada, the United States of America, South America, Africa, and in China. This power structure is unsustainable from a socio-political, ethical, and human rights dimensions. In "The Archaic Revival: Speculations on Psychedelic Mushrooms, the Amazon, Virtual Reality, UFOs, Evolution, Shamanism, the Rebirth of the Goddess and the End of History," the ethnobotanist refers to contemporary civilization as a 'sinking ship' (McKenna, 1992, p.14). Although Terrance McKenna's ideas are eccentric, his wild and wise soul's had an incredible ability to think creatively. He was a curious man. His unique creative expression was his fantastic contribution to contemporary society. It is time for the shamanic revival and rebirth of the goddess Terrance McKenna envisioned, an evolutionary process allowing for massive psycho-spiritual transformation, breaking open the human imagination, heart and spirit.

7.2.8 Climate Change adaptation and mitigation measures

The collective challenges of addressing climate change requires strategic and visionary international coalision-building, broad-based civil society engagement and progressive global leadership, momentum, multidisciplinary initiatives, transnational/local cooperation, transparency in the policy decision-making process, the comprehensive application of creativity and innovative solutions. Transition strategies will require the joining of three dynamic events: 1) "a comprehensive understanding of the ecological crisis that we face and the development of comprehensive ecological quality criteria;" 2) "an acknowledgement of humanity's role as a member of the ecological community and the development of ecological conscience;" 3) "the cultural and social determination needed to (as Jared Diamond put it), "choose" to succeed" (Grinlinton, Taylor, 2011. p.19). "Dragon Tears," in which I intend on including all three case studies, is directed in an effort to refine ecological consciousness in China, Canada and internationally.

Independent media, education, critical thinking, as well as art, communication, and unrestrained creativity, are the most powerful tools to galvanize an understanding of the spiritually limited paradigm of our postmodern circumstance. This investigation begins to re-imagine geopolitical coalitions. As an activist, I feel that my personal process now is to understand Chomsky's message and apply it. What does an organized public look like? How can Canadian independent media help cultivate environmental consciousness, and an all-embracing human rights approach to life on earth. Will Canadian media help inspire the more radical and progressive solutions needed to adapt to the looming planetary changes and ecological challenges? What are the ways in which independent media can help shape cutting edge pathways for environmental leadership, and forge alliances based on Earth stewardship between the East and the West? How can independent media best communicate pragmatic solutions, establish the groundwork for ethical adaptation and practices to effectively address the planetary human ecological crisis?

We are cosmic stardust children, born right out of pure mystery, born from, and of the Earth. We have a right to be free, to live peacefully in balance with the forces of the natural world and cosmic universe. Transitioning into sustainable lifestyles, is not only possible, it is an unavoidable. What an exciting opportunity for unbound creativity, heart opening growth, and fascinating collaborations. Through this unavoidable transformation, humanity's evolution, and the meaningful birth of a culture with an inspired ecological awareness, and the evolution of human consciousness expressed through renewed kinship to all living creatures, towards each other, and Mother Earth. Through this evolutionary process we are called to embrace an ethos honouring the sacredness of all life forms, reflecting world healing, compassionate, cooperation, as well as the revival of our full capacity for unbound creativity and love. I dream of an equitable, peaceful, green and free society I believe in a new cultural system which reveres Mother Earth's exquisite beauty, remarkable, and curious biodiversity.

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