Unity Through Diversity:
A study of a Pan-Asian Interfaith Climate Change Network

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19 October 2019

For Diego
7 April 1977- 11 January 2016
Pure Heart

And for Sombath Somphone
INEB, ICE Network affiliate
Founder of PADETC (Participatory Development Training Center), Laos.
Disappeared by Lao police 2 weeks following Anuradhapura ICE conference
Missing since 15th December 2012
He spoke truth to power.

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Abstract

Traditional ecological knowledge (TEK), ancient nature-based wisdom, and Indigenous practices the world over have been systematically removed, dismissed, and marginalized throughout the industrial growth era. Now in an era of accelerated climate emergency and biodiversity loss, calls for creative *nature-culture-based s*olutions to address the challenges of climate change intensify from United Nations and International Non-Governmental organisations. Leaders within these institutions generally assert there are no such examples from which to draw in markets, energy, transport, land management, industry, global governmental, and NGO spaces. I argue that creative, nature-culture-based solutions *are* emerging and converging globally, beyond the confines of the dominant climate regime. They can be found in local faith-based, eco-cultural / eco-spiritual, endogenously-derived and Indigenous engagement on climate change and biodiversity loss, most vividly through convergent regional networks. These nature-culture initiatives offer strategies for biodiversity recovery and climate change adaptation, mitigation, and resilience, and for transitioning and new systems: for markets, organisational patterns, and human-ecological dynamics. The Interreligious Climate and Ecology (ICE) Network in Asia presents a particularly exciting example for eco-culturally derived solutions and regenerative systems underway, which this project seeks to clarify, investigate, and understand. Eschewing centralised or linear program management and structure, membership requirements, and with limited fiscal resources, the ICE Network thrives and rapidly expands its sphere of influence, catalysing and inspiring endogenous, eco-culturally-reflexive climate change and biodiversity initiatives through an expanding web of interconnected faith networks across Asia.

This study shows how the ICE Network challenges current "standard toolkit" assumptions around scale and impact, as well as attitudes towards climate change, and humanity's relationship to a living Earth. To facilitate this understanding, the overarching research question guiding this work asks "Why does the ICE Network appear to thrive and expand while explicitly eschewing structure and centralised program management as is usually considered essential for networks to succeed?" This study of the ICE Network serves as a potential map for humanity to re-learn or re-connect with a sustainable way of life in harmony with the Earth, informed by diverse eco-cultural practices, and the wisdom of all of humanity's ancestors, accumulated over millennia. Lovelock's and Margulis' *Gaia theory*, one in which the Earth is a self-regulating organism, finds a mirror or manifestation in the self-regulating nature of a network rooted in convergent beliefs that they *are* nature, and part of a self-regulating Gaian Earth organism. The findings from this examination of a network formed and expanded through the liminal states of ritual furthers, through a practical case study understanding, van Gennep's Turner's and Wagner's theoretical conceptions of linear and separated stages segregating a 'mundane' societal structure from the temporary liminal sacred states of ritual, challenging the notion of 'profane' with a worldview in which all is sacred. The findings build upon Rappaport's theory that a new, singular and universal religion would form in the 21st Century in response to the ecological crises of the Anthropocene following an age of scientism and industry--yet with a distinction. The emerging movements of spiritual-ecological consciousness are not singular in uniformity, rather richly ecoculturally diverse while joining in a mutuality that strengthens the health of the whole: unity emerges through dynamic eco-cultural-diversity.

My ethnographic research employed participant observation for more than a two-year period. It includes semi-structured interviews and focus groups across ICE Network affiliate projects and ICE Network gatherings. From these interviews and my field observations, I found the characteristics within this nature-culture-inspired climate change network to include: a convergent spiritual ecology

ethos across faiths and local eco-cultural traditions; self-organising, dynamic, and mutually co-responsive self-regulating systems of network formation and functions akin to the Gaia theory in practice, and a pervasive Indigenous worldview (liminality of energy in ritual as governance); endogeneity and eco-cultural confidence of values and practices; centrally-positioned ritual and "spiritual awakening" emphasis, applied learning, and leveraged capacities across the network through practical action. Thus my study concludes that a critique of the structural violence of dominant 20th century economic, social, and political power paradigms is a catalyst for giving attention to and creating new food systems, new markets, and new strategies for ecosystems recovery.

ICE Network's predecessors contribute to foundational values, capabilities, and organisational decision-making processes, but they also inject some contradictions and friction evident across generation and gender. What could become fatal flaws for most organisations instead illustrates the adaptive, resilient, corrective, and self-organising characteristics of the network. A "small is beautiful" ethos presents numerous challenges when enveloped by dominant conventional farming and industrial market systems. The functional models emerging from this network potentially apply to climate finance mechanisms, transitional systems considerations, and particularly climate-smart markets that enable sustainable and sovereign local livelihoods. There are few studies conducted on interfaith-Indigenous climate change collaboration in network spaces, particularly not in Asia. This study could provide a roadmap for navigating the complexities and challenges of the Anthropocene in a manner that respects and restores the agency, wisdom and variety of eco-cultural values and practices around the world. It offers potential for a transition into more sustainable, harmonious ways of living, informed by traditional Indigenous wisdom, yet transformed through challenges and opportunities of the Industrial Age.

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"Wake up and fight!"
—Woodie Guthrie's 33rd New Year's Resolution, 1942

"Only love can save us from climate change." -Zen Master Thich Nhat Hanh

Preface:
Death and Awakening in the Epoch of Climate Change

How do we respond to damage done, shadows on the wall, the burned memory of the deed itself? Stars shining through the night perished millennia ago—we were not there to save them. We were sleeping then. We refused the gentle waking. Now the climate change alarm sounds loud enough to shake us from slumber. The fires we lit are burning the house along with us, its inhabitants. Are we awakening too late, to imminent death with no way out? Or is there a tree branch outside our window, inviting us to step onto its leafy stabilising limb?

Climate Change presses humanity to stare directly into the vast void of mortality, our survival and meaning as a species, alongside a multitude of species on Earth, under threat. This can be frightening, the stuff of nightmares. Yet we must awaken to face it. The importance of this resides in the potential insights, understanding, and perhaps even psychological, systemic, and behavioural change possible when humanity awakens to the suffering it has created, and looks with renewed vision at present ecological planetary circumstances.

This project evaluates convergent interfaith and spiritual ecology processes and values emerging from collaborative ecocultures[1] (capturing the relational ecology of human culture with and through ecosystems), given their applications of traditional ecological knowledge (TEK) and ancient religious texts to climatic change and biodiversity loss. (Maffi & Rapport, 2011; Böhm et al, 2016; Decker, 2012) To this end, the research examines a case study of the Pan-Asian Interreligious Climate and Ecology (ICE) Network, seeking insight into how climate change may affect human consciousness and, by extension, engagement with climate change and ecological crises.

In *Facing Gaia: Eight Lectures on the New Climatic Regime,* Bruno Latour writes (2015; 2017) of climate change through his interpretation of James Lovelock's "revenging Gaian goddess" (Lovelock, 1979, 2000, 2006). Lovelock named his theory of a self-regulating Earth system after *Gaia*, "the ancient Greek name for Earth, its shorter form "Ge," the root for Earth science disciplines of geography and geology. (Lovelock, 2016) Lovelock is

[1] The term 'eco-cultural' is applied instead of 'biocultural,' as biocultural implies a more general placement within geography of cultures, whereas ecocultures and 'eco-cultural health' emphasizes the relational ecology of cultures. According to Rapport and Maffi (2010), eco-cultural health is a dynamic, co-evolutionary interaction between humans and the environment, that does not compromise either critical ecosystem processes or the vitality of cultures. (*See Acronyms & Terms in appendices.)

aware, of course, that to the Greeks, Gaia is the Earth Goddess, mother of Themis, or divine justice. When Gaia's boundaries are transgressed, such earthly crime brings retribution of storms, drought, and pestilence. (Lovelock, 2007)

More vividly for Latour, Gaia is the vengeful monster, a manifested living nightmare. She is chasing us down from a past in which we refused to wake, to give climate change our consciousness. We slept through the repeating call to act in protection of Earth / Gaia's balance. We failed to change our fossil-fuelled, industrialised, hyper-consumerist ways.

This call sounded as early as the 1970s, but we did not heed it. (Latour, 2015; Latour & Porter, 2017) ExxonMobil knew (Goldenberg, 2015; McKibben, 2015; Supran & Oreskes, 2017). Carl Sagan knew (Sagan, 1979, 1980). Donella Meadows, Lynn Margulis, Rachel Carson, and a host of scientists, policy makers, and corporations knew, have known, for nearly half a century, that industrialised extractive economies and exponential growth models, escalating carbon emissions, conspicuous consumption, and waste were creating a global environmental catastrophe, breaking through (Gaia's) planetary boundaries that hold humanity—and all life on Earth—within a safe inhabitable space. (Carson 1907-1964, author, 1963; J. E. Lovelock & Margulis, 1974; Margulis, 1971; Meadows, 1985, 1992, 2005; Meadows, 1972; Rockström et al., 2009) Exxon may have chosen to slip the general population another sleeping pill, but many others have been speaking, whispering with greater intensity into our dreams:

Wake up. Wake up. Wake up.

Ratcheting their dire wake-up calls to action is the Intergovernmental Panel on Climate Change (IPCC) with the 8th October 2018 release of the *Special Report on Global Warming*

of 1.5ºC (SR15), a report commissioned in 2016 to review "impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways contained in the Decision of the 21st Conference of Parties of the United Nations Framework Convention on Climate Change to adopt the Paris Agreement" (Allen, Babiker, Chen et al; 2018). SR15 documents high confidence in an exponentially accelerated rate of global warming and an urgency to take decisive action to meet commitments of the Paris Agreement.

The IPCC SR15 report argues that the timescale to take action which would enable a cap of 1.5ºC warming above pre-Industrial levels is diminishing. It is now within a window for clear and articulated action of approximately twelve years (Allen, Babiker, Chen et al, 2018; Watts, 2018). Failing to limit warming beyond a 1.5ºC rise within the next twelve years, according to the IPCC scientists' projections, will "significantly worsen the risks of drought, floods, extreme heat and poverty for hundreds of millions of people" (Watts, 2018).

A global temperature rise above the 1.5ºC cap could result in complete loss of coral reef across the planet's oceans, long-lasting and irreversible impacts that include the death of entire ecosystems. Flooding, drought, wildfires, landslides, hurricanes, and other complex emergencies would increase exponentially. Those populations already experiencing climate impacts and vulnerabilities, encompassed within deep economic, political, social, and ecological complexities, would suffer far greater losses.

SR15 states that

> "Populations at disproportionately higher risk of adverse consequences of global warming of 1.5°C and beyond include disadvantaged and vulnerable populations, some Indigenous peoples, and local communities dependent on agricultural or coastal livelihoods (high confidence). Regions at disproportionately higher risk include Arctic ecosystems, dryland

> regions, small-island developing states, and least developed countries (high confidence). Poverty and disadvantages are expected to increase in some populations as global warming increases; limiting global warming to 1.5°C, compared with 2°C, could reduce the number of people both exposed to climate-related risks and susceptible to poverty by up to several hundred million by 2050 (medium confidence)." (Allen, Babiker, Chen, et al, 2018)

According to the October 2018 IPCC report, rapid and far-reaching transitions in land, energy, industry, buildings, transport, and cities are required. Global net human-caused emissions of carbon dioxide (CO2) would need to see an estimated 45% reduction from 2010 levels by 2030, reaching 'net zero" around 2050. Such transitions depend on a critical mass of shifting new paradigms for global and local policy, corporate engagement, market systems, and climate finance, as well as infrastructural and, importantly, *behavioural* change.

Former Executive Secretary of the UNFCCC who presided over the 2015 Paris Agreement, Christiana Figueres, recently (29 October, 2018) reinforced both the call for transitions and systems change across industry, markets, transport, energy, and land relationships, but also echoed a common message within international climate, development, and humanitarian institutions: we need models for new, nature-based markets, new ways of doing and being on the planet, but we don't have those models, nor can we envision them. (Huq, 2013; Oxford Martin School Public Lecture, 2018.; Reid et al., 2014)

The likelihood that required vital action will be comprehensively taken within the necessary timeframe has been called into doubt. Frighteningly, Adrian Raftery and his research team at the University of Washington calculated that humanity has a 5% chance that temperatures can be capped below the 2ºC Paris Agreement commitment and a 1% chance that temperatures will rise to less than 1.5ºC, with a likely range of global temperature increase between 2.0-4.9ºC (Raftery, Zimmer, Frierson, Startz, & Liu, 2017).

Donna Haraway (2016) presents us with yet another monstrous, “tentacular” allegory of planetary social-ecosystems under stress with the *Chthulucene*, named for 20th Century monster-myth of Cthulhu. The Chthulucene [*sic*] is what Haraway proposes as an alternative to the Anthropocene. It emerges at the heels of the *Capitalocene*, Haraway’s term for the industrialized epoch of fossil fuels and exponential economic growth, the mechanism through which sequestered carbon has been removed to serve the machinery of overconsumption and waste, transgressing planetary boundaries. (Haraway, 2016; Rockström, 2009; Raworth, 2018)

Ninety years ago, Cthulhu was pulp fiction author H.P. Lovecraft’s octopus-armed monstrous creature of the deep, usually depicted emerging from dark oceanic miasma. Cthulhu, named for the classical Greek ‘*chthonic*’ or subterranean (similar to Gaia as a “chthonic” deity), is described as a "monster of vaguely anthropoid outline, but with an octopus-like head whose face was a mass of feelers, a scaly, rubbery-looking body, prodigious claws on hind and fore feet, and long, narrow wings behind." Cthulhu was a creature that embodied humanity’s fears of the unknown, the mysterious opacity of existence. (Lovecraft, 1999)

But Haraway’s *Chthulucene* monster is reframed for the 21st Century, one of epochs and shifting landscapes, converging knowledge and understanding, the remains reshaped from the ruins of a crumbling 20th Century capitalist world. She offers a contrast to Latour’s, and Lovelock’s monsters. Her Cthulhu’s tentacles reach across artificially constructed borders, enabling through crisis and stress, a (realization of) connection and kinship between species, disciplines, and knowledge. Thus, the monster becomes a teacher and gift.

This *Chthulucene* counters and overcomes what Haraway and Ingrid Hoofd see as the "anti-environmentalism, nationalism, misogyny, and even fascism" of the dying *Capitalocene* (Haraway, 2016; Hoofd, 2017). Jason Moore further qualifies the *Capitalocene* to capture the industrial era of fossil fuel systems that emerged during the *Holocene*, prominently within the 19th and 20th centuries (J. and R. P. Moore, 2018; J. W. Moore, 2017). Haraway sees a rise in the "chthonic ones" who "are beings of the earth, both ancient and up-to-the-minute" [...] imagined as monsters in the best sense; they demonstrate and perform the material meaningfulness of earth processes and critters." She distinguishes between the *chthonic ones (of the Chthulucene)* and humans, when she writes that chthonic ones "have no truck with the sky-gazing homo." In her emerging epoch of the Chthulucene, humans fall away as nature (the *chthonic ones*) resurges and reclaims the earth. In this scenario, humanity is separate from nature.

Haraway's Chthulucene monster, perhaps with at least one tentacle raised by Rebecca Solnit, attempts to offer some hope through a transformative, abrupt, and challenging encounter with the institutionalised violence within western countries (namely, the United States and Europe) (Haraway, 2016; Solnit, 2010, 2016). Haraway perhaps even celebrates the demise of humans, their institutions and "the world's great monotheisms in both religious and secular guises [that] have tried again to exterminate the chthonic ones" (Haraway, 2016). Lovelock's and Latour's Gaia-monster inspires a regretful fear that it may now be too late, our chance to *wake up and fight* a "great ecological war" came and left unnoticed several decades ago. Now, we may be facing a 95% possibility that whatever we do is too little too late; we are facing the Earth deity Gaia's revenge. (Latour, 2015; Lovelock, 2006)

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The Tree Branch

At the Gaia Ashram and Gaia School Asia (ICE Network affiliates) on the border of Laos and northern Thailand, the Greek myths are far afield, and only vague concepts have travelled to syncretise with Lao and Thai animist and Buddhist eco-cultural (the relational ecology of culture and ecosystems) worldviews. For those of Gaia Ashram and Gaia School Asia, Gaia is not a monster. She is not a fierce and furious, cruel and vengeful deity / Earth System, such as Lovelock and Latour (and even Haraway) propose. In this Southeast Asian ecotemple, Gaia is a protective, wise, caring, and sacred Earth mother, a patient and knowing healer, a teacher and collaborator when we remember, again, how to listen.

> *"Gaia is our Earth Mother. She is sick, and we have caused her this harm. But if we listen to her, if we hear her messages from the plants, the trees, the water and soil, the wind in the trees, the caterpillar on the branch, we can learn again to collaborate with her, to collaborate with Nature. And when we begin to listen and collaborate, to restore biodiversity of forests, to grow food organically and in food forests, to build our buildings traditionally and ecologically, to compost our waste so it becomes part of life cycles again, Gaia will heal us. Because we are nature, and we are part of Mother Earth, of Gaia, and when we help her heal, we heal too."*
>
> -*Interviewee #17, ICE Network affiliate, co-founder of Gaia Ashram, Gaia School and Gaia Education, Thailand. Gaia Ashram and School were inspired by the first ICE Network conference in Sri Lanka 2012, and the lands which had been for conventional mono-crop farming restored to a healthy biodiversity*



Photos clockwise from top left. Top left: i. Gaia Ashram food forest on Lao-Thai border with recovered ecosystems on what was previously a conventionally farmed (with chemical pesticides and fertilizers) monocropped farm; ii. top right: eco-building utilizing mud-brick technique with earth and straw from land and build collaboratively with local community and a wider range of volunteers interested to learn traditional eco-build techniques; iii. left bottom: another natural eco-build at Gaia Ashram; iv. bottom right: restored ecosystems with some food forestry, Gaia Ashram Lao-Thai border. (E.Parry, 2015)

To the Thai, Burmese, Cambodian, Vietnamese, Bhutanese, Malaysian, Lao, and Sri Lankan engaged buddhists[2] of the Interreligious Climate and Ecology Network, everything is interconnected, and we are a part of this Living Earth, not separate from or at war with her. For these monks and lay buddhists, engagement is necessary, but it is not about preventing an inevitable death; all life dies and is born again. Renewed again and again, a lifecycle loop fosters resilience and another opportunity to begin. Ecology teaches us this. Our bodies teach us this. We all move through life cycles, as individuals, societies, ecosystems, institutions, and yes, Earth Systems, stars, universes.

Traditional Ecological Knowledge (TEK), ancient nature-based wisdom, and Indigenous practices the world over have been systematically removed, dismissed, and marginalised

[2] Small '*b*' *buddhists*: this is explicitly articulated across many in INEB, to remove the confines of identity and labels, and focus on the 'buddha nature' of a life. The ICE Network includes engaged buddhists from many more countries as well.

throughout the industrial growth era (Haraway's *Capitalocene*) (Berkes, 2008; Maffi, 2001; Turner, 2003; Berkes, 2008). What humanity has been losing from Indigenous, TEK and '*Earth Wisdom,*' along with diminishing biodiversity, inhabitable landmass, and a multitude of species at risk for extinction or already extinct, is our original shared ethos that led us to knowing why and how to live sustainably on the earth. This is a loss of the experience of sustainable living, the ethical or moral compass--and faith in the future-- that this way of living engenders. As Wahinkpe Topa (Four Arrows, aka Don Trent Jacobs) writes in chapter 3 of *Peacefulness: being Peace and Making Peace*, "It is not a coincidence that 80% of the biodiversity on Earth is on the 20% of landmass still occupied by Indigenous people" (Cadman and Gill ed., 2017). Where Indigenous and local TEK (eco-cultural views and practices) have somehow managed to continue despite global exponential growth and extractive industries, resides a biodiverse health and key to recovering wholeness. (Maffi, 2001; 2010; Danaiya-Usher, 2009; IPBES, 2018)

In many cases, Indigenous wisdom and knowledge from ancient (yet ever-present) societies is syncretised or dynamically mutually influential within Asian Buddhist, Islamic, Christian, Baha'i, Brahma Kumari, and Hindu faith practices, with diverse bio-culturally and geographically influenced interpretations. (Kirsch, 1977; Aragon, 1991; Danaway, 2009; Picard, 2011). For example, in Thailand, all Buddhist temples and most buildings and homes (including shopping malls) have spirit houses or *san phra phum*, shrines to keep the spirits of the grounds happy-- an animist practice that precedes Buddhism (Pinthongvijayakul, 2015; Parry, pers.obs, 2014, 2015, 2016).

In the Philippines among the Tagalog people, traditional shamanic Indigenous beliefs and practices, such a Anito or Anitism, have been syncretised into the Catholicism brought by the

Spanish missionaries to the islands between 1521 and 1898; at times this was to protect and preserve these practices, in others the cultural perspectives and practices merged over time with the Catholic religious forms--most evident in alignment of Anito spirits to Catholic saints. (Abogado, 2006) Indonesian interpretations of world religions also exhibit signs of syncretism between Indigenous beliefs and cultures predating the presence of Islam, Hinduism, and Buddhism, now woven into the local interpretation of these faiths (Colbran, 2011; Dali, 2018; Hauser-Schäublin (ed.), 2013). The recognition of syncretism present in Indonesia's majority-practice religions should not fail to recognize the ongoing presence of living Indigenous local ecocultures such as the Kiratist, the Korowai, Yali, Baduy, Dani, Mentawai, Abui, Lamalera, Arang, the Asmat, Dayak, Bajau, and the Aga peoples, among many others (Chapin et al, 2005).

In India and Nepal, the birthplace of Buddhism yet now majority Hindu, many Buddhists identify within Indigenous cultures, with a merging and overlapping across Indigenous communities such as the Kiratists, Simla and others and Jainism, Sikhism, Buddhism, Hinduism, and other religions. Similarly in Sri Lanka (Ceylon in some references) there is a presence of merging Indigenous cultures with Buddhism and Hinduism, while the Indigenous ecocultures, such as the Veddas of central Sri Lanka, continue alongside (Prajapati, 2018; Senarath, 2018; Kraft, 2002; Assavavirulhakarn, 1990; Mayer et al, 1967).

The theory of Spiritual Ecology, as discussed in Chapter 2, serves as a fitting frame in which to capture and examine the nature, values, formation and engagement of the ICE Network, with their convergent and mutual complementary beliefs, traditional wisdoms, knowledge and practices across religions, local eco-cultures, and engaged Indigenous communities.

Definitions of Spiritual Ecology vary to a degree. St. Ethelburga's definition of a Spiritual Ecology worldview centres on the premise that everything is sacred and interconnected. "In the vision and experience of oneness, the term 'spiritual ecology' becomes, itself, redundant. What is earth-sustaining is spiritual; that which is spiritual honours a sacred earth." (Bhohi, 2018) Spiritual Ecology is a response to the values and socio-political structures of recent centuries with their trajectory away from intimacy with the Earth and its Sacred Essence.

Spiritual Ecology as a school of theory has entered western academic discourse, developing as an intellectual and practice-oriented discipline, for nearly a century. Contributors to the field of Spiritual Ecology can be found in the writings and work of Llewellyn Vaughan-Lee, Rudolph Steiner, Pierre Teilhard de Chadrin, Thomas Berry, Joanna Macy, Les Sponsel, Thich Nhat Hanh, His Holiness the Dalai Lama, Wahinkpe Topa, Tiokasin Ghosthorse, Vandana Shiva, and many others who've planted the roots of today's Spiritual Ecology understanding and practices (Vaughan-Lee, 2017; Macy, 2012; Sponsel, 2012; Vaughan-Lee, 2013). Spiritual Ecology theorists openly acknowledge and respectfully attribute the foundations of the field of Spiritual Ecology to diverse and long-survived Indigenous wisdom and practices over thousands of years.

These Indigenous / Earth-Consciousness foundations can also be recognized as embedded within a wide-ranges of sects and expressions within Buddhism, Hinduism, Islam, Christianity, and other major world religions as found in the pan-Asian ICE Network. Although most Eastern religions, especially Hinduism, may readily and practically show that they retain much Indigenous wisdom, one must seek it carefully in Abrahamic religions. It can be found in South Asia and Southeast Asian Islamic rituals, particularly in the Sufi communities (Young, 1990; Vaughan-Lee, 2013). Historic attempts by national authorities

and missionaries to 'purge' major religions of their Indigenous perspectives and practices have not been altogether successful, as mentioned above. Reinforcement of Indigenous presence can be found across global studies of eco-cultures which have syncretized (either as mask /hide Indigenous practices or through a process of gradual merging) their traditional practices, perspectives and beliefs within a major world religion. Aragon's study of Christian minorities and Animism in Indonesia, Bowen's inquiry into ritual and Islam in Gaya society, and Canelle's examination of Filipino Christian views and practices in *After Syncretism: The Anthropology of Islam and Christianity in Southeast Asia*, all reveal residual or saturated perspectives and behaviours indicative of root Indigenous local ecocultures. (Rutherford, 2002; Barnard et al, 2010)

Indigenous populations and their eco-cultural beliefs and practices continue to exist, evolve and engage across Asia on climate and ecology concerns. They do this alongside (and collaboratively *within* the ICE Network) the dominant religions that have syncretised many eco-cultural values and practices. (Sponsel, 2000; INEB, 2012)

In the non-dualistic Indigenous worldview, one that has informed several contemporary religions to some degree, but especially Hinduism and Buddhism, it is understood that awakening is a kind of death and death is a form of awakening. We can die and be reborn within the span of a lifetime and across many lifetimes. I asked a Buddhist monk who is an affiliate of INEB and the ICE Network[3], "How does this all end? Why do you feel we must engage on climate change and biodiversity loss?"

> *"We all die. Avoidance of death is not the point. That is impossible. How we live, how we die, how we renew again and again, that may be what is being asked of us. Nature shows us this. And we are her. We are not separate from all we see and experience in*

[3] The case study for this research is the Interreligious Climate & Ecology (ICE) Network.

this world. To act from fear, to attempt to fix with our brains a world greater than we understand, that is ego, arrogance and blindness. We do not need to be afraid of that which is us. If we live by the Eightfold Noble Path, the teachings of the Buddha, including to Do No Harm, Right Ecology, Right Livelihoods, Right Thought, Right Speech, Right Action, then we can come to understand our own nature. We can step kindly on the Earth, and we can realize our true InterBeing."

-Interviewee #92, INEB and ICE Network affiliate, Myanmar

A distinction is being drawn here, between the wisdom and awareness present within these spiritual and interfaith communities in Asia, and the western-derived cultural lens of a globalized capitalist industrial growth model. While this distinction is in some ways an oversimplification, there are enough telling contrasts between what is happening in the "East" (Asia) and in the "West" (Europe / UK / North America) that it is useful to point out the divide; the contrasts are significant enough to be meaningful in the present context.

This is not to suggest that Earth / nature-based spirituality and traditional ecological knowledge found in the pan-Asian ICE Network [Indigenous / spiritual practices] do not or did not exist in Europe or elsewhere. In geo-locational and endogenous ways, they've long existed, and are quietly re-emerging (Taylor, 2016). Yet societies in Asia have generally managed to maintain a pervasive spirituality central to their daily lives, their institutions, and eco-cultural understanding. While expanding structures of global capitalism and consumerism-based commercialism are present and influential in these Asian countries (Thailand, Sri Lanka, India, Bangladesh, Myanmar, Indonesia, Malaysia, for example), ancient traditions reflecting their eco-cultural views are still practiced and omnipresent. Indigenous beliefs have been syncretised into many local interpretations of Buddhism, Islam, Hinduism, Christianity and other world religions, and Indigenous animist and shamanic

cultures continue to do this, albeit under threat. In countries where these non-dualistic traditions have been practiced, a syncretism took place enabling a coexistence or complementarity that changed the practice of the religion. These root influences inform the ICE Network, that does not see a duality or polarization between these religions and the original traditional spiritual beliefs. Exclusivity is not expressed. Nevertheless, the context and experiences across Asia are quite different (and diverse), due, among many other reasons, to the religious and spiritual beliefs and eco-cultural diversity, as well as organizations and individuals, that come together in an interfaith network centred around climate change concerns.

This thesis is about the tree branch inviting us to step out from the flames, the house burning down functioning as a metaphor for Earth in the Anthropocene, for climate change. On this branch, humans (re)learn our own nature, as part of nature, and (re)discover how to come back into harmony *with and as nature*, through sustainable living.



Photo v: Buddhist monk, Interviewee #63, affiliate of INEB and the ICE Network, standing high up on a tree limb the Bellipola training centre for Analog Forestry

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After more than two decades working in complex emergencies, sustainable development, humanitarian disaster response, recovery, and community-based climate adaptation and mitigation, I stepped away from triage to explore questions in response to climate change within and across most-climate-vulnerable populations and climate "hotspots."

The curiosity that sparked this project originated within an arena of applied research consideration informed by my experiences in international development and humanitarian fields as well as grassroots organising in Asia, Africa, Haiti, and Brazil. My sense was that there is a need to open up spaces for facilitating creative and innovative engagement in the face of climate change that is appropriate, sustainable, and effective for people within their social, economic, ecological cultures. I wanted to learn what might be underway in local communities to address climate change vulnerability and impacts.

I was particularly interested in initiatives emerging apart from the dominant global and national governmental and non-governmental institutions, and the formats and methods of global development and humanitarian agencies. I found those elements driven and informed by international funding and program management bodies (namely United Nations agencies such as the UNFCCC, UNDP, UNHCR, UNOCHA[4], and international Non-Governmental Organisations) particularly restrictive for local communities. By the very formation and founding assumptions of standardized, bureaucratic, centralized, and top-down structures, I realized that such institutions restrict and limit the "culture of approach and organisation," the siloed categories of specialized programmatic focus, and the exogenous nature of program design and implementation.

I asked questions in 2012 that are now (in 2018) being articulated by the former Executive Secretary of the UNFCCC, Figueres. She calls on her audience to find, identify and learn from nature-culture-based, "new and creative" (read: outside the international climate regime) strategies to cope with climate change, strategies that are not to be found within the

[4] United Nations Framework Convention on Climate Change; United Nations Development Programme; United Nations High Commissioner for Refugees; United Nations Office Of the Coordination of Humanitarian Affairs.

perspective informed by institutional path dependency of the dominant structures of global climate and development regimes. My experiences are also informed from within the above-mentioned international institutions, yet also grassroots endogenously driven organisations.

The driving interest of this research is to learn more about endogenously derived, eco-culturally and socio-geographically specific initiatives around climate change, particularly in climate-vulnerable populations. I question whether there are lessons to learn from such activities that could move from specific contexts into generalised applications in the fields of climate change (inclusive of development and humanitarian fields), offering some different, unique creative approaches to the global / local work.

Initially, this early investigation led to the emerging city-to-city and local-to-local climate change networks (such as ICLEI, ISET, ACCCRN and 350[5]) working to leverage local capacities across regions, even across the globe, by groups working directly across broad geographies, rather than 'up, out, and then down again' through the existing bureaucratic hierarchies of governments, International Non-Governmental Organizations (INGOs), and International Governmental Organizations (IGOs).

This inquiry led me to a conversation one evening in Bujumbura, Burundi, with Dr. Nigel Crawhall, an affiliate of the Bangkok-based International Network of Engaged Buddhists (INEB), and chair of an African Indigenous knowledge network focused on climate change (IPACC, or Indigenous Peoples of Africa Coordinating Committee). Dr. Crawhall spoke to me of faith leaders learning about climate change and influencing community action and understanding as well as policy makers. He invited me to present on disaster management

[5] ICLEI: International Council for Local Environmental Initiatives; I.S.E.T.: Institute for Social and Environmental Transition-International; 350: Bill McKibben's originated grassroots global climate campaigns across 188 countries, named for safe level of 350 parts per million of carbon dioxide in the atmosphere.

and climate change at the INEB's first interreligious dialogue on the human drivers of climate change and biodiversity loss in Anuradhapura, Sri Lanka (INEB, 2012). Understanding how much of the world's population is religious—around 84% of the global population practices one of the world's major religions (Hackett et al, 2012)—and influenced by their faith leaders, this appeared to be a very interesting practical strategy, to utilize religious leaders to bring about behaviour and policy change across societies.

What I did not imagine is how this gathering in Sri Lanka, and the ensuing research, would open a new field of inquiry, considerations and deepening understanding for me, one that would shift my vision of what may be possible in our transitioning and uncertain future.

What I witnessed from the diverse participants at this gathering was compelling and very different from my experiences working through international humanitarian, development, and climate institutions funded (or influenced) by International Finance Institutions (IFIs). There appeared to be a clearly articulated and inhabited yet diverse biocultural and eco-cultural sovereignty, a confidence, capability, and new kind of "knowing." Across languages, cultures, geographies, and faiths, I heard story after story of endogenously derived engagement and incorporation of climate and ecological sciences with spiritual and traditional practices.

Many participants are part of populations considered by the IPCC as "'disadvantaged and vulnerable,' local communities dependent on agricultural or coastal livelihoods." Indigenous Wanniyala-Aetto, or Veddahs, of Sri Lanka sat together with buddhist monks and Muslim Imams, Hindus, Christians, Baha'i, Brahma Kumaris, Vietnamese hill tribe animists and Filipina shamans, sharing their local beliefs and ancient sacred texts around duty of care

and understanding of nature, and learning together the science of climate change, while connecting the ways this science translates to their own local experiences.

The healthy, holistic, and inclusive nature of this gathering and the seeming wide ranging climate and environment-focused initiatives alongside generous, spontaneous cooperation intrigued me. The Pan-Asian Interreligious Climate & Ecology (ICE) Network was formed, with clear commitments, at the close of the Anuradhapura conference (INEB, 2012). It has since blossomed rapidly and multi-directionally across the Asian continent.

I wanted to learn more. I felt there was something emerging in these collaborations, and this newly formed interfaith climate change and ecology network, that might illustrate a very different path than the one predicted across humanitarian, development, and climate-siloed terrains. This compelling experience, this intrigue and curiosity, led me through five years of research and discovery with the ICE Network —primarily examining the nature of how the network and its affiliates were formed, the processes facilitating social change and climate engagement; and, secondarily, its activities and initiatives for climate change resilience, carbon sequestering, biodiversity recovery, and new market systems.

An aspect of my journey through this research emerged in a surprising experience where my perceptions and priorities shifted away from an "end-point outcome." Rather than ascribing a pragmatic, reductionist value to the potential of spiritual communities and clergy / monastics as *vehicles for community climate change education and policy influence*, I found myself drawn into a deeper understanding of the influential energy of liminality pervasive across ICE Network gatherings, activities, and affiliates' processes. (Roy Wagner, building upon Victor Turner's work on ritual, energy and liminality, asserts that liminality and energy are interchangeable, that ritual can create a kind of 'energetic holding space' for *communitas* or

'holy communion' and *flow* wherein activities and engagement simply 'happen' through a trance state of a whole system or group, rather than being directed or dictated from mental intention or central 'leadership.') (Wagner, 2017; Tuner, 1997)

The (eco-cultural) values imbued in the gatherings and collaborative work, the way in which the diverse groups and activities came together harmoniously without merging into a singularity, and they way they manifested into unique organisational and functional applications seemed remarkable. There has not been a reduction and diminishing of the diverse beliefs, languages, geographies, and eco-cultures into one simplified "common value, mission and belief." This is distinct from many interfaith and diversity coalitions who may simplify their collaboration or 'mission' to the extent that their unique facets have been divested of meaning or effect.

Chapter 1 begins with an introduction to the ICE Network, drawing out the values, processes and activities, alongside that which makes the ICE Network unique, exciting, and important as a case study. Chapter 2 offers up a literature review, looking more closely at the Gaia theory, Earth Systems Theories, and Deep Ecology, Spiritual Ecology, or Sacred Ecology, in relation to Roy Rappaport's conception of a rising new *Universal* religion of the 21st century in response to the global ecological stressors (Rappaport, 1999; Lambek, 2001). Chapter 3 provides the details of the full research design, methodology, implementation, and research questions for this research. Chapter 4 is an examination of the network formation, processes and functions of the ICE Network. It explores new concepts of ritual, religion, and governance in a diverse climate network setting; convergent eco-cultural and spiritual perceptions and action; the contributing foundations of the network, including an anti-structural organising critique; and conflicting experiences across gender and generational

leadership (as well as the ‘feminine rising’). Chapter 4 explores a potentially pivotal contribution of the ICE Network affiliates through their efforts towards building a new climate-smart economy via the Good Market and the Mindful Markets forum, one where markets are viewed as social constructs that may be infused with the values and practices determined by their co-creators. Chapter 4 further emphasizes the activities and findings from ICE Network affiliate actors and considers the challenges of creating a new and transitional economy within the context of a very powerful, globalised, and established market systems. Finally, Chapter 5 concludes the thesis.

Chapter 1

The Interreligious Climate & Ecology Network: Spiritual Ecology and Social-Biodiversity

"The Buddha taught us to have compassion and loving kindness for all living beings. There is a strong Buddhist tradition of environmental conservation, a tradition of protecting water, forests, and animals. [...] Buddhist practitioners have a responsibility to respond to climate change and the suffering that it is creating. We have a responsibility to address the root causes, mitigate the impact and adapt to change in our own communities." -interviewee #27 [Buddhist], Sri Lanka, INEB, SLF, ICE Network

"As we live in the forest, we are respectful of the environment. When we farm, we don't disturb the trees. We maintain the watersheds around springs. When we hunt, we never kill the females. When we need timber, we cut the branch, not the tree. We are rooted in these values, and we instil them in our children. We live with the environment, not in competition with it."

- Veddha[වැද්ද; வேட ர்] chief Uruwarige Wannila Aththo, Sri Lanka

"Unless we wake up humanity to a spiritual level, none of these things we are talking about [climate change solutions, paradigm shift, critical mass] can be implemented." - Ariyaratne, Sarvodaya



[6]

"We have been too busy dealing with the war--the IDPs, the conflict, the resettlement-- only now can we begin to think about climate change."- interviewee #119 [Hindu]- SLF, Sri Lanka

"Everyone and everything is our neighbour because we live in an interdependent world. When you love your neighbour, you protect them." -[Catholic]

Interviewee # 81, South Korea

"Assuredly the creation of the heavens and the earth is greater than the creation of mankind: Yet most men understand not.--from the Holy Qur'an 40:57" - interviewee # 98[Muslim], Islamic Forum, Muhammadiyah, Indonesia

"We worship nature. Nature inspires us. Spirit lives in all life. In the trees, in the waterways. Spirit is in the seed, and in the tree roots, and the leaf that has fallen to the earth. We are in the spirit too. The land and the forest are sacred. All life is sacred. Earth is mother. Sun is father. We are family. We must not harm our family.--Interviewee #44 [Animist / Ma Lieng]; TOA, SPERI, Vietnam

"Unless we change our own value systems, we can't expect others to."

-interviewee #76, INEB, JNEB, Japan

"How can I leave this situation to my children? Is this moral? Is it ethical for us to leave this to the next generation? When you read the papers and listen to the speeches, it is clear that the world's

[6] *Photo vi: Peacock climate change dance, at the inter-religious dialogue on human drivers of climate change and biodiversity loss, ICE Network at the Islander Center, Sri Lanka.*

biggest political leaders are not working genuinely to find answers to this global crisis. Are we going to allow them to continue like this?"
-Interviewee #47, India, FSM, INEB [Buddhist]

"One way to reduce global warming is...to just do it." -Interviewee #17, Thai buddhist monk, sufficiency economy eco-temple (Photo from the eco-temple sufficiency economy land, utilising Traditional Ecological Knowledge and permaculture methods to restore biodiversity and grow food for the community; near Chiang Mai, Thailand)



Photo vii., left: transitional organics combined with TEK (traditional ecological knowledge) community agro-ecology project, ICE affiliate projects, Sri Lanka.

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Origins and Foundations of the ICE Network

At the Islander Center in Sri Lanka, 2012, the Inter-religious Climate & Ecology (ICE) Network formed across faith and interfaith groups, incorporating faith and spiritual teachers and leaders, Asian-based ecologists and academics, Indigenous populations, and grassroots organisations across Asia. This included small-village farmers and fisherfolk as well as affiliates from as far away as Africa and Europe. They came together, facilitated by the International Network of Engaged Buddhists (INEB), for an interreligious dialogue on the human drivers of climate change and biodiversity loss. The objectives of the first conference were to "inspire a commitment from interfaith leaders, as well as environmental and climate scientists, conservationists and social activists to engage with the core drivers of declining biodiversity and climate change" (INEB, 2012).

The program was organised around 1) facilitating an understanding of the drivers of climate change and biodiversity loss from a scientific and a socio-political-economic perspective, exploring risks, impacts across vulnerable communities, and bio-regions in Asia; 2) articulating a faith-based interpretation of root causes and change theory; and 3) initiating an analysis of hindrances to climate action, developing an initial roadmap for interfaith cooperation and collaboration in the Asian context, to "engage in appropriate action to bring about socially just, sustainable and healthy communities within healthy environments." (INEB, 2012) The conference itself was initiated with spiritual interfaith ritual. These rituals permeated the entirety of the week-long program.

Photo viii. below: one of the many multi-faith shrines at the Islander Center, Sri Lanka, during the first ICE Network conference.

(Parry, 2012)





Photo ix. left: a special ceremony at ICE I conference between a Sri Lankan Tamil Hindu priest and a Sinhala Buddhist at a forest shrine for Ganesha, recognizing interconnection and vowing to care for Mother Earth together (2012, E. Parry)

While the ICE network appears young, having only formed in 2012, the actors and networks involved represent not only generations of local grassroots actions and collaboration within Asian countries, but also broader collaboration and relationship-building across faiths, languages,

ecosystems, cultures, and geographies. An earlier generation, which has enabled strong collaborative relationships across geographies, cultures, and faith, includes foundational engagement from A.T. Ariyaratne and Sarvodaya—the 1970's founded ecological-social education for social change institute in Sri Lanka, and for whom Joanna Macy (general systems theorist, buddhist activist, and board member of INEB) worked; Harsha Navaratne, founder of *Sewalanka Foundation,* and Ariyaratne's nephew (Navaratne is the current president of INEB); Thai activist and thinker Ajahn Sulak Sivaraksa, founder of *Sathirakoses Nagapradeepa Foundation* as well as the International Network of Engaged Buddhists, whose international board and patrons also include H.H. the Dalai Lama, HH the Karmapa, ecofeminist Vandana Shiva, Lama Lodi Gyari Rinpoche, Vietnamese Zen monk Venerable Thich Nhat Hanh, Taiwanese Venerable Bhiksuni Chao Hwei, Thai Venerable Maha Somchao Kusalacitto (Siam), Venerable Pomnyum Sunim (S. Korea), Venerable Tsing Tao (Taiwan), Venerable Master Ren Da (China), and Kingjiro Niwano (Japan); the Islamic Forum of Indonesia and Muhammadiyah, as well as interfaith peacebuilding coalitions across Myanmar (Burma), Sri Lanka, Cambodia and Korea; as well as many other overlapping networks that grew from these influential convergences at the first ICE Network gathering. The efforts, knowledge, and capacities of the ICE Network's "forebears" contribute to its ability to catalyse and facilitate action and engagement around climate and conservation concerns.



Photo x: LTTE militarized border near Vavuniya, 2001 (Parry)

ORIGINS

Near Vavuniya, in Sri Lanka, a border once stood which, for over three decades' civil war, served as the military checkpoint delineating the Sri Lankan government (SLGO) Sinhalese-controlled area of the south and the Wanni Zone, the region deemed "occupied" by the Liberation Tamil

Tigers of Eelam, or LTTE. Not far from there, at a place called the *Islander Center* in Rajanganaya Anuradhapura, Buddhist monks, Hindu priests, Muslim Imams, Philippine Shamans, Japanese Shinto priests, Vietnamese animists, the Indigenous Forest Veddas of this central Lanka region, and many others—including Thai farmers, Burmese fisher-folk, Lao grassroots organisers, Malaysian business professionals, biologists, and ecologists from across Asia—gathered for a week in September 2012. They came to discuss the human drivers of climate change and biodiversity loss through an inter-religious dialogue facilitated by INEB. The Sri Lankan conflict, one in which Buddhist Sinhalese and Hindu Tamils were enmeshed in religious clashes, had only been declared "over" by the Sri Lankan government less than three years prior.

Photo xi below: slash and burn by war IDPs passing through, in area of the Islander Center (Parry, 2012)



Around the same time as the proclaimed end of the decades-long civil war, the land where this gathering took place looked very different. Bombs had decapitated the trees of the forests many times over, war-displaced elephants ravaged the forests and surrounding ecosystems; displaced humans engaged in slash-and-burn farming, looking for quick and ready yields from lands they would likely never call home. Desertification was in full bloom. Increasing stretches of drought, advancing soil erosion, followed by severe and unpredictable monsoons, floods, and landslides, levied havoc against the land and its inhabitants. For years, the land in the Wanni region has been dry, the earth cracked or scorched black, the brush brown and yellow. Long-neglected water wells had run dry or been destroyed in the fighting. The traditional *wewe* water systems, genius irrigation systems dating as far back as 300 BCE, were damaged, neglected, and disrupted.



Photo xii above: a building has partially fallen off into the sea, an example of coastal erosion in Sri Lanka was visited as part of the climate change study visits in the ICE Network conference. Mannar, Sri Lanka, 2015.



Photo xiii. to left: The Wewe and lake at Islander Center are teeming with life: hundreds of reptiles, thousands of insects and birds, two crocodiles, and many water monitors. This contrasts with the above slash and burn photo, which this area resembled 3 years prior to the start of an Analog Forestry project at the Islander Center (2012).

It was here that the ICE Network was formed. But the spaces were deeply transformed just 3 years after the war was declared over in 2009. A Sri Lankan ecologist, Ranil Senanayake, and his students had been working with the Sewalanka Foundation to recover the biodiversity of the area, including many species thought to be extinct, through a method of analog forestry which Senanayake developed. Analog forestry, a system of silviculture -- a holistic form of forest conservation and management--considers the processes through which forests and ecosystems form and design a recovery of a local ecosystem through a synthesis of local Traditional Ecological Knowledge (TEK) and current scientific knowledge considering natural forest succession dynamics--the ecosystem is designed to be analogous to the Indigenous community of plants, fungi and animals (climax community). It is distinguishable from agroforestry, as in agroforestry, an increase in the production of crops and income generation is the desired goal. Analog Forestry holds conservation of biodiversity as an equally important goal, if not more so, than economic gain. Analog forestry also has far greater potential to sequester carbon than plantation forests, and contributes greatly to healthy, resilient food systems, while aiding in mitigation of climate impacts. (Senanayake, 2015; Palihawadana et. al, Sewalanka Foundation Report, 2012).

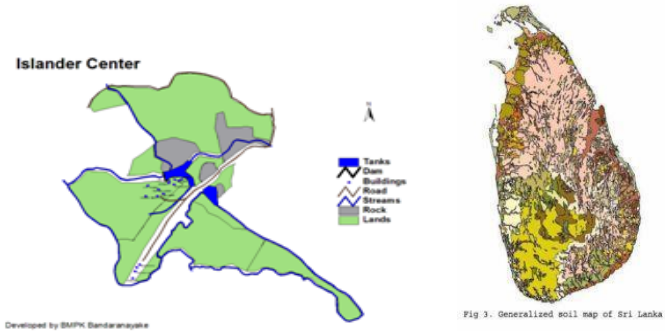
At the Islander Center, analogy forestry resulted in a return of thousands of species in a very short period and the vibrancy of the traditional Sri Lanka ecosystem recovered. Exceptional in its own right, this space, which became the Islander Center (see more on this in Chapter 4), served as a location to facilitate the formation of the ICE Network through the INEB interreligious dialogue on climate change conference. The space functioned as an area

dedicated to experiential education and modelling practical trial-and-error engagement that could support carbon sequestering, mitigate climate risk, and sustain life for many species, including humans. This is the first example among many of the ways in which the ICE Network affiliates model demonstrates process-oriented application of ideas, inspires its affiliates, catalyses action (exponentially), and shares knowledge and capabilities across a large and growing dynamic web of social ecosystems, organizations and engaged actors.




Photo xiv, left: a water monitor enjoys an early swim at the Islander Center; photo ix right, this land just 3 years prior was brown and cracked dry, scarred black in spaced, inhospitable to life.

The Islander Center now covers over 100 acres and many different soil, water, and plant systems (organic farms, the tank band, lake, scrubland, forest). Rajanganaya is categorised as part of the agro-ecological zone termed “Low Country Dry Zone.” It functions as an important biodiversity repository. In just 3 years after the analog forestry strategies were initiated, a flora and fauna review of Islander identified 43 species of butterfly (an important indicator for healthy biodiversity), 7 species of amphibians, 11 mammal species, 84 bird species (several of which had been thought to be gone from the island, potentially extinct), 197 plant species, and thousands of species of insects (Palihawadana et. al, Sewalanka Foundation Report, 2012).





Left and above, maps of the Wanni and area of Analog forestry recovery area where Islander Center was formed.

The key influential aspects of the first ICE Network gathering could be seen as ritual and storytelling involving faiths, beliefs and interconnections, alongside experiential education, demonstrating initiatives (do more, collaborate more, talk less), and the critical engagement of root causes, economies, politics, and global structures.

This study of the ICE Network has found that the same processes of ritual, critical engagement, facilitated and experiential learning, modelling and collaborating, have patterned themselves across the network affiliates spanning the Asian continent, but with different, unique, and endogenously informed cultural and ecological/ locally-based iterations and elements.

Schema of the Network Formation & Processes

Below is a schema, identifying the consistent pattern of engagement across ICE Network affiliates and the way in which this disseminates across a dynamically co-arising, expanding and adaptive porous network. (1._ Is the initiating point through the cycle to (4) and then the cycle initiates again in multiple new cycles, as each person catalysed in the first cycle becomes a facilitator and catalyst for others in their own populations:
Key:

I. Ritual & Religion: 'Spiritual Awakening'' 'Awareness' Liminality of energy created through ritual
II. Education for Social Change; critical analysis paired with experiential education (We Make the Road by Walking)
III. Experimental / Creative applications of ideas; modelling of learning
IV. Modelling, facilitating, connecting, inspiring, catalysing. Advocacy & Policy (leveraging the collective)

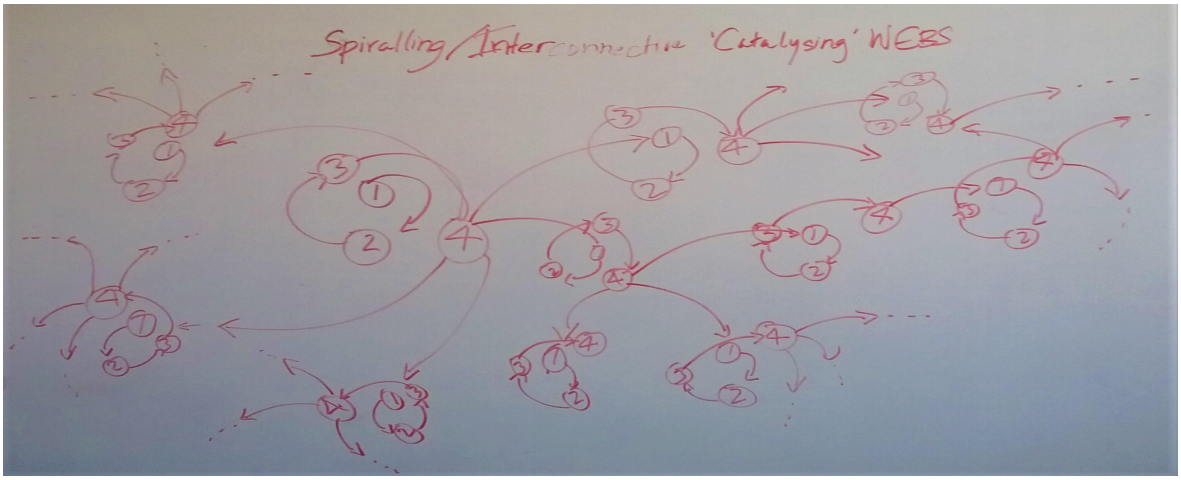


Photo xvi: Modelling spiral-webbing process across ICE Network affiliates.

There is an aspect of a multidimensional dynamic web of life, as well as spiral dynamics, within ICE Network formation and processes (difficult to depict in 2-D).

What is unique, special, and different about the ICE Network?

I. Refusing Institutionalisation, Structure, and Codification

The ICE Network is not a member-based, but an *affiliate*-based network—a gathering of friends, or, in Buddhist terms, *kalyanamitra* (spiritual friends). There is a strong intention in and across the ICE Network to avoid forming hierarchical structures and centralised, vertical *or* horizontal organizational formations, and to resist codification. Institutionalisation and heavy structure in organisations are deemed destructive and potentially negating to self-determination and wellbeing as well as sustainable rights-sovereignty-based civil society engagement. The dynamic shifting flexibility and even porousness of the network enables rapid, widespread, endogenously derived, bio-culturally unique and specific climate change and conservation actions.

The formation and function of the network is reflective of convergent views and shared values across faith and spiritual actors in the network. Concepts of deep ecology, sacred or spiritual ecology, have been discussed such that they reflect the values and perspectives found in the sacred texts of Buddhist, Hindu, Muslim, Christian, animist, and other spiritual groups. ICE

Network functions, from the macro to the micro, also demonstrate applied understanding of ecosystems (social-ecosystems) and strategies for collaboration with each other and whole ecosystems. The movement and activities of the ICE Network show a dynamic mutual co-arising and flux equilibrium—concepts referenced in sacred texts, as well as in Earth Systems Theory, General Systems Theory (and GST and the Dharma), and Gaia Theory--Earth as a self-regulating organismic system (see Chapter 2).

My research has found significant organisational resilience enabled by this network formation as well as the suggestion of increased resilience and capacities to cope with climate change and other complex stressors by network affiliates. Porousness of the network and the ability to expand and include easily diverse actors and activities contributes to the strength and resilience of the network and its ability to influence the efficacy of climate change action both directly and indirectly.

II. Critique and Alternative Model to the Dominant 20th Century Paradigm

Consistently throughout interviews, conferences, and my time as a participant observer, clearly articulated and theoretically grounded critiques of the "dominant western paradigm" were expressed. These critiques were accompanied by facilitated spaces for experiential learning in order to explore, develop, and co-create strategies to address distinct priorities and concerns of network actors and their self-identified communities. Such creative experimental initiatives were undertaken in line with unique and specific spiritual bio-cultural values, concerns for the ecosystems and their placement within them, and the specific climatic, social, economic, and ecological challenges experienced by a given affiliate.

Very different models from the conventional international development structures, institutions, and funding structures have emerged from these approaches and are explored in this

dissertation through the examination of the network's formation and functions, as well as in the activities and initiatives of the ICE Network and its affiliates (particularly through markets).

III. Bio-cultural Values; Religion, Spirituality, and Unity through Diversity

The ICE Network overrides and offers a counterexample to perspectives that view religion as divisive, contributing to climate change, and reinforcing dominant power structures.
There is a convergence across faiths, geographies and ecocultures around shared values of appreciation, particularly related to climate change and biodiversity loss. This unifying element appears threaded across diverse communities through ritual, storytelling, shared beliefs, and working directly and collaboratively. So much of what ICE Network affiliates do together and in their own communities begins with what affiliates term "spiritual awakening" or "awareness" Moreover, action on climate, ecology, and community seem to emerge from that space. The meta-narrative that appears to bind people together can be captured in an encompassing term of "spiritual ecology," a convergence of faith and Indigenous eco-cultural perspectives that see nature, the world, all as sacred. (Sponsel, 2015)

Network affiliates often share certain core values that include but are not limited to the commitment to "Do No Harm," the ethical and moral responsibility to care for and show compassion towards all beings now and in the future, human and non-human alike ("all beings for all time"). The Inter-religious Climate and Ecology Network is one that strives to maintain the local endogeneity, diverse bio-cultural perspectives, and self-determination and sovereignty of its affiliates in each location, while spanning 36 countries in Asia and linking the network to affiliates in Africa and Europe.

The perception of humans as part of nature is consistent across the varying faiths, beliefs, and cultures of the ICE affiliates. Having been, through the structural violence of industrialised

power systems (cultural, political, economic and pedagogical hegemony), forcibly yet artificially separated from nature / their own nature, a general consensus among affiliates is that humans can come back into healing with and for Earth, by listening to what nature wants and needs, and "collaborating" with her. This is already different from Haraway's vision of a future *Chthulucene,* where nature or the *chthonic ones* who "have no truck with homo" (humans) are resurgent, while humans, whom she presents as separate from nature, recede. Haraway is critical of monotheistic religions as "exterminators of nature." (Haraway, 2016) This might seem like a contradiction between her view and that of the ICE Network. Yet, there are more shades of grey in this network. There is great anger and pain felt across the network for this "extermination" of nature, as Haraway puts it (Haraway, 2016), or demonization of nature, as Metzner writes (Metzner, 1993).

Within the ICE network, problems related to religious fundamentalism are recognized in a general sense, yet the "West" and globalised capitalism are blamed more often than religions for the violence, injustices, and ecological tragedies facing our world. Some of this may be attributed to many of ICE network affiliates' own relationships within major world religions, or interest in sustaining strong relationships with each other within the network. Many interfaith linkages within the ICE Network are pre-existing and were developed intentionally through locally networked peacebuilding initiatives-- for instance in Myanmar between Buddhists and Muslims, in Sri Lanka between Hindus and Buddhists. These relationships grew around shared interests that expanded to ecological and climate concerns and an examination of root causes to shared problems. Still the dominant findings across interviewees indicated no sense of conflict across various religions--at least interpersonally and within the network this diversity is viewed as a strength--and more a sense of conflict with dominant economic and power structures. There is recognition within ICE Network of the ways in which dominant power structures (through governments, military and markets) have utilized religious institutions in order to control populations, yet a distinction in this anti-structural group is made between institutions

and communities of critical engagement and applied values. Perhaps more apparent and documented in North American and African encounters with Abrahamic religion, specifically a history wherein Christianity and Christian missionaries served as an arm for coercive assimilation[7] , the experiences in Asia are specific to cultures and histories experienced by those in the Network. Importantly, the engagement of these groups affiliated with the ICE Network are at the forefront of building new systems, so therefore are not mainstream or representative of dominant conditions. Their exceptional dynamics rather are of value to study their responses and the processes involved in initiatives to build new systems, to model other ways of doing and being. What is of significance in this network, in part, is the way in which different faiths and Indigenous beliefs are viewed within this group as convergent and complimentary around duty and care for the Living Earth and all her inhabitants, and the way in which this can be expressed through the language and values of Spiritual Ecology, reverberating strongly if not always explicitly recognized, with Indigenous wisdoms and practices.

IV. Activities / Initiatives of ICE Network Affiliates As Models for new systems & process formation (*What does the ICE Network do?)*

The activities of ICE Network affiliates, derived from ICE Network gatherings, trainings, workshops, and facilitated spaces, are not predetermined, assigned, or otherwise designated or controlled by anyone other than those who have decided to undertake the activities. There is freedom to explore strategies for action and a degree of creativity difficult to find within global conventional development, humanitarian, and climate change institutions. The freedom is present, in part, because there are little or no funds available for activities, and the activities themselves emerge from the context, need, or interest of the implementers. There is no "waiting for permission" from another entity in order to move forward with initiatives.

[7] Many native nations survivors share accounts from Turtle Island / United States of being forcibly removed from their families as young children, forced into English-language only Christian boarding schools where speaking their own languages or practices their own cultural ways was violently punished.https://www.wkar.org/post/survivors-indian-boarding-schools-tell-their-stories#stream/0 https://boardingschoolhealing.org/education/us-indian-boarding-school-history/ Spanish missionaries arrived in the Americas (Turtle Island) as early as the 1500s, and many Indigenous peoples were murdered, beaten and enslaved under the orders of Catholic missionaries; forced to convert to Christianity and compelled to forced labour under the auspices of the Church.

The majority of actions begin through learning and taking inspiration from others. Capabilities and resources are assessed and, where resources may be lacking, a decision is often made to begin with what each group or community has and to build from there. The phrase "We make the road by walking," a reference to Myles Horton's work with the Highlander Center nearly 100 years ago, indicates the determination to first envision a path forward and then to work together to create it. One does not have to have mountains of money to bring transformation, change, and healing to facilitate collective wellbeing. Often, this "taking the leap" into activities draws resources and support in the process.

The nature of the network, and the manner in which activities are determined and implemented, means that it can be a challenge to track and document all that is underway across ICE Network affiliates as a result of the facilitative, catalysing, and supportive role that the network plays. The engagement of affiliates is widespread, and the education and modelling aspect means that with each individual or group inspired and catalysed to action, there can be 10s to 100s more activities that quickly follow. What manifests could be likened to the ripple effect of a stone in a pond, except there are many stones across many inter-linking ponds.

The activities and initiatives of affiliates catalysed through ICE Network engagement serve to provide very different models for addressing the challenges of climate change than found in international development, humanitarian, and climate regime institutions. These activities offer an alternative, new, and transitioning models that could help existing institutions re-imagine a path forward out of limiting systems that struggle to respond to the complexities of life in the Anthropocene.

While diverse and locally specific in nature, these activities can be generally grouped in the following clusters:

Ritual & religion	Sacred Ecology; ritual and liminal connective coalescence of religious and spiritual alignment of Relational Ontology
Education for social change / experiential education	Learning and training exchanges; technical capacity exchanges; learning and curriculum support with commitment to adapt ideas and models to each new local circumstance
Biodiversity Restoration and transitioning food systems:	analog forestry, permaculture food forests, analog forestry, organics transitions, disaster risk reduction and recovery through new social-ecological / holistic systems; ecotemples, ecochurches, ecomosques, ecovillages; urban-peri-urban-rural cooperation;
Mindful Markets: endogenously, spiritually, bio-culturally, and climate / social justice rooted values informing and shaping new markets systems	Building market webs across Thailand, Vietnam, Myanmar, Laos, Cambodia, Malaysia, Indonesia, and broadly across Southeast Asia; linking to market webs out of Sri Lanka that are merging with South Asian and Southeast Asian market webs; Gradations of new and transitioning market systems; Utilising free and low-cost technology for lean business 'start-ups' and the collaborative construction wider sustainable, Right Livelihoods climate-smart market webs Urban-peri-urban-rural linkages for biodiversity restoration and mindful markets

[redacted]

Above left photo xvii: early stages of an village / temple organic and permaculture transition in Burma; Above right photo xviii, Buddhist monks from Sri Lanka and Thailand study the plants in a cooperative plant nursery intended for transitional organic and permaculture design; Below left xix, a Lao village continues stages for Analog forestry; photo xx below right, Thai students study Buddhist 'nature collaboration farming' techniques with farmers. (Parry, 2015)







Ritual commences and permeates ICE Network affiliate activities. Above right photo xxi, Buddhist monks and a Muslim Imam join Thai and Cambodian and Burmese farmers and students in planting sacred peace trees to support regenerative biodiversity while building relationships of peace and mutuality. Bottom right photo xxii., South Korean, Indian, Thai, Nepalese, Sri Lankan and many other faith actors and community members undertake an interfaith 'Climate Yathra' or spiritual pilgrimage for climate

education and outreach. Below left photo xxiii, a permaculture and natural building training at Wongsanit Ashram includes meditation, ritual and experiential learning. Below centre xxiv and above right xxv, an interfaith spiritual 'Smudging' or 'Smoke' commences a day of experiential learning and discussion at a Thai ecotemple and eco-Ashram. (Parry, 2015, 2016.







Applications & Implications
(Why is this important? Why does a study of the ICE Network matter?)

he ICE Network is an important case study for a myriad of reasons relevant to global climate change discourse and the climate regime—particularly creative nature-culture solutions, behavioural change, thinking about how people mobilize and the significance of ritual and belief, and the importance of having spaces for creative trial and error where mistakes are teaching tools, not reasons to lose funding in subsequent donor cycles. Practically, a study of the ICE Network offers lessons and new insights into endogenous, local, sovereign, and holistic strategies to address the drivers and impacts of climate change. It also offers unique strategies through blending TEK and science

across diverse bio-regions and bio-cultures. It presents a new consideration of our assumptions around “scale” and programs that must be “scaleable” so therefore must be standardized in a toolkit form. The ICE Network shows something different—the potential for high scale impact through the local-to-local interconnections, while still keeping origins and emphasis local, “small is beautiful.” Moreover, it reflects the nature of richly diverse ecocultures.

Culturally, an actively collaborating Asian interfaith network, focused on the ways faith and spiritual beliefs bring affiliates together on ecology and climate change concerns, presents a new perspective on how differences are perceived, and how, just as in healthy ecosystems, we can be different for the sake of each other and ourselves. Diversity makes for health and wellbeing. Expanding through and beyond these pragmatic (and important) values is a much more encompassing insight into the way in which humanity’s relationship to the living Earth is changing.

While a global eco-crisis of rapidly increasing mass species die-out may unfold, and rising global temperatures with all their repercussions accelerate, these traumas and stressors could catalyse a monumental shift in consciousness and identity in humanity. Our relationship to spirituality, to the wisdom of our ancestors, to our complementary Indigenous and endogenous ways of knowing, doing, and being, and to our perceptions of our roles as collaborators or disruptors in the Gaian self-regulating organism we call Earth may be undergoing a great shift. In the ICE Network, this relationship is not just conceptual. It is what drives direct action and what seeds the practical methods and models in their work.

For most of human history, humanity has lived in a flux equilibrium as part of the natural cycles of their ecologies, the traditional ecological knowledge and mythos of peoples serving as a cord across time and a lifeline for progeny. The advent of agrarian and industrial revolutions, the introductions of hierarchical and structural power formations, created chasms in humanity's perceptions and awareness of our relationships to our own nature and the Living Earth. A kind of concussive amnesia formed. Where there is forgetting, there can also be remembering. Can we return to our beginnings, our roots? When something is splintered, it can never be made whole as it was before. Healing happens around and with the scars. How will we transform? Will we transcend?

Chapter 2

Climate Change, Systems and Movements: A Theoretical Framework

I. Introduction and Overview of Chapter

The Geological Epoch of the Anthropocene

Not yet formally accepted by the International Commission on Stratigraphy (ICS), nor yet the International Union of Geological Sciences (IUGS), nevertheless, geologists and conservationists argue planet Earth has entered the epoch of the Anthropocene (Angus, 2016; Lewis, 2015; *Subcomission on Quaternary Stratigraphy Anthropocene Working Group*, 2016; Zalasiewicz*, Williams, Steffen, & Crutzen, 2010).

On 29th August 2016, the Anthropocene Working Group (WGA) presented evidence to the ICS in South Africa that the Anthropocene officially began in 1950; "The WGA's suggestion will face a rigorous evaluation before it can be scientifically accepted by the commission. It

may be many years before it is formally ratified." (Castree, 2016) The Anthropocene epoch represents a subdivision of geological time, 'functionally and stratigraphically distinct' from the current recognized geological age of the Holocene (Waters *et al*., 2016).

Holocene conditions, according to Johan Rockström (formerly of the Stockholm Resilience Center), are the only ones in which we know for certain humans can survive and prosper (Rockstrom *et al*., 2009). The Anthropocene as an epoch is proposed to mark the period of time in which human activities began to effect significant global impact on planet Earth's ecosystems and geology- to a degree in which human activity is leaving its signature on the fossil record (Zalasiewicz *et al*., 2011). As Jamie Lorimer has written, "Now, we are being depicted as geological actors, entangled within and responsible for a powerful, unstable, and unpredictable planetary system" (Lorimer, 2015).

While ecologist Eugene F. Stoermer applied the term 'Anthropocene' in the 1980's to reference evidentiary impact of human activity upon the planet (Crutzen & Stoermer, 2000; Kociolek, 2012), it was atmospheric chemist Paul J. Crutzen who made the term known in 2002, asserting the impact of human behavior on the Earth's atmosphere and climate is so great as to constitute a new geological epoch for its lithosphere (Crutzen, 2002). "Anthropogenic pressures on the Earth System," writes Walker, et.al. in *Ecology and Society*, " have reached a scale where abrupt global environmental change can no longer be excluded," and that "Transgressing one or more planetary boundaries may be deleterious or even catastrophic due to the risk of crossing thresholds that will trigger non-linear, abrupt environmental change within continental- to planetary-scale systems." (Walker *et al*., 2009) While humanity has always had some influence on climate, well before the Industrial Revolution, it is only in the past seventy years that this influence has been so disproportionate

as to influence the balance of the Earth systems. Disputes over the start of the Anthropocene epoch continue- some identifying the beginning as marked in 1492 when the first Europeans arrived in the Americas and the start of the Industrial Revolution (Lewis & Maslin, 2015), others identifying the start coinciding with the Atomic, or Nuclear Age (1946) (Smith & Zeder, 2013).

Political, social and cultural acceptance of the Anthropocene increases, with a growing understanding of the human drivers of global climatic change. Understandably, the magnitude and consequences of this existential shift and threat are difficult to absorb, let alone to process, then gain clarity for action to adapt, mitigate and develop resilience within this new reality (Garrard, 2013; Hulme, 2010; Latour, 1993; Norgaard, 2011). The challenge to build or strengthen capacity and systems that are appropriate, sustainable, and effective for coping with climate change is great, and the learning curve is steep (Chapin III *et al*, 2006; Chishakwe, 2012; Friman, Linnér, & Hjerpe, 2006; Wise *et al*., 2014).

How do relationship formation -and perceptions of ways of relating- influence capacities for climate change resilience? It is the contention of this thesis that in order to identify new and creative models that may contribute to solutions for the complex challenges of climate change in the Anthropocene, relational formation, processes in systems, as well as values perceptions and beliefs must be examined. The discourse of examination will be stronger and more relevant if it is broadened and deepened through inclusion of more voices, of new and different ways of relating, acting and engaging within the global climate change conversation. This involves the way in which humans relate to themselves, each other, and the natural world.

The Anthropogenic era itself presents a period of vast and potentially all-encompassing change on the planet. It affects economies, politics, social and cultural systems, and of course, ecosystems. Its implications are far-reaching-- challenging the very way in which we humans live our lives and relate to other life on the planet. For many, it challenges the potential and continuation of humanity's existence upon the Earth.

This chapter reviews and critiques relevant literature pertaining to perceptions, beliefs and ideas of relating to each other and the planet. It does so in order to develop a new framework of understanding of our foundational systems, our processes of belief, engagement cooperation and behaviour change, in the rapidly evolving ecologically and spiritually-rooted climate change networks.

The following section starts with a discussion of social and eco-cultural change in revitalization movements, examining aspects of perception and relating to self, others, and larger systems. Section (a) introduces and examines organismic analogies within revitalization movement theories regarding cultural and social movements— suggesting an alternative to adaptationists' siloed, interchangeably categorical view of nature and social systems. This organismic systems exploration continues into section (b) of this chapter, wherein General Systems Theory (GST) and the Gaia Hypothesis open up potential, and at times controversial, facets of organismic systems theory in the context of climate change. Finally, section (c) follows the link from General Systems Theory and organismic analogies into social ecology, and sacred, deep, or spiritual ecology, and the role of ritual and religion, and concept of Universalism, or *Unity and Diversity*, in a time of great ecological crisis. The research sub-questions are reiterated as they emerge from this theoretical framework of relational formation.

II. The Literature

a. Revitalization Movements, Social Change and Transformation

> "A revitalization movement is defined as a deliberate, organized, conscious effort by members of a society to construct a more satisfying culture." (Wallace, 1956)

Having surveyed many religious movements in anthropological literature for his article (Wallace, 1956), Anthony Wallace established a unifying framework to conceptually define instances of attempted or successful innovation of whole cultural systems (or at least sizable portions thereof). This unifying conceptual framework of revitalization movements contributed to the works of Berkes on sacred ecology (Berkes, 2008), Robertson on globalisation, social theory and global culture (Robertson, 1992), Rappaport on ritual and religion and ecology and the sacred (Rappaport, 1999), Smelser on theories of collective behavior (Smelser, 1962), and Skocpol on states and social revolutions (Skocpol, 1979; 2015), among hundreds of other scholars. Wallace's framework spans a diverse range of movements, including 'social movements,' 'mass movements,' and 'revolutions.' Wallace termed these phenomena *revitalization movements*. He identified pivotal commonalities across a spectrum of 'messianic movements,' 'utopian communities,' 'reform movements,' and other social and cultural change movements (Wallace, 1956), elucidating a *unity* of process, purpose, and scope across what may have otherwise been deemed very *diverse* and disparate instances. (Harkin, 2004; Wallace, 2009)

As will be discussed further on in this chapter, some critics of Wallace have focused on his earlier work. They challenge his application of certain psychoanalytic tools, suggesting an 'arrogance of youth' which later softened, that led to Wallace's so-called 'harsh' early perspective on the Quakers in *Teedyuscung* (Wallace, 1949*);* or his early assertion that

anthropologists and historians should not sit and talk to each other, but instead learn each other's methods and use them (Jennings, 1990; Wallace, 1949). Later critiques, such as from Roscoe and Siikala, challenge assumptions and gaps they identify within Wallace's revitalization movements model, examining the way in which stress and disruption impact society and culture (Andelson, 2005; Harkin, 2004). Brown, Siikala, and Martin all caution against what they view to be a danger of idealizing revitalization movements (Harkin, 2004).

Wallace established a clear distinction between revitalization movements, and the classic processes of cultural change which exhibit a gradual chain-reaction effect, including, as Heyck (2015) iterates, "evolution, drift, diffusion, historical change, and acculturation" (de Gruyter,1992; Benford, 2000; Heyck, 2015; Wallace, 1956). While 'classic processes' produce change in cultures but do not depend upon deliberate intent (Moreno, 1943; Morris, 2001; Heyck, 2015), revitalization movements, according to Wallace, must exhibit deliberate, organized intent and conscious effort to bring about systems change and innovation. Moreover, this must be characterized by a uniform process (*see Table 1)* with intent towards major systems innovation. (Wallace & Grumet, 2003; Wallace, 1956)

Table 1 Uniform Process: the Five Stages of a Revitalization Movement Cycle

I. *Period of generally satisfactory adaptation*.	…to a group's social and natural environment
II. *Period of increased individual stress*	While the group as a whole is able to survive through its accustomed cultural behaviour, changes in the social or natural environment frustrate efforts of many people to obtain normal satisfactions of their needs.
III. *Period of cultural distortion*.	Changes in the group's social or natural environment drastically reduce the capacity of accustomed cultural behaviour to satisfy most persons' physical and emotional needs.
IV. *Period of revitalization*	(1) Reformulation of the cultural pattern; (2) Its communication; (3) Organization of a reformulated cultural pattern; (4) Adaptation of the reformulated pattern to better meet the needs and preferences of the group; (5) Cultural transformation; (6) 'Routinization' when the adapted reformulated cultural pattern becomes the standard cultural behavior for the group.
V. *New period of generally satisfactory adaptation*	…to the group's *changed* social and/or natural environment

Source: Author's own categorization of Wallace's (1956) schema

According to Wallace and Grumet's *Revitalizations and Mazeways: Essays on Culture Change,* in order to qualify as a 'revitalization movement,' actors engaged in the process of revitalization must perceive their culture or major parts of it *as a system*, one they find unsatisfactory (Wallace & Grumet, 2003; Wallace, 1956). Actors must innovate a new cultural system rather than small, discreet items within their existing system. A new cultural system should specify new relationships, a new *Gestalt*, or pattern or organisation of a culture, of self, of nature and body (abruptly and simultaneously), as well as, in some cases, new traits of the culture. (Wallace & Grumet, 2003; Wallace, 1956)

Jennifer H. S. Brown, Jukka Siikala, and Joel W. Martin (2004) all caution against idealizing revitalization movements, from social movements to revolutions. Terms like 'new cultural system' risk invoking images of whole social improvement. Not every vision of cultural and social change manifests as intended, or the manifestation may be as intended, yet not one that inculcates or sustains standards of human, civil or environmental rights as globally defined. As Siikala (2004) sees it, Wallace's model is dependent upon a notion of social and cultural equilibrium, one that is often requiring a 'static' or stable state of governance. She contends that perhaps such a context is limited to a colonial era power structure, rendering aspects of Wallace's model no longer viable in a post-colonial era. Brown and Lepowsky (2004) note there can be a 'die out' or 'failure' of revitalization movements that nevertheless prove to influence and shape the culture or region well beyond the period of 'failed experiment' (Harkin, 2004; Jennings, 1990). Many social change movements that followed Wallace's initial theory fit within his revitalization movement model nevertheless have experienced outcomes that did not match the populist vision of social change and revitalization, from Aristide's Lavalas movement in Haiti (Farmer, 1994; Farmer & Sen, 2005; Wilentz, 1994), to

the *Hundred Flowers* movement (and ensuing crackdown on free thought) in China (Mu, 1962).

Wallace responds to the critiques that the revitalization model applies only under colonialism with the assertion that his model holds wider application in postmodern scholarship, "invoking hegemonic Power and the oppressed Other (…) examples of revitalization (…) fit easily into the imperialist, colonialist mold…and ever more relevant as the tide of globalization washes over the world producing neocolonial situations in which 'emergent nativisms' (…) flourish in revitalistic response*."* (Harkin, 2004)

In a short space, Wallace raises the work of Lévi-Strauss, Saïd and Spivak, and the literature of post-colonialism (Lévi-Strauss, 2010; Said, 1977; Spivak, 1990), as he proposes that his revitalization model is flexible and encompassing enough to apply across periods of history and thought, up to present day. Wallace writes that his model… "follows on the lifecycle of birth, fluorescence and decline as a result of inner dynamics, of potentialities and vulnerabilities inherent in the system itself." He goes so far as to suggest his Revitalization Movement theory may find application to 'larger, imperial polities' not yet examined through such lens, including the United States as a whole. (Harkin, 2004; Mcdowell, 2005) Wallace suggests the U.S. and other industrialized nations of the globalized age are in need of further anthropological studies "of large, hegemonic imperial systems that disequilibrate not just from the impact of external, alien cultural hegemony or natural disaster, but from internal social, ideological and economic conflicts of interest intensifying over time and in due course generating revitalization movements of massive size and unfortunately, xenophobic philosophy" (Harkin, 2004).

Wallace is not applying judgment as to whether the social, cultural and systems changes brought about through this revitalization process are good or bad, productive or destructive, or actually successful in applying improvements in society. The outcome of a revitalization movement is subjective--and may be temporal as opposed to permanent. He leaves this analysis to specific cases, and to the cultural relativism of a given lens on a particular movement, from the bloody Taiping Rebellion, to a recent movement across Muslim societies to return to a perceived 'original Islam,' 'uncontaminated by Western society.'(Harkin, 2004) As an anthropologist, Wallace identifies patterns and key qualities that he, and many who've followed, have found present in a revitalization movement model.

The theory underpinning the research presented in this thesis hypothesizes that, a shift in relationship of body-to-self, of self-to-community, and of self-to-nature is significant and points to a major social change, with key culminating and catalyzing shifts mobilizing around the global crisis of anthropogenic climatic change. In particular, my research proposes that the emergence of a Pan-Asian interfaith climate change network (the Inter-Religious Climate & Ecology, or ICE Network) through a convergent yet diverse eco-cultural and spiritual ecology lens, suggests the central components of a networked revitalization movement. The network formation and processes themselves, and the beliefs and perceptions that inform them, offer a potential new mapping for systems and (re)emerging eco-cultures' ways of relating to each other and other living beings on the Earth.

Across a very diverse network of countries, cultures, religions, group identities, activities and capacities, do there exist unifying factors of process, such as Wallace outlines (*see Table 1*)? Or are there other unifying values of ecology and nature across a diversity of faiths, such as

Cohen-Kiener asserts in *Claiming Earth as Common Ground: The Ecological Crisis Through the Lens of Faith*? (Cohen-Kiener & Bingham, 2009; Wallace, 2003)

A revitalization movement is not simply one that challenges status quo systems. Rather, it offers up *alternative relational systems* in its place: "The process by which transformations occur *is* the revitalization process" (my emphasis, Mead, 1955; Wallace, 1956). Mead (1955) further suggested that cultures can change within one generation. In the case and context of a current global anthropogenic climate change crisis, there are great shocks and stresses upon people and the planet (L. Brown, 2006; Turner, Davidson-Hunt, & O'Flaherty, 2003). The 2015 Global Climate Risk Index (Kreft, S., D. Eckstein, L. Junghans, 2015) tracks rapidly increasing climate change-related losses—loss of human life, loss of property, loss of livelihoods, loss of home and country—due to extensive flooding, severe storms, drought, wildfires, heat waves, and landslides. Each year the risks and losses surpass the previous year, with the poorest people on the planet most vulnerable to climate change impacts (Kreft, S., D. Eckstein, L. Junghans, 2015).

As of 2014, due to climate change, the planet was already--in crude terms--five times as dangerous and disaster prone as it was in the 1970s, according to the World Meteorological Report (Williams, 2014). Arguably, emergency response capacities have evolved and improved globally since the 1970s (Slim, 1997; 2015). With growing aptitudes, fewer die than in comparable disasters. The humanitarian field has improved with organization, skills, training, standards and as a professional field as a whole (ALNAP 2001; Lawday, 2011). Nevertheless, the number (and intensity) of severe climate events is also increasing at an accelerated rate and is moving beyond capacities for existing national and global humanitarian--and funding--agencies to cope (Vorhies, 2012). These stresses indicate the

need for culture and systems change at a far more accelerated rate than Mead's one generation would allow (K. Brown, 2014; Wise *et al*., 2014).

Lester Brown, discussing collective responses to current global-ecological stresses, writes that "This is not Plan A, business as usual. This is Plan B—a wartime mobilization, an all-out response that is designed to avoid destabilizing economic and political stresses that will come with unmanageable climate change." (L.R.Brown, 2009, 2012) Further, Katrina Brown asserts that the field of climate resilience innovation is rapidly evolving in step with the accelerating shocks and shifts of climate change--with resilience as an "organizing concept for radical change" (Brown, 2014; Adger, Hughes, Folke, Carpenter, & Rockström, 2005)

Current technology may allow for a swift, highly mobilized response on par with accelerated climate shocks, carbon emissions, and increases in global temperature (Galaz, 2014; Scharmer, 2009). In fact, "new information and communications technology (ICT) has transformative potential in several key areas in sustainable development, not only to address vulnerability and support adaptation, but also potentially to increase the long-term resilience of communities." (Heeks and Ospina 2012) Community networks, collaborating across the globe via internet technologies, may now offer new possibilities, which could be applied to scale up local movements to a global level of impact. (Hasselmann, Csaplovics, Falconer, Bürgi, & Hersperger, 2010; Thorgren, Wincent, & Örtqvist, 2009).

While very little research exists on continent-wide and global climate change interfaith / spiritual ecology and nature-culture-based community networks, several studies have been conducted on the Internet's capacity to increase social capital in social movements, community activities and civic engagement. (Cheng, Liang, & Leung, 2015; K.N., 2016; Lin, Cheong, Kim, & Jung, 2010; Mesch & Talmud, 2010) In Mandarano's U.S.-focused study

Building Social Capital in the Digital Age of Civic Engagement (Mandarano, Meenar, & Steins, 2010), "an uptick in civic engagement through Internet technologies" has leveraged and created a kind of "digital social capital," enabling transformative innovation for planning, information sharing, fundraising, and remote collaboration (Mandarano *et al*, 2010).

Harkin suggests that Wallace and his immediate 'intellectual ancestors,' such as anthropologists and ethnographers Franz Boas (Boas, 1920), James Frazer (Frazer, 1890), Leslie Spier (Basehart & Hill, 1965; Spier, 1930; Spier, Riley, & Taylor, 1967), A. Irving Hallowell (Hallowell, 1976), Frank G. Speck (Chute, 1999; Speck, 1928), and Loren C. Eisley (Eisley, 1935), as well as Wallace's father Paul A.W. Wallace (P. Wallace, 1946), were not the first to come to the concept of revitalization movements. (Harkin, 2004) He cites many North American movements drawing from political-religious historical social change in Europe, such as Puritan sects and groups of Quakers shaping culture and movements in the 20th century (Harkin, 2004). Wallace, however, melds anthropological, ethno-historical, and psychosocial methods, which helps organize and understand these movements, and the relational factors within them, in new ways.

There are a series of critiques that oppose the claims of the literature discussed in the readings above. U.S. historian Francis Jennings, for example, has been critical of Wallace's use of psychoanalytical theory, which can create biases in historical anthropological accounts (Jennings, 1990). While the value of understanding human psychology is important when asking questions of relational formation and catalyzing forces for behavioral and systems change, some of the theory and tools Wallace utilized for his ethno-psychological studies (precursors to his revitalization theories) (Wallace, 1952) are now discredited—such as Rorschach tests (Koocher, Mcmann, Stout, & Norcross, 2015). While notions of cultural

relativism were emerging from Boas' work (Stocking, 1966) and through Wallace's and other's research, cross-cultural psychology emerged well after Wallace's initial work on revitalization movements. (Kim, 2000; Levine, 2010; Segall, Lonner, & Berry, 1998). Alongside this criticism, Jennings notes as valuable that "Wallace concentrates on the mindsets of the peoples he has studied, how and why they respond to physical environments, and how they work to influence each other" (Jennings, 1990).

Opening up a theory published 6 decades ago, building upon much earlier theories, may give rise to the question of its relevance to current research on climate change resilience and a climate justice movement. In 2004, Michael Harkin edited a collection of essays investigating a similar question, *Reassessing Revitalization Movements: Perspectives from North America and the Pacific Islands.* What value does Wallace's revitalization concept offer today? (Harkin, 2004)

Contributors to Harkin's collection of essays on Wallace--the majority of whom are postmodernists--agree along with Harkin that while Wallace's revitalization ideas may need to be honed, modified, and updated for currency of theory and context, they still offer an insightful and valuable model for assessing and understanding social and cultural change movements today (Harkin, 2004; Mcdowell, 2005). The application of revitalization movement concepts to relational dynamics; the importance of articulated systems and intent towards change; organismic systems and *Mazeways*; the emergence of movements in response to stressors and disasters; and threading a unifying frame across diverse actors and movements are of particular interest to my research.

Key Aspects of Wallace's Revitalization Movements

i. Relational dynamics
ii. Organismic systems and Mazeways
iii. Perception of systems and intent to change the system(s)
iv. Movements emerging in response to stressors and disasters
v. Unity and Diversity / Organization of Diversity

Revitalization movement theory finds application within the question in my research on what moves people to change and how changes from the individual, to group, to large-scale might take place (behavioural change relative to climate change). It looks at relational dynamics between the body, the self, the community, nature (as a distinct 'entity' in Wallace's work), and the world—and the manner in which those dynamics can shift and transform through the processes of a revitalization movement. The way in which people and societies relate to themselves, others, and nature is a key aspect that could catalyse movements and itself be transformed through societal and cultural change. (Wallace & Grumet, 2003; Wallace, 1956, 2009)

Wallace's 'Mazeways' concept (as described by Nicholas) can be defined in terms of "the paths by which individuals map out their culture or respond to stress, illness or disaster."(Nicholas, 2005) Mazeway theory provides a way to look at the impact of shocks and upheaval on culture and on social movements (Nicholas, 2005; Wallace & Grumet, 2003; Wallace, 2003). Wallace's early work on social movements, religion, and ritual is potentially of value to this thesis in terms of its unifying systems element--through an organismic interconnection of life from the cellular level to the individual and broader society and to nature. The present Anthropocene Age is one in which human activity has been the dominant influence on climate and the environment, giving rise to the challenges of global warming. Anthropogenic climate change serves as a global common denominator with stress (or

perceived stress) a unifying factor. (Nicholas, 2005; Wallace & Grumet, 2003)

Still, understandably, Wallace's early work does not go far enough for today's current geological age, and there is linearity in the systems approach that does not seem to capture a dynamic interchange understood within social ecologies. There could be a danger of being trapped within an oversimplified closed loop of articulated, linear 'mazeways' that fails to capture the complexities of human societies within their eco-cultures (Comberti, Thornton, Wyllie de Echeverria, & Patterson, 2015). Jukka Siikala points out that Wallace's theory/model relies on a notion of social and cultural equilibrium, but that Wallace never defined society or the needs or nature of culture, and warns against assumptions that Wallace's concept of a "mazeway" adequately reflects the way all cultures work. (Harkin, 2004)

Paul Roscoe argues that Wallace's use of 'stress' is not necessarily the best descriptor for the pressures that seem associated with revitalization, "in which the felt need to interpret unusual phenomena is pivotal (p.164)." (Mcdowell, 2005) Wallace does include the term 'disasters' alongside stress in several of his pieces, and while there can be a broad spectrum of applications for the term 'stress' in Wallace's theories, I would counter that the term 'stress' is an appropriately flexible term capturing the complex nuances of some scenarios catalyzing change, alongside more explicitly obvious forms of pressure upon social groups. Wallace asks theorists to look beyond a post-modernist frame and other limiting frames, when reading his work, allowing for terminology such as 'stress' to have broader interpretation and applications. He argues that his theories can identify unifying factors across cultures, time and movements around the world. (Harkin, 2004; Mcdowell, 2005)

In a 2009 Wallace wrote a response to emerging discourse he reviewed in *Cultural Anthropology* (Wallace, 2009) that considers climate change, unity, and diversity. Wallace challenges the assumptions that "every society, large or small, would produce individuals with the same basic personality structure, except for a few 'deviants.'" (Wallace, 2009) He was asked in his early research to identify and categorize within social systems patterns demonstrating a 'replication of uniformity.' When requested in 1948 to identify a uniform psychological profile across residents of the Tuscarora Indian Reservation, a 'replication of uniformity,' Wallace's methods reveal no such thing, but rather a kind of cohesive individualism yet coexisting with shared values. Wallace returned to Tuscarora fifty years later with more 'evolved' anthropological methods (he was using a Rorschach test in 1948). In his latter visit, he found present an ethos among the diverse Indigenous groups of Tuscarora of "non-interference" that he proposed was an adaptive survival mechanism to allow for peace valued by a surviving 'emigrant faction' when the tribe's warring faction was annihilated. (Wallace, 2009). What Wallace found instead proposes an elegant solution to an oft-posed question: how can a diverse set of actors or components be unified in groups if they are not all the same? Or as he put it, "how is diversity in individual lives--knowledge, personality and life--factually organized in cultural systems?" (Wallace, 2009)

Wallace asserts that within societies, within nature, within all systems, there is a natural 'organization of diversity.' Patterns and interacting, which can also be described as exchanging relationships within society, enable such organization without the diversity being ignored or forced to conform to a uniform template. Much like an ecosystem, wherein plants and animals may live symbiotically, in mutualism, and yet not be the same, there is an organization among human societies that may allow for mutual benefits and organization through diversity.

In light of the complexities of the emerging discourse on climate change, and the great diversity of causal and impact factors and actors, Wallace applies his 'unity through diversity' or 'organization of diversity' to help examine relationships and responses to climate change through an organismic and organized framing of diverse complexities involved.

Wallace's organismic foundations for his revitalization movements (involving responses to stress and disasters) and unity through inter-related diversity, may lend itself from some pathways to our understanding of ecosystems, wherein diverse, complex species interact and exchange with each other to form a balancing, interactive, and healthy system (Ellis, 2014) and, by extension, a consideration of climate change drivers and implications. This relationship between natural ecosystems and human societies will be explored in Section III to follow: Ecology: Social, Sacred, Deep and Spiritual (Fikret Berkes, 2012).

Insights from Revitalization Movement theory into how people are motivated to change align with the question as to what moves people to adapt their behaviors / take action on climate change. The shift is into greater awareness, internal change, action, and engagement in movements. My applied research (see chapters 5 and 7) examines in part what is happening in these movements and paradigmatic shifts. It seeks to find creative, new and innovative models and strategies to address the large-scale climate change challenges today.

While Wallace studies individual religious and spiritual movements, he does not look at *interfaith* movements, as my project does. (de Gruyter, 1992; Wallace, 1956; Frick, 2006; Rappaport, 2001; Rappaport & Lambek, 2001) Nevertheless, his theories are relevant to my

thesis as they provide a framework for understanding religious as well as political spaces in which societal, *systems change*, or even 'revolution,' is undertaken. Wallace does not apply judgment nor necessarily interest as to whether revolutions are good, bad, successful, or not. Revitalization movement theory is about processes of systems change, not the values or contributions of a given movement. Wallace provides a distinction between cultural change and social revitalization movements for the collective intent to transform relationships and systems. That distinction is vital when examining potential movements within the complexities of anthropogenic climate change (Badaracco, 2008; Editors, 2013).

For Wallace, 'revitalization' implies an organismic analogy: "A human society is regarded as a definite kind of organism, and its culture is conceived as those patterns of learned behavior which contain 'parts' of the social organism or system (individual persons and group of persons) characteristically displayed." (Wallace, 1956) This organismic analogy as part of a revitalization movement suggests a natural inter-connected relationship between systems, societies, and ways to think of the self in context.

Theorists of General Systems Theory, the Gaia Hypothesis, and Social / Sacred Ecology -also known as 'deep ecology' or 'spiritual ecology'- (Berkes, 2012; Lauer, 2002; Nhat Hanh *et al*., 2013; Sponsel, 2012) have built upon Wallace's theories on revitalization movements and organismic systems (Wallace & Grumet, 2003)--wherein the total system constitutes a society including, as significant parts of the group, the individual organs and cells of the 'Body Ecology.' (Berkes, 2012; Editors, 2013; Latour, 2015; J. Lovelock, 2007, 2009; Macy, 1991; Rappaport *et al*., 2001; Rappaport, 1971; Skyttner, 2001; Sponsel, 2012; Staley, 2002) The implications of this inter-connected, relational organismic systems amount to, as

Wallace articulated, “Stress on one level translates to stress on all levels of a system.”(Wallace, 1956)

b. Organismic & General Systems Theory and the Gaia Hypothesis

As first defined by French physiologist Claude Bernard in *Introduction à l'étude de la médecine expérimentale* (1865), homeostasis is “the control of internal conditions, be it temperature, specific blood conditions or other variables within living organisms.” (Bernard, 1865) Wallace draws a helpful corollary to the principle of homeostasis in his revitalization movement work: a society will work, by means of organized actions by all or some of its parts, “to preserve its own integrity by maintaining a minimally fluctuating, life supporting matrix for its individual members, and will, under stress, take emergency measures to preserve the constancy of this matrix” (Wallace & Grumet, 2003; Wallace, 1956). Stress, in this context, can be defined as a condition in which some part or the whole of the organism is threatened with more or less serious harm (Nicholas, 2005). The perception of stress can be viewed as the common denominator. (Nicholas, 2005; Wallace & Grumet, 2003) This section will examine notions of homeostasis and stress as they relate to social and ecological systems in the context of anthropogenic climate change.

Wallace & Grumet’s drawn corollary, termed the ‘Mazeway,’ is also important because it links the biological understanding of an organism to that of human society, framing social structures, relationships, and decision-making as elements of a dynamic interdependent organism. The mazeway is “nature, society, culture, personality, and body image, as seen by one person”. It originates at the cellular level of an individual traveling outward to

personality, then to nature, then to culture, and finally to social system or field. (Wallace & Grumet, 2003).

The linkages and relationships drawn by Wallace & Grumet (2003), and by Hallowell (1967) are valuable for reconnecting the biological processes of nature to the human systems, and for demonstrating their connections. However, my research suggests that Wallace's *Mazeways* is a conceptual depiction that is too linear and anthropocentric, i.e. it does not fully reflect the organismic perspective that Wallace otherwise incorporates dynamically into his revitalization movement theories (Wallace, 1957).

In *Mazeways,* the individual human is placed at the center of this mazeway, reflecting an anthropocentric and compartmental, segregating perspective, which was still dominant in western academic discourse in the 1950s and remains dominant in economic and political thought today. (Chan *et al*., 2016; Hawken, 2007)

In 1979 Gould and Lewontin, critics of an independent, compartmentalized manner of organizing the world, challenged the 'adaptationist' approach which treated the organism as a sum of interchangeable yet almost completely independent components (Gould & Lewontin, 1979). They reintroduced to England and the United States concepts of organismic systems from continental Europe (particularly theorists in France and Austria), the foundations of a scientific consideration of integrated systems. The organismic systems view derives from much earlier theories that were developed in Europe around one hundred years ago. (Drack, 2015) As with Wallace's work on revitalization movements, Drack suggests these earlier organismic systems theories are now being extended to new applications for today's

examinations of anthropogenic climate change, complexity and network theory (Drack, 2015).

General Systems Theory (or GST) asserts that all living organisms are open systems, constantly exchanging information, matter, and energy, with the environment (Drack, 2015; von Bertalanffy, 1973). Ludwig von Bertalanffy (1901-1972), a theoretical biologist, is widely known as the father of general systems theory (GST). He is considered by some to be a forerunner to the organismic systems approach (Callebaut W, Mueller, GB, 2007). Bertalanffy's work, which he extended to almost all areas of biology, recognized that 'an organism must be considered as a *system*, as an organization of parts and processes." (Drack, 2015; my emphasis)

General Systems Theorist Joanna Macy writes, 'by shifting their focus to relationships instead of separate entities, scientists made an amazing discovery--amazing at least to the mainstream western mind. They discovered that nature is self-organizing." (Macy, Brown, & Fox, 2014) Bertalanffy's systems approach to understanding nature suggests a dynamic, multi-directional co-arising within natural systems--a mutual causality of processes and parts exchanging and interconnected (Macy, 1991; Von Bertalanffy, 1972)

Social scientist Wallace's *Mazeways* theory can, in part, be seen to mirror biologist Bertalanffy's General Systems Theory, given that GST organized three levels of open (and exchanging) systems. In GST, the first system level or '*focal level*,' focuses on an individual or immediate system (which could be a human person, but which may apply to any organism), similar to the levels in a *Mazeway* model. Next comes the '*supra-system level*'. If one follows the individual person analogy in the focal level, the supra-system level could include a person's

family, community and culture. Internally, the *sub-systems level*, according to Bertalanffy, is below the focal level and may include in the human analogy the cells and bodily systems.

Unlike Wallace, Bertalanffy does not specify in his model that an individual human must be at the focal point of interconnected organismic systems. Rather, the emphasis and level can shift dynamically to any number of organisms with changing roles in the system depending on a chosen systemic focal point (Drack, 2015; Von Bertalanffy, 1950, 1972). Both models nevertheless suggest linear pathways across and within organismic systems.

My research questions whether these earlier models are too simplistic to fully explore and examine complexities that do not interact along linear pathways. GST suggests that the treatment of a whole integral system is of greater value than the treatment of symptoms or parts. (Drack, 2015; Von Bertalanffy, 1972)

Bertalanffy's *fliessgleichgewicht,* 'flux equilibrium' or steady state concept in GST, asserts that open systems can self-regulate to adjust for changing conditions in their environment (1957). This function of homeostasis in a system monitors the effects of response behavior and adapts to a norm, reducing deviation feedback--as exemplified by Macy in the way that the human body maintains a steady body temperature in spite of shifting environmental temperatures (Drack, 2015; Macy *et al*., 2014; von Bertalanffy, 1973)

Further, Macy stresses that "open systems not only maintain their balance amidst the flux, but also evolve in complexity. When challenges from their environment persist, [open systems] can fall apart or adapt by reorganizing themselves around new, more functional norms" through a deviation-amplifying feedback, often with complexities in the manner in which self-regulation resettles following shocks (Macy, Brown, & Fox, 2014). She asserts that this

is how systems learn and evolve. If that feedback loop is blocked, however, the system cannot learn or evolve, and systems collapse becomes possible (Macy *et al*., 2014)-much as the planet is now experiencing with climate change and planetary ecosystems collapse.

In 1974, Lovelock and Margulis, through a study of Earth's atmospheric chemical composition and the balancing of its proportions necessary to maintain life on Earth, set forth the Gaia Hypothesis in which homeostasis is a key component. Their theory proposes that the biosphere of the Earth is a synergistic, self-regulating, and self-organizing complex system--itself an organism--that helps to maintain and perpetuate the conditions for life on the planet. (Lovelock & Margulis, 1974; Macy *et al*., 2014) Systems theory formed the basis for this hypothesis (Barney, 2002; Macy, 1991; Ravilious, 2008), and enabled a relational shift in perspective for humanity to the planet, viewing it as a living organismic system, essentially a living planet:

> " For the first time in our history we can actually see our whole planet and recognize it as a living being—and we can understand that we are not its privileged rulers, …but only one part, and not even an indispensable part, of its body."
>
> –Elizabet Sahtouris (2000)

Not all scholars embraced the initial perspective of the planet as a self-regulating, integral organismic system as wholeheartedly as Sahtouris, John Seed, Arne Næss, Joanna Macy, and those within the ecosophy and systems theory camps (Dass, Seed, Tieger, & Project., 1992; Lauer, 2002; Macy, 1976; Sahtouris, 2000; 2014) Moreover, not everyone agrees with the interpretation of Gaia as "the dynamical physiological system that has kept our planet fit for life for more than three billion years" (Lovelock & Margulis, 1974).

Some scholars, particularly the ecosophists and general systems theorists above, embraced a general concept of the planet as a living organismic system, while this proved a sticking point

for others, creating the quagmire of how to define 'life'--a philosophical question well outside the scope and capacity of my research (Enting, 2012; Tyrell, 2013). In fact, many feel Gaia theory was misunderstood, misinterpreted, or entirely ignored due to disagreements in part (Ruse, 2013b; Tyrell, 2013).

According to Ball, as he wrote in *Nature,* "the idea sparked controversy when Lovelock and microbiologist Lynn Margulis proposed it in the 1970s, but environmental and Earth scientists now accept many of its basic principles." (Ball, 2014) For example, their argument of 'the greenhouse effect,' is now widely accepted--that "the planet's entire biota changes the composition of the gases on Earth and in so doing, moderates and steadies the effects of the Sun's heat (…) whereby the planet's gases trap the Sun's heat and release it out to space at different rates according to the different compositions of the atmosphere." (Ruse, 2013b)

At its naissance as an academic paper, the Gaia Hypothesis received little attention in the 1970s (Ruse, 2013b). Increasingly, however, Lovelock brought his theory into the public eye. When he published the book *Gaia: A New Look at Life on Earth* (Lovelock, 1979, 2000), the flames of controversy were stoked. (Ruse, 2013a, 2013b) Some suggest it was the name itself, "Gaïa," named for the Greek Goddess of the Earth, which drew public interest, and spurred disdain from the scientific community (Macy, 1999).

An implied reference to spirituality, derived from a theory named after an Earth goddess, most likely served to put off many in the physical and earth sciences, or "mainstream science" fields (Ruse, 2013). As Latour suggests, this may have been a mis-interpretation on their part:

> "James Lovelock didn't have a chance with the Gaia Hypothesis. In naming a fragile and complex system by which living phenomena are changing the Earth after the old Greek

> myth, it was believed that he was speaking of a single body, a giant thermostat or even a divine Providence. Nothing was further from his intent. Gaia is not the world, is not nature, as one has imagined it since the 17th century, this nature in service to human subjectivity, Nature constituting the backdrop for our actions." (Latour, 2015)

Richard Dawkins, author of *The Selfish Gene* argued that Gaia theory contradicted Darwinian evolution. In particular, Dawkins did not accept the possibility of group selection, wherein the group (nature, the planet) would make decisions for the good of the group rather than individual decisions for the good of the isolated individual, working interdependently (Dawkins, 1989). Dawkins, a neo-Darwinist and believer in individualistic evolutionary self-selection and brutal competition, criticized the Gaia hypothesis accordingly,

> "The fatal flaw in Lovelock's hypothesis would have instantly occurred to him if he had wondered about the level of natural selection process which would be required in order to produce the Earth's supposed adaptations. Homeostatic adaptations in individual bodies evolve because individuals with improved homeostatic apparatus pass on their genes more effectively than individuals with inferior homeostatic apparatuses. For the analogy to apply strictly, there would have to have been a set of rival Gaias, presumably on different planets." (Dawkins, 1989)

It is possible that Dawkins did not take into account, accept, or understand the interconnected, symbiotic organismic systems foundation of Lovelock's theory. Dawkins' perspective requires teleology for self-centered, individualistic preservation, while Lovelock's suggests a collective organismic teleology to hold and preserve the common good or shared wellbeing of the planet over that of individuals (be they plant life or human life or other). Margulis' work on symbiosis and the evolution of cells and organisms to work interdependently provides an evidence-based counterpoint to Dawkins assumptions (Margulis, 1971, 1998).

Dawkins' criticism of Lovelock's Gaia Hypothesis draws from a narrow interpretation of the natural selection process according to his, and Alfred Wallace's, neo-Darwinist perspective (Berry, 2013; Elsdon-Baker, 2009b). Fern Elsdon-Baker (Elsdon-Baker, 2009a, 2009b) reminds us that Darwin himself was a pluralist wherein *environment* could impact genes and cells, contrary to *"The Selfish Gene* 's message […] that evolution is about the natural selection of genes, and genes alone." (Elsdon-Baker, 2009a) She critiques and largely challenges Dawkins' neo-Darwinist interpretations, motives and underlying 'advocacy' in her book *The Selfish Genius: How Richard Dawkins Rewrote Darwin's Legacy* (Elsdon-Baker, 2009b) and in her *New Scientist* piece, *The Dawkins dogma; Metaphors like "The selfish gene" paint a vivid picture of how evolution works, but the reality is more subtle* (Elsdon-Baker, 2009a).

Elsdon-Baker recognizes that Lamarckian inheritance theories, among many other alternatives to neo-Darwinian theories, hold an acknowledged place within the scientific community—Dawkins' neo-Darwinist, positivistic assertions on the natural selection process are not accepted as singular *fact* (Elsdon-Baker, 2009b). At the University of Oxford for example, genome scientists Frenk, Oxley, Houseley and others have found budding yeast meiosis exhibits epigenetic Lamarckism inheritance, versus Darwinian traits (Frenk, Oxley, & Houseley, 2014). The efforts of other evolutionists- several of whose work is distinct and varied from Darwin as well as from the neo-Darwinists- have influenced science, popular and cultural understanding of ourselves and nature, including but not limited to Lamarck, Chambers, Spencer, Wallace, Haeckel, and de Vries (Shepherd-Barr, 2015). From the perspective of understanding of many evolutionary scientists across the field, a set of 'rival Gaias' would not have been essential -- as Dawkins contends (Dawkins, 1989)--for Gaia theory to be possible. Lateral gene transfer (LGT), transgenerational epigenetic effects, and

other waysin which environment has been recognized to influence and dynamically interact with cells, organisms, and groups of organisms, are consistent with, and potentially reinforce, Lovelock and Margulis' Gaia theory of self-regulating, synergistic and self-organizing systems of planet Earth (Lovelock & Margulis, 1974).

Elsdon-Baker, an evolutionary scientist herself, is the principle investigator and project director for Newman University's 'Science & Religion: Exploring the Spectrum' project (Newman University, 2016). Unsurprisingly, her critique of Dawkins includes his atheist, anti-religion stance in which he firmly roots his scientific beliefs (Dawkins, 2016; Elsdon-Baker, 2009b). Elsdon-Baker suggests Dawkins creates and perpetuates a false dichotomy between science and religion. Dawkins' manner and attention-seeking strategies, according to Elsdon-Baker, have served to create a popular understanding that Dawkins' orthodox neo-Darwinism and Darwin's evolutionary theories are one and the same, and therefore "Darwinism is against religion." To follow, this false dichotomy sets out to impose that one cannot recognize evolutionary biology and simultaneously be a spiritual person who believes in the Sacred. Emerging from the rigorous examination developed in *The Selfish Genius* (Elsdon-Baker, 2009b), neither is true, and other neo-Darwinists, including the original neo-Darwinist Alfred Wallace, have explored spiritual aspects of evolution (Berry, 2013; Elsdon-Baker, 2009b; A. R. Wallace, 1870). Elsdon-Baker illustrates that outside of Dawkin's orthodox popularizing of science (via advocacy of theory as an absolute truth), many evolutionary scientists and Darwinists, including Darwin himself, do not see a conflict between evolutionary theory and religion. She further demonstrates space within the sciences for relativity, and alternate emerging / transforming paradigms via Kuhn's theory of scientific revolutions (Devlin & Bokulich, 2015; Kuhn, 2012). It may be that Latour and Macy were thinking of Dawkins when they suggested that for some, Lovelock's naming of the theory

after an Earth Goddess, implying as aspect of spirituality to the theory, prevented the theory itself from serious recognition or consideration (Latour, 2015; Macy, 2007; Ravilious, 2008).

Over the last 40 years, Margulis and Lovelock continued to expand and explore the Gaia Theory, and the implications for a planet continually pushed off balance by mass deforestation and rapidly increasing carbon emissions (Lovelock, 1990; Margulis, 1998; Schneider & Press, 2004). Lovelock's 2006 *The Revenge of Gaia,* made predictions of disastrous effects from climate change within twenty to thirty years, as a homeostatic, self-regulating response by the earth to bring the living system back into balance. *Revenge of Gaia* projects "only a handful of the teeming billions now alive will survive" (Lovelock, 2006a, 2006b, 2007).

Macy goes on to explain the hypothesis on homeostatic open systems as a condition in which, "when a system is unable to adapt to its norms, perhaps because of the scale and speed of change, the positive feedback loop goes into *overshoot* and *runaway*. As ever-increasing oscillations upset the balance of its interrelated parts, the system loses coherence and complexity--and begins to unravel." (Macy *et al*., 2014) In such conditions, organismic systems, ecosystems and Earth systems are at risk of collapse.

According to Lovelock's *Revenge of Gaia* (Lovelock, 2006), carbon dioxide is being released into the planet's atmosphere at such accelerated rates, that a tipping point--Macy's "feedback loop on overshoot and runaway"--will be reached in a matter of decades, and global temperatures will rapidly increase beyond any human-experienced rates. In other words, the Earth's ability to balance its system of interrelated parts in order to maintain life (as we know it) will be overwhelmed. (Margulis, 1998) What will ensue, as Lovelock drew upon the predictions of others 10 years ago, will be melting ice caps, heat waves and droughts, sea

level rise, floods, increasing inhabitability--for humans and many other species--of large swaths of the planet, and mass species die out,warning the world's population may sink as low as 500 million over the next century due to global warming (Giffin & Lovelock, 1969; Lovelock, 2006, 2007, 2009).

Lovelock's work has been surrounded by controversy over the decades. His predictions of catastrophic loss and disaster have been deeply criticized, dismissed, embraced, revisited by theorists and public opinion, and even reconsidered by Lovelock himself. (Ball, 2014; Ruse, 2013b) In 2008, Lovelock stated that the planet has already passed the tipping point--just two years after his warning of such a tipping point (Cresser, 2008; Lovelock, 2006) He suggested taking any action on carbon emissions, recycling, pollution, or other strategies to counter global warming, is just too little, too late. He went on to propose that, had the world's leaders taken steps in the late 1960's or early 1970's (just as information about global warming was coming to light within closed political and scientific circles), that may have made a difference, but now any mitigating action taken is delusional, and catastrophic loss certain (Cresser, 2008).

Later, in 2012, Lovelock admitted he had gone to extremes (Rom, 2012) just a few years after writing '*The Revenge of Gaia: earth's climate in crisis and the fate of humanity'* and *The Revenge of Gaia: Why the Earth is Fighting Back and How We Can Still Save Humanity* (Lovelock, 2006a,b, 2007). Although, some evidence of Lovelock's predictions are coming to pass just ten years after his predictions (Ammann, Caspar; Kyoko Ikeda, 2014; L.R. Brown, 2012; Harvatt, Petts, & Chilvers, 2011; Lovelock, 2009; McAdam, 2012; Schwartzman, 2002).

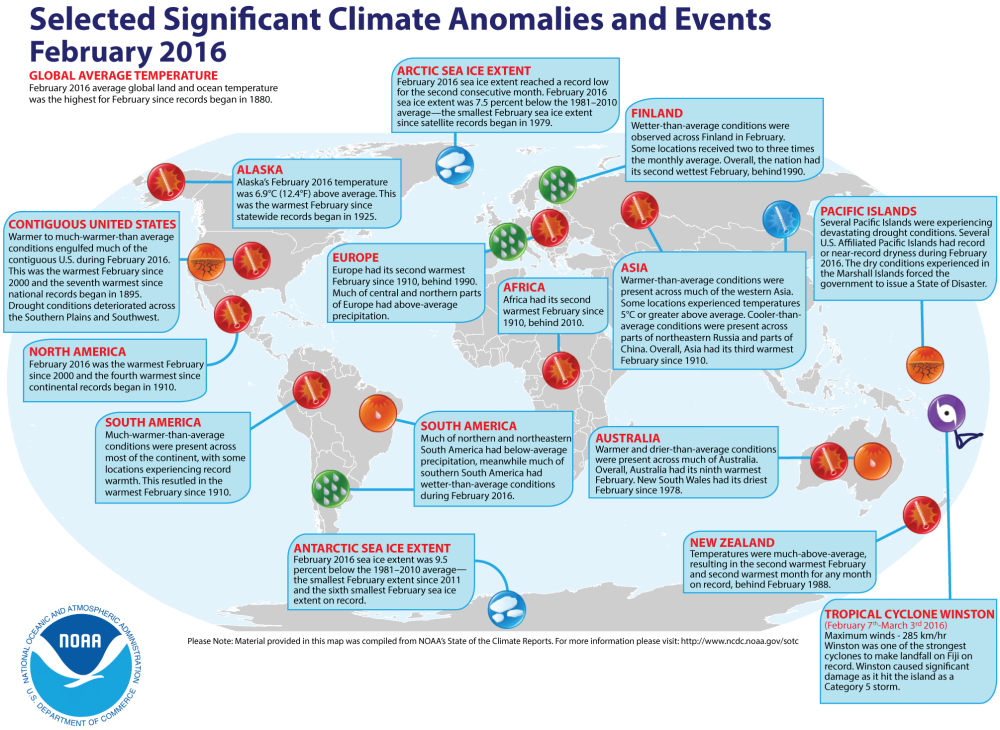
Such strong statements, verging at times on hyperbole, followed potentially by reneging, make it understandable why Lovelock's work has entered shaky ground, and has been repeatedly criticized. Making futuristic predictions is challenging in the best of conditions, and as Latour points out when speaking to Lovelock's Gaia Hypothesis, we no longer inhabit the best of conditions:

> The old nature disappears and leaves in its place a state of being in which it is difficult to predict events. This, being far from stable and reassuring, appears to consist of a set of feedback loops in perpetual upheaval. Gaia is the name that suits it best. Exploring the thousand faces of Gaia, one can unravel all the notions of Nature we have conflated: ethics, policy, a strange conception of science and, particularly, economy and even theology.[8]* (Latour, 2015; emphasis, translation to English is mine)

In the wholesale dismissal of the Gaia Hypothesis, there exists the risk of a logical fallacy: must *all* of Lovelock's predictions be correct in order for some of them to be correct, to be taken seriously? A decade following Lovelock's *Revenge of Gaia,* the planet has experienced record high temperatures with each progressive month of 2016 marking the hottest month on record (*NOAA* 2016; Meyer, 2016). National Oceanic and Atmospheric Administration (NOAA) climate scientist Jessica Blunden called the latest data "astronomical": "It's on land. It's in the oceans. It's in the upper atmosphere. It's in the lower atmosphere. The Arctic had record low sea ice. Everything everywhere is a record this month, except Antarctica." (Bonessi, 2016)

Figure 1: NOAA State of the Climate Report, February 2016:

[8]* Latour's original French, full quote: Or, à cause des effets imprévus de l'histoire humaine, ce que nous regroupions sous le nom de Nature quitte l'arrière-plan et monte sur scène. L'air, les océans, les glaciers, le climat, les sols, tout ce que nous avons rendu instable, interagit avec nous. Nous sommes entrés dans la géohistoire. C'est l'époque de l'Anthropocène. Avec le risque d'une guerre de tous contre tous. L'ancienne Nature disparaît et laisse la place à un être dont il est difficile de prévoir les manifestations. Cet être, loin d'être stable et rassurant, semble constitué d'un ensemble de boucles de retroactions en perpetual bouleversement. Gaïa est le nom qui lui convient le mieux. En explorant les mill figures de Gaïa, on peut déplier tout ce que la notion de Nature avait confondu: une éthique, une politique, une étrange conception des sciences et, surtout, une économie et meme une théologie. (Latour, 2015)



(*NOAA National Centers for Environmental Information; State of the Climate: Global Analysis for February 2016*, 2016)

Record hurricanes and severe storms have also been on the rise (Schwartz, 2015; NOAA, 2016b). M.I.T. professor of atmospheric sciences, Kerry Emanuel, and his research team have drawn a direct causal link between global warming and the increase in frequency and intensity of hurricanes (cyclones) on the planet in the past decade, predicting an even greater increase of hurricanes and severe storm systems in the coming decades. (Kerry Emanuel, 2016; Reed, A.J., M.E.Mann, K.A. Emanuel, N. Lin, B.P. Horton, A.C. Kemp, 2015) Continuing sea level rise and increasingly common sea surges--once rare at such intensity--exacerbate the impacts and degree of severe storm activity risks. Emanuel observes that "the consensus in the field [of atmospheric sciences] is that frequency and intensity of hurricanes and storms will go up as global warming increases."(K. Emanuel, 2015; Kerry Emanuel, 2016; Reed, A.J., M.E. Mann, K.A. Emanuel, 2015; Reed, A.J., M.E.Mann, K.A. Emanuel, N. Lin, B.P. Horton, A.C. Kemp, 2015)

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On March 22, 2016 report, James Hansen and his team published their study *Ice melt, sea level rise and superstorms: evidence from paleoclimate data, climate modeling, and modern observations that 2 °C global warming could be dangerous* in the journal, *Atmospheric Chemistry and Physics* (Hansen *et al*., 2016). The study predicts that a multi-meter sea rise is possible within decades (similar to Lovelock's prediction), with a 2ºC post-Industrial Revolution global temperature rise as opposed to centuries suggested in previous estimates. Such a degree of sea level rise will likely put coastal cities around the globe in great danger; this is particularly so when one recognizes the high population density in urban areas, and that current climate change vulnerability is highest in urban centers, and the potential for conflict (Bicknell, Dodman, & Satterthwaite, 2010; Hansen *et al*., 2016; Satterthwaite, 2011) Some have criticized Hansen as well, for 'blurring the lines between advocacy and research" much as Lovelock and Margulis have been accused.

What remains interesting about Lovelock's and Margulis' theories is the extent to which they characterize the planet as a living, self-regulating organismic system, much like the human body. Such theories suggest that the Earth is an interconnected whole, dynamically and responsively striving to recover and maintain homeostasis. In this view, humans are not separate from the organismic system, not separate from nature. Rather, as Sahtouris points out, humanity is seen as an integrated part of the 'body ecology' of the planet, neither isolated nor dominant over a hierarchical, vertical categorization of species (Sahtouris, 2000, 2014).

c. *Ecology: Social, Sacred, Deep and Spiritual*

> "Planetary boundaries are interdependent, because transgressing one may both shift the position of other boundaries or cause them to be transgressed. The social impacts of transgressing boundaries will be a function of the social–ecological resilience of the affected societies" (Walker *et al*., 2009)

Social Ecology

In Social Ecology, human society is not separate from or dominant over the ecological systems often deemed 'the natural world;' rather it is dynamically, geo-relationally ingrained as part of living social-ecosystems--with the ability to influence and be influenced by them. (Berkes, 2012; Wright, Camden-Pratt, & Pratt, 2011)

Social Ecology can claim many scholarly parents, although Murray Bookchin is largely attributed with the founding of the philosophy of social ecology (Bookchin, 1990; 1993; 2007). "Social ecology is based on the conviction that nearly all of our present ecological problems originate in deep-seated social problems. It follows, from this view, that these ecological problems cannot be understood, let alone solved, without a careful understanding of our existing society and the irrationalities that dominate it. To make this point more

concrete: economic, ethnic, cultural, and gender conflicts, among many others, lie at the core of the most serious ecological dislocations we face today—apart, to be sure, from those that are produced by natural catastrophes." (Bookchin, 2007) A point of contention could be made with the latter part of his statement, given that the Anthropocene Epoch recognizes the causal link between actions taken within human societies and increasing environmental catastrophes linked with global warming (Eckstein, 2014).

Bookchin initiated the critical theory of social ecology within anarchist, libertarian socialist, and ecological thought, and has drawn the linkages of relationship and interconnectedness across human societies and the ecological systems in which they are intricately linked (Bookchin 1921-2006, 1993). Societal issues cannot be addressed without healing and addressing imbalance in ecology, and vice versa (Bookchin, 1990; *Defending the Earth: a dialogue between Murray Bookchin and Dave Foreman*, 1991).

A question that helps frame the social ecology conceptual space is asked in Adger's *Social and ecological resilience: are they related*? (Adger, 2000). The language of "resilience" has been applied in traditional ecological spheres, and in social spheres--increasingly becoming a shibboleth within climate change humanitarian and development circles (Adger, 1999, 2000; W. N. A. and K. Brown, 2011). Adger defines social resilience as "the ability of groups or communities to cope with external stresses and disturbances as a result of social, political and environmental change." Ecological resilience is defined as a "characteristic of ecosystems to maintain themselves in the face of disturbance." (Adger, 2000)

By highlighting "social resilience in relation to the concept of ecological resilience," Adger draws a link between social and ecological resilience, most specifically for "social groups or

communities that are dependent on ecological and environmental resources for their livelihoods." (Adger, 2000) In examining whether resilience is a useful characteristic for describing the social and economic situation of social groups, Adger focuses upon institutions as a key linkage between social and ecological resilience.

"Institutions," Adger writes, "in this case are defined in the broadest sense to include habitualized behaviour and rules and norms that govern society, as well as the more usual notion of formal institutions with memberships, constituencies and stakeholders. This broad definition is important because institutional structures, such as property rights, govern the use of natural resources creating incentives for sustainable or unsustainable use. Hence they are a central component linking social and ecological resilience." (Adger, 2000) In several case studies, Adger points to governmental institutions and economic policies as creating social and ecological vulnerability in certain communities (Adger, 1999, 2000; Barnett, 2007). This conceptual, inter-linking assertion by Adger provides a multi-layer reinforcement for establishing interlocking institutional, governance and community systems and social change movements (Badaracco, 2008; Barnett & Adger, 2007; Paavola & Adger, 2005).

Vulnerability, within environments and within communities, is a naturally interlinked concept for consideration when exploring the definition and nature of socio-ecological climate resilience. According to Chambers, Klein and Adger, "Social vulnerability is the exposure of groups of people or individuals to stress as a result of the impacts of environmental change (W. N. A. and K. Brown, 2011). Stress, in the social sense, encompasses disruption to groups' or individuals' livelihoods and forced adaptation to the changing physical environment. Social vulnerability in general encompasses disruption to livelihoods and loss of security. For vulnerable groups such stresses are often pervasive and

related to the underlying economic and social situation, both of lack of income and resources, but also of war, civil strife and other factors (see Chambers, 1989)." (Adger, 1999)

Within this framework, vulnerability of natural ecosystems is created when stressors disrupt or pressure communities ('of species'), as well as in 'threshold' spaces within ecosystems, where environmental changes cause potentially irreversible shifts. Human-induced risks and natural hazards (including anthropogenic drivers of 'natural' hazards), are among a span of phenomena observed to influence social vulnerability to environmental change at different scales (Klein *et al*, 1998; Adger, 1999). Resilience increases the capacity to cope with stress and is hence a loose antonym for vulnerability (Weichselgartner & Kelman, 2014).

In *Multi-scale vulnerability of natural capital in a panarchy of social–ecological landscapes* Petrosillo, Zaccarelli, and Zurlini present environmental vulnerability (fragility) in opposition to environmental security, in order to frame both "multi-scale and complex, existing in both the objective physical, biological, and social realm, and the subjective realm of individual human perception."

The Ecosystem Services field supports the growing SES (Social-Ecological Systems) field of research (Cote & Nightingale, 2012). Berkes and Folke write, "The most appropriate subjects to study for planning and management of ESPs [Ecosystem Services Partnerships] are socio-ecological systems (SESs) (Berkes and Folke, 1998), as society has always influenced and shaped the ecological component of SESs, and processes and patterns have been interacting and co-evolving historically that it is often very hard to distinguish what is natural from what is not. SESs are deemed as whole complex, dynamic and adaptive systems hierarchically structured, and self-organizing, with historical

trajectories, memory and learning capabilities, with nonlinear feedbacks, thresholds, and hysteresis effects" (Berkes and Folke, 1998; Levin, 1997; Li, 2000, 2002; Cadenasso *et al*., 2006; Ohl *et al*., in press).

Sacred Ecology

Dr. Fikret Berkes is an applied ecologist by background who works at the interface of natural and social sciences, emphasizing social ecology/SES. He wrote in his book, *Sacred Ecology* (Berkes, 2012) about defining "Traditional Ecological knowledge:" There is no universally accepted definition of traditional ecological knowledge. The term is, by necessity, ambiguous, since the terms *traditional* and *ecological knowledge* are themselves ambiguous. In the dictionary sense, *traditional* and *ecological* usually refers to cultural continuity transmitted in the form of social attitudes, beliefs, principles, and conventions of behavior and practice derived from historical experience. It is cumulative and open to change (Nakashima 1998; Ellen *et al* 2000). Hunn (1993a:13) explains: "New ideas and techniques may be incorporated into a given tradition, but only if they fit into the complex fabric of existing traditional practices and understandings. Thus traditions are enduring adaptations to specific places… Traditions are the products of generations of intelligent reflection in the rigorous laboratory of survival. That they have endured is proof to their power." (Berkes, 2012) Dr. Vandana Shiva, Dr. Joanna Macy and Dr. Leslie Sponsel have contributed broadly to overlapping and converging concepts of 'spiritual ecology' and 'sacred ecology' (Nhat Hanh *et al*., 2013; *Seed Freedom | Sacred Ecology*, n.d.).

Linking traditional ecological adaptation to an enduring adaptation to a *specific place* may raise some interesting lessons and contrasts with a local-to-local network intent upon raising its adaptive and resilience capacities through the sharing and exchange of their local

traditional and/or Indigenous knowledge. What does an exchange of this sort look like? What kinds of adjustments are necessary in the application of learning through these exchanges, and what knowledge is sustained and ever-appropriate across these local ecological and social circumstances?

Berkes further writes, "A major issue of our times is how humans can develop a more acceptable relationship with the environment that supports them. Growing interest in traditional ecological knowledge since the 1980s is perhaps indicative of two things: the need for ecological insights from Indigenous practices of resource use, and the need to develop a new ecological ethic in part by learning from the wisdom of traditional knowledge holders. However, it becomes clear that "resource management" is a concept is too Western-centric. Many Indigenous languages do not even have words for 'resource' or 'management.' Traditional knowledge provides lessons not in resource management but in dealing with human-environment relations." (Berkes, 2012) My interest in developing empirical primary research collaboratively with the ICE Network is to take a humanistic and inclusive approach to explore with ICE network affiliates, through their collaborative efforts and shared learning, ways in which these vital relationships between humans and their environments (including other "beings" within those ecosystems), and humans with each other. What can these efforts teach the world about what is viable, what is possible for navigating the challenges of climatic change together?

TEK is defined by Berkes Colding and Folke as "a cumulative body of knowledge, practice, and belief, evolving by adaptive processes and handed down through generations by cultural transmission, about the relationship of living beings (including humans) with one another and with their environment" (2000).

Traditions of sacrality (in which something is imbued with sacred character, particularly through ceremonial ritual) within the climate change context may support stronger, more sustaining dynamic adaptive ecosystems and adaptation and resilience capacities within a social-ecosystem. (Berkes, 2012; Bhagwat, 2006; Frascaroli, 2014, Cassidy, 2012; Juhé Beaulaton, 2014) Studies of polycentric governance and diverse institutions have identified examples of common resource protection (water, air), through local practices and sanctions, many of which are backed by the sanctity of the sacred and other moral precepts which override self-interest for communal benefit (Milton, 2002; Brockington, 2006; Thornton, 2010; Berkes, 2012; Sponsel, 2014; Rappaport, 2012). Such systems are built not only on rational self-interest but also emotion, cultural significance, and collaborative reciprocity (with other constituents of the landscape and cosmos). As such they represent moral ecologies, which are for the most part absent from conventional governance schemes.

Deep Ecology and Spiritual Ecology

"Through deep experience, deep questioning and deep commitment emerges deep ecology"

-*Arne Næss* (Næss, 2008)

"To me, the essence of deep ecology is moving beyond a type of environmentalism that is still based on a highly reductionist and a highly distant approach to the living natural world."

-*Helene Norberg-Hodge* (2012)

There are converging values and concepts of sacrality that have been termed 'sacred ecology,' 'spiritual ecology,' at perhaps at the origins of this conceptualization is 'deep ecology.' Arne Næss is widely considered the founder of Deep Ecology (Atkisson, 1989;

Biehl, 1995; Nhat Hanh *et al*., 2013). Deep ecology argues that the 'natural world' maintains a balance of complex inter-relationships in which the existence and perpetuation of organisms is dependent on the existence of others within ecosystem—that the whole Earth is an organismic system, dynamically interconnected. Deep Ecology asserts that human interference with or destruction of the natural world poses a threat not only to humanity, but to all organisms constituting the natural order. (Devall & George, 1985; Gottlieb, 1995; Lauer, 2002)

In the 1960's, Næss was deeply influenced by Rachel Carson's *Silent Spring* (Carson, 1963), a book which brought to the public sphere a consciousness of the environmental crises brought on by pesticide use and chemical pollutants, alongside carbon emissions. Her book launched Næss' lifelong investigation of the global environmental crisis, and his search for solutions. (Galtung, 2011; Harding, 2009; Naess, 1993)

For Näess, the environmental crisis moved him towards ethical questions regarding the manner in which humans should live and relate to other living beings on the planet. Reductionist ecological sciences, he felt, did not consider the ethical or relational aspects of the environmental crisis. Nevertheless, these scientists were influenced by subjective assumptions of those relationships--such as adaptationists' viewpoint that organisms and systems are made up of interchangeable, independent parts (Gould, 1979; Naess, 1993). Næss asserted that a kind of ecological *wisdom* was necessary to bring ecological science to consideration of ethics and relationships for life on the planet.

Bill Devall describes long-range deep ecology as a social movement, based upon ecology, the relationship between organisms and their habitat, and a recognition for potentialities of

evolution of the system. It encourages participants to engage in deep questioning, asking "why am I here? What is meaning?" As Devall states it, "Deep ecology is basically a search for meaning in a world of fact." (van Boeckel, 1997)

The term 'deep ecology' stems from Næss seeking to develop ecological wisdom through deep questioning, deep experience (of the natural world, of our place within it) and deep commitment (to living life in a new way, to stepping out of the systems which contribute to the ecological crisis) (Næss, 2008; Nhat Hanh *et al*., 2013) In Deep Ecology, these elements all contribute to an interconnected system, and the experience, as Macy framed it, of mutual causality, or 'multi-directional dependent co-arising'(Macy, 1979, 1991). The entire system, in Deep Ecology terms, is an ecosophy: "an evolving but consistent philosophy of being, thinking and acting in the world, that embodies ecological wisdom and harmony" (Harding, 2010)

Næss makes a distinction between 'shallow' and 'deep' ecology (Næss 1973). Shallow ecology is anthropocentric. It views humans as dominant over and external to nature; shallow ecology views nature-external to and distant from the self and human society--as a resource, a commodity to exploit, extract, and of which one can then dispose. Nature is only valued in the ways it can serve human society. Deep ecology does not separate humans from the natural environment, nor does it separate anything else from it. It does not see the world as mechanistic but "rather as a network of phenomena that are fundamentally interconnected and interdependent. Deep ecology recognizes the intrinsic values of all living beings and views humans as just one particular strand in the web of life. It recognizes that we are all embedded in, and ultimately dependent upon, the cyclical processes of nature (Devall and Sessions 1985)." (Posey, 1999; Dryzek & Schlosberg, 2005; Naess, 1973)

‘Shallow ecology, or shallow environmentalism / reform environmentalism, has been linked to the efforts of sustainable development. George Sessions describes shallow ecologists as seeking to perpetuate existing systems with small reforms, making them more sustainable or more ecological (Devall & Sessions, 1985). Deep ecologists, however, reflective of the process of revitalization in Wallace’s Revitalization Movements, are seeking radical change in society, to get to the root causes of ecological crises, and transform the manner in which humans related to the rest of the living planet.

George Sessions states, “I think the concept of sustainable development is a good example of what we call shallow environmentalism. The idea is that the development won’t stop—we’ll continue to develop—we just want to develop sustainably, or ecologically. As long as you’ve got this tremendous society that causing all these environmental problems, you’ve got to have the reform environmentalists […] Without the shallow environmentalists, we probably would have lost everything by now. Deep Ecology’s point is that is not enough. You’ve got to make fundamental changes to society.” (Devall & George, 1985; van Boeckel, 1997) Harold Glasser asserts that what Næss is encouraging environmentalists to do is to question more deeply, to engage with the questions of meaning of self and relationship with other living beings, and then to bring that lens back to reviewing the existing societal systems in which they live. (Glasser, 2011)

Indigenous Worldview and World Religions Embedded Within Spiritual Ecology

Spiritual Ecology identifies the rupture of the human relationship with spirituality and nature within western societies, as a result of the Scientific Revolution, Age of Enlightenment, and the Industrial Revolution (Sponsel, 2012; Vaughan-Lee, 2013; Bhohi, 2018)--and as captured by Durkheim, and later Rappaport, as the age of scientism (Durkheim, 1912; Rappaport,

1999). Some Spiritual Ecologists distinguish between 'Deep Ecology' and 'Spiritual Ecology,' suggesting that Deep Ecology may offer a pathway to a more comprehensive, encompassing worldview of Spiritual Ecology (Bhohi, 2018). Early catalysts for Spiritual Ecology discourse include Rudolf Steiner (1861-1925) who founded anthroposophy and described a 'co-evolution of spirituality and nature' (Steiner, 1918); Pierre Teilhard de Chardin, the French Jesuit paleontologist (1881-1955), described a transition in collective awareness toward a consciousness of "divinity within every particle of life, even the most dense mineral," wherein dissolution between divisions of fields of study become necessary. that "science, philosophy and religion are bound to converge as they draw nearer to the whole." (Sequeiros, 2017). This perspective is echoed in Roy Rappaport's work a century later, on the cusp of the new millenia, that a new Universal religion is needed and imminent (Rappaport, 1999). Thomas Berry, an American 'Passionist' and 'geologian' (1914-2009) furthered Teilhard de Chardin's view with a shift in perspective influenced strongly by the eco-cultural relational Indigenous worldview, that humanity is not the center and dominant actor in the Universe, but integrated into a divine whole with its own evolutionary path: "The present urgency is to begin thinking within the context of the whole planet, the integral earth community with all its human and other-than-human components" (Berry, 1987; 2009).

Spiritual Ecology is not based upon any single religion or spiritual path but rather "points to the primary and universal recognition of the sacred nature within creation. It is informed by the teachings of religion and spiritual traditions, Indigenous wisdom and the new scientific paradigm" intertwining environmental and spiritual experience and understanding (Bhohi, 2018) As mentioned in this dissertation's preface and in Chapter 1, Spiritual Ecology, as a century-old theoretical discourse and worldview that everything is sacred and interconnected,

embraces its foundational influences of diverse, nature-culture roots of Indigenous worldviews spanning potentially hundreds of thousands of years (Culotta, 2009).

In Unlearning the Language of Conquest, Don Trent Jacobs, aka Four Arrows or Wahinkpe Topa (2006), points to potential complementarity along with shared values / perspectives between between Indigenous spirituality and world major religions such as found in the ICE Network. Indigenous Scholars such as Robert Allen Warrior (1989) and Angela Wilson (Mihesuah & Wilson, 2002) would say that there is very little Indigenous wisdom embodied the the mainstay of the Abrahamic religions, but this has been countered by scholars of Asian religious cultures, who have identified Indigenous beliefs, worldviews, and practices in Filipino interpretations of Christianity, and Indonesian practices of Islam and Christianity, as a few examples (Abogado, 2006; Dali, 2018; Hauser-Schäublin, 2013).

Given that diverse Asian Indigenous actors join together with Asian Buddhists, Hindus, Christians, Muslims, Baha'is, Brahma Kumaris and other affiliates of the ICE Network, a unique opportunity to further existing theory has been provided in practices of convergent, complimentary, and shared applied values spaces across Asian Indigenous and Interfaith worldviews and active collaboration.

Buddhism and Ecology

> *If we continue abusing the Earth this way, there is no doubt that our civilization will be destroyed. this turnaround takes enlightenment, awakening. The Buddha attained individual awakening. Now we need a collective enlightenment to stop this course of destruction. Civilization is going to end if we continue to drown in the competition for power, fame, sex and profit.-- Thich Nhat Hanh*

Buddhism serves as a powerful influence upon Næss and the school and movement of Deep Ecology. Eastern Buddhist cultural philosophies, as introduced to the United States in the

1960s, imported a notion of inter-relatedness, and interconnection, of all living beings, animals, plants, soil, watersheds, and so on, which planted a seed for the concepts of Deep Ecology that considers protection and wellbeing of whole ecosystems and landscapes (Næess, 1973; Sessions, 1985), not simply focusing on individual species, as shallow ecologists most often have done.

Gestalt ontology, the philosophical underpinning Næss developed in support of Deep Ecology, considers the perception of 'inter-Being' and that "the whole is more than the sum of its parts." This is distinguishable from Gestalt psychology of Max Wertheimer, Wolfgang Koehler, Fritz Perls and others of the Berlin School of experimental psychology, in which one attempts to decipher and understand the principles and patterns that enable meaning and purpose within an apparently chaotic world (Wagemans et al, 2012). Næss' Gestalt ontology, on the other hand, deals with the nature of being through the relationships of "human spontaneous experience of reality." Næss writes that "gestalt ontology is introduced to take better care of some important phenomena usually denoted by terms such as holistic thinking. The usages of Systems Thinking build upon his thinking, and expand beyond it. The most important job is to suggest a different way of conceiving the relevance of mathematical physics to descriptions of reality. It is suggested that mathematical physics aims at creating models for how to conceive and explain the abstract structures of reality, leaving its content untouched." (Næss, 2005; Sieg, 2004)

In Næss' 'Gestalt Thinking and Buddhism,'convergent pathways of Buddhism inform his Deep Ecology theories. Of *Anatmavada and Self-Realization* he writes that the "'doctrine of no (permanent) Self' is essential to both Buddhism and Gestalt thinking;[...] a deep ecological philosophy (Ecosophy T),'Self-realization!' is the logically (derivationally)

supreme norm, but it is not an eternal or permanent 'Self' that is postulated. When the formulation is made more precise, it is seen that the Self in question is a symbol of identification with an absolute maximum range of beings. [...] The same applies to a term such as self-realization. This status as instruments for thinking, however, does not exclude such terms from appearing in important statements. 'Only through one's self-realization one can attain nirvana . . . ,' says Masao Abe in his article (1985: 31) concerning Do-gen's term buddha nature (buddhata). (Næss, 2005).

Drawing upon her earlier book *Mutual Causality in Buddhism and General Systems Theory: the dharma of natural systems* (1991), Joanna Macy, Buddhist, General Systems Theorist (and board member of INEB) and proposes a Spiritual Ecology worldview of the 'world as Self' (Macy, 2007; Sponsel, 2012) that more deeply articulates Næss' assertion. She proposes emerging at present a collective societal recognition of the essential non-separateness of the world, and of all Beings as part of this world. In a mutual, dynamic, inter-responsive (and organismic) manner, self-realization become the recognition that the individual, group, and humanity as a whole is not separate from Earth, from Nature, but rather *is nature.* In this Buddhist view, to know the 'self' is to recognize *Oneness*, the 'I Am' of Buddhist (and Hindu) tradition, to understand that interconnection itself diminishes as borders become connections, and existence is a composite Body Ecology. (Macy 2007; Sponsel, 2012; Vaughan-Lee, 2013) To harm another Being, to pollute the waterways, to blow-off mountaintops with explosives for mining, to do anything that harms ecologies, Earth, or 'others' (Said, 1977) is to harm the Self. Ecocide becomes suicide. (Higgins, 2015)

Just as a mother, even at the risk of her own life, protects her child, her only child, in the same way one should cultivate a measureless heart of love toward all beings. One should cultivate a measureless heart of love toward the whole world- above, below, and across-- without constriction, enmity, or rivalry. Whether standing, walking, sitting or lying down, as long as one is awake, one

should maintain this mindfulness; they call this 'divine living' in this world. --Suttanipata

Buddhist Zen Master Thich Nhat Hanh's book *The World We Have: A Buddhist Approach to Peace and Ecology,* he calls for a kind of collective awakening, as humanity has constructed structures that we can't control. "I have sat with the Buddha for a long time and consulted him about the issue of global warming, and the teaching of the Buddha is very clear. If we continue to live as we have been living, consuming without a thought of the future, destroying our forests and emitting dangerous amounts of carbon dioxide, then devastating climate change is inevitable. Much of our ecosystem will be destroyed. Sea levels will rise and coastal cities will be inundated, forcing hundreds of millions of refugees from their homes, creating wars and outbreaks of infectious disease." (Hanh, 2008) This collective awakening through a Buddhist lens of Ecology and interdependence also calls for a *collaborative* rather than *competitive* understanding of ecosystems, of the Earth System, and the way we understand our role as humans, as part of the Earth.

> *Now the adverse effects on forests through overpopulation and the development of various chemical elements in the atmosphere have led to irregular rainfall and global warming. This global warming has brought changes in climate, including making perennial snow mountains melt, thereby adversely affecting not only human beings but also other living species. Older people say that these mountain were covered with thick snow when they were young and that the snows are getting sparser, which may be an indication of the end of the world. The harmful effect on the atmosphere brought about by emissions in industrialized countries is a very dangerous sign*.
>
> -HH the Dalai Lama, of Himalayan changes
> From *A Buddhist Response to the Climate Emergency* (Stanley et al, 2009)

Ecocultural Distress Syndrome

Finally, it is of value to take note of Luisa Maffi and David Rapport's (Maffi & Rapport, 2011; Pilgrim & Pretty, 2013) proposed *Ecocultural Distress Syndrome*. Eco-cultural diversity is a concept embedded within biocultural studies, particularly through understanding of Indigeous worldviews and practices, emphasizing the relational ecology of culture and ecosystems--for example, the way in which engaged Buddhists, Hindus, Veddas, Anitoists, Muslims and other affiliates of the ICE Network view themselves in relation to their whole ecologies, and engage in the network as part of an expansive, inter-related web of their shared eco-culture.

Eco-cultural Distress Syndrome considers the experience of diverse ecocultures such as found in the ICE Network, and the implications of diversity loss for these complex systems. Maffi and Rapport explored what comprises a healthy eco-cultural system in terms of formation, function and resilience, based on ecological, socio-cultural, and governance dimensions:

> - ***Organization*** The alignment of cultural institutions and practices with the maintenance of biotic composition, interactions and integration;
> - ***Vitality*** The capacity of the system to sustain itself (transmit/reproduce) so that its potential for life in both nature and culture is undiminished; and
> - ***Resilience*** The maintenance of coping mechanisms in nature and culture to enable rebound from ecological and social disturbance, such as drought, floods, epidemics, conflict, etc. (Rapport and Maffi 2010).
>
> *-Rapport & Maffi in Pilgrim & Pretty (2013)*

This is of value in considering the formation, function and resilience of the ICE Network, as well as implications of the decline in eco-cultural health through loss of diversity, climate shocks, and other destabilizing stressors.

Interestingly, in the context of consideration of the ICE Network, the concept of Ecosystems Distress Syndrome (EDS) neatly responds to Wallace's Revitalization Movement formulation as a response to shocks and stressors upon a group (or social-ecosystem). Whereas Wallace's Revitalization Movements (and stressors upon individuals-to-society catalyzing a movement for systems change) tend to frame Mazeways as linear and working from an individual at the molecular make-up, up to the individual, then out through family, community, society and ecosystem, EDS considers humans as integrally, dynamically relational (and not central or anthropocentric) within an eco-cultural system, experiencing shocks and distress (and fall out) together with all Beings of an ecosystem. When any part of the eco-cultural system experiences loss or damage, the entire eco-cultural system experiences distress--this could be loss of eco-cultural language, TEK and Indigenous / local wisdom as much as loss of species or habitat. (Maffi & Rapport, 2011; Pilgrim & Pretty, 2013)

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In summary, this chapter has built upon previous theoretical work of revitalization movements, organismic systems, ritual ecology and systems theory, concepts of interconnection and levels of relating from the cellular to the planetary, and philosophies of sacred and social ecologies that break us all out of our isolated, independent parts which have been treated as interchangeable cogs in a wheel for much of the Industrial Growth Society (Dryzek & Schlosberg, 2005; Hawken, 1999). The convergences of many inter-relating recent literature create a new, expanded framework for examining relational formation and perspectives for

relating, in order to seek out new and evolving models, and creative ways of addressing the global climate change crisis.

Patterns for a New 'Universal' through Asian Biocultural Perspectives, Spiritual Ecology and Interfaith Convergence on Climate Change may help model a way forward in the Anthropocene

The 21st Century opened its doors to a planet neck-deep in new circumstances posed by the Anthropocene. The degree and intensity of flooding, hurricanes and storm systems, wildfires, drought, landslides, and other climate extremes have severely increased in the first 17 years of the century. Ice caps are melting and sea levels are rising. 2016 was the hottest year on record with 2017 close behind (2016's heat was amplified by El Niño) (Meyer, 2016; NOAA, 2016; *NOAA National Centers for Environmental Information; State of the Climate: Global Analysis for February 2016*, 2016; Nuccitelli, 2017). Existing governance structures and institutions formed in the 20th Century—centralized, bureaucratic, and hierarchical global institutions—have struggled to respond, adapt, or mitigate the impacts and vulnerabilities that climate change poses. Spiritual and religious leaders in Asia, and increasingly around the planet, have been stepping up to help address this gap, speaking about the moral, ethical, and systems perspectives they feel are not being considered within the dominant paradigm. Moreover, these interfaith climate actors propose new models and methods for engaging with climate change. These models reflect a 'unity through diversity' convergence of spiritual traditions and practices, coming together to form what could be considered in a new conception of the universal through the lens of sacred ecology systems.

Today, 84% of the world's human population self-identifies as belonging to a major world religion (UNICEF, 2010, 2012; Pew Research Center, 2015). However, according to Keith

Hart, Durkheim's *Les Formes élémentaires de la vie réligieuse (The Elementary Forms of a Religious Life)* (Durkheim, 1912) framed the western European dominant paradigm of the 20th Century, as one of "centralized states staffed by a professional class of scientific experts" (Rappaport, 1999). In this view, religion became obsolete as a serious intellectual concern for social organization. Durkheim felt this scientism nevertheless could not fulfil the spiritual needs of society in the way that religion previously had. Yet Durkheim could not envision an alternative.

Keith Hart points out that Roy Rappaport's human ecology / systems theory (steady state cybernetic homeostasis) work on ritual, culture, and society, served to help envision that which Durkheim could not—a new concept of the universal. Hart views Rappaport's work as striving to provide "the groundwork for the development of a new religion adequate to the circumstances humanity will encounter in the twenty-first century," in order to "inform future attempts to construct a religion [grounded in ecology] compatible with the scientific laws ruling a world for which humanity is ultimately responsible." (Hart, 2003)

Rappaport recognized indicators of global and systems change at the turn of the century and positions them within a consumerist culture that enacts global destruction of nature and society, an ecological crisis on planetary levels. (Fabian & Rappaport, 1982; Messer, Lambek, & Woodman, 2003; Rappaport, 1948-, Lambek, Rappaport, & Lambek, 2001)

The pan-Asian emergence and convergence of interfaith and spiritual actors with climate change science and climate change action offers a practical model and a method to answer Roy Rappaport's vision for a new conception of the universal—one that does not demand monotonous uniformity, a conformist singularity of belief and action. Rather, it suggests

potential for recovering 'wholeness' and health through diverse collaboration. As often found in nature and society, diversity supports rebalancing and health. A potential friction that may arise in differences is viewed as an opportunity for improved understanding and transformation of relationships (Lederach, 1997).

The purpose of this project is to consider more closely the values, processes, attitudes, and actions of this pan-Asian interfaith climate change engagement, with the interfaith and sacred ecology elements front and center. This network case study may provide a practical example relative to Rappaport's conceptual explorations. Rappaport's ideas are useful in that they envision one alternative to (or evolution beyond) the monolithic centralized systems paradigm of the 20th century. This literature helps frames an understanding of the potential context and value of the current networked interfaith engagement on climate change.

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Chapter 3

Research Design, Methodology and Case Study

I. *Epistemic and Ontological Foundations*

This research is not solely description, not merely about what exists, but the way people perceive the existence of things, and how they relate to these ideas and perceptions. This dissertation is not an attempt to discern an 'absolute truth,' but rather to explore the ways in which people talk about 'truth' or 'knowing' according to their experiences. In drawing out such 'truths'—which have not been included in dominant climate change and development discourse—this research engages with different belief systems in order to bring them into conversation with each other.

Failing to embrace the full breadth of the existing climate change discourse relative to Anthropogenic stressors by suppressing or 'othering' certain voices (Alkire, 2003; Deneulin, 2011; Oberholtzer, 2013; Said, 1977; Seed, 2014) may result in a degree of blindness. This seems especially true as people around the world initiate strategies for coping with the impacts and threats of climate change (Environmental Ethics and Anthropocentric, 2012). The more voices coming together in climate change discourse (Lévi-Strauss, 2010), the greater the possibility of establishing deeper, more encompassing, 'truths' that reflect challenges, capabilities, and potential pathways to sustainable climate action.

Anti-foundational anthropology—for example, the ideas inherent within *Results of the conference of anthropologists and linguists* by Lévi-Strauss and colleagues in 1953 (Lévi-Strauss, 1953)—asserts the need for multiple voices in order to achieve a closer, experiential, perception-based understanding (Lévi-Strauss, 1968, 2008). Jean-François Lyotard, in *Au juste: Conversations* (Lyotard & Thébaud, 1979) argues that we cannot have a singular narrative which adequately explains social and political systems. Rather multiple micro-narratives can facilitate a profusion of voices, allowing for the widest variety of perspectives to be entertained and therefore providing a clearer picture of the overall conversation.

Moreover, as Paolo Freire points out, a field of competing discourses can "help structure a variegated system of socially constituted relationships" (McLaren, 1993). Power and access to power (money, materials, policy and legal influence, markets) can disproportionately influence whose voices are heard, what discourse is included and considered, and what is not. This research strives, in part, to bring forth some of the marginalised, lesser heard, often excluded or unknown discourses of localised social justice and interfaith climate change

actors networked across Asia. The research questions, case study, and methodologies chosen for this research reflect this interest, with emphasis on ethnographic processes (Bell, 2002).

II. ***Research Questions & Hypothesis***

The theoretical framework developed in my review of the relevant literature and through the iterative and generative processes of empirical research conducted in field research (grounded theory) (Qualitative Research: Grounded Theory Methodology | Mark Bound - Academia.edu; Strauss, 1998a), has **led to five general lines of inquiry** (Chapters 2) designed to address the dissertation primary research question.

The preliminary research questions, and the primary research question arising from inquiry and engagement with early data, go directly to a gap in the existing disciplinary literature where voices raised within international climate change and development fields call for new, nature-culture-based (biocultural and eco-cultural) creative models for knowing, relating, and engaging with climate change concerns apart from the dominant international systems:

> The preliminary research question initiates the project:
>
> Are there identifiable, practical-action examples emerging separately from the dominant international climate change and development systems, that can offer new models for relational formation and action? Could aspects emerging from new local-to-local climate change networks, in part, answer the call for creative and innovative methods and systems designed to confront the challenges of climate change?

Within this overarching preliminary examination, the following sub-questions are explored: *Does relational formation of emerging climate change networks influence the capacity to address the systemic and social stressors of climate change? What role, if any, do sacred ecology, eco-cultural perspectives and organismic systems play in the formation of working*

relationships for climate change action? What role or contribution, if any, does faith/religion play in building relationships for climate change action? (Why are religious actors getting involved in climate change efforts?) What role or contribution, if any, do relationships between people, and between people and nature, play in catalysing behavioural change around climate change issues?

This project observes there is something happening with mushrooming and converging climate change networks-- a multiplicity of diverse geospatial ecocultures and ecological systems perspectives. The manner in which this is occurring, particularly as regards the pan-Asian case study, may serve to offer up new models for transitioning and new systems formation better suited for the heightening challenges of the Anthropocene--or at minimum, widening the lens of approaches (discourse) through which humanity perceives climate change conditions. Quite literally, these actors and networks share their micro-narratives with each other: their climate stories, their spiritual and ecological mythos, as they come together to identify shared values of appreciation, ways to co-exist so that their differences strengthen each other.

The case study of the ICE Network offers a unique example involving many religions and spiritual traditions coming together through a network formation with an eco-culturally convergent focus on climate change. The nature of the network, renouncing centralized and hierarchical structure or linear program management, and operating with limited fiscal resources, has the potential to proffer new insights. Finally, through this iterative and generative process of inquiry led to a pivotal, **primary research question**, which is:

> ***Why does the ICE Network appear to thrive and expand while explicitly eschewing structure and centralised program management as is usually considered essential for networks to succeed?***

Sub-question: *What characteristics of the network enable this very different formation and (enigmatic / ambiguous) governance to sustain?*

The proceeding analysis of network formation, processes, dynamics, decision making and the 'unanticipated factors' in the case study of the pan-Asian Inter-Religious Climate and Ecology (ICE) Network, seated in the International Network of Engaged Buddhists (INEB) Secretariat, explores foundational values, beliefs, and relational systems that shape ICE Network activities across Asia and globally. It hopes to provide a deeper understanding of how diverse ecocultures relate to each other and the natural world, and the forms of organising that may emerge from these convergent yet diverse beliefs and practices. Is there potential to identify practical new models or examples that may enable innovative creative approaches to the climate change problem? Or is this yet another cycle of small, naïve, marginal utopian experiments that will have very little bearing upon the trajectory of the planet and its inhabitants as we navigate the Anthropocene?

III. ***Research Methods***

This chapter proceeds with an overview and analysis of the case study of the pan-Asian Inter-Religious Climate and Ecology (ICE) Network, seated in the International Network of Engaged Buddhists (INEB) Secretariat, and explores the foundational values, beliefs, and relational systems that shape ICE Network activities across Asia and globally. The research hopes to provide a deeper understanding of how perceptions and manners of relating to each other and the natural world--and how systems, and structures may influence the efficacy of climate change action. The research asks: in opening the discourse to include the voices, perspectives, and activities of the ICE Network affiliates—a network that has emerged both endogenously and external (and in response) to the international climate regime and IGO systems—is there potential to identify practical new models that may enable innovative creative approaches to the climate change problem? Or is this yet another cycle of small,

naïve, marginal utopian experiments that will have very little bearing upon the trajectory of the planet and its inhabitants as we navigate the Anthropocene?

Research for this dissertation spans two years of participant observation and 116 in-depth, semi-structured interviews of 77 key individuals involved with the pan-Asian Inter-Religious Climate & Ecology (ICE) Network (Appendix for interview participant details). The ICE Network is spread across 21 Asian countries, with engagement from three African countries, one Latin American country, and representatives originating from seven European countries (Appendix).

The research also involved eight focus group interviews (focus groups in four Asian countries, with six, twelve, twenty-four, thirty-six, fifty-one, seven, fifteen and five participants respectively. In addition, conference reports, concept papers, planning meeting notes, project plans and reports, archival records (of INEB and ICE Network affiliates), and standards (for the Mindful Markets Forum and the Good Market Participatory Guarantee System) were reviewed.

My work as a participant observer across ICE Network affiliates includes one year based within the INEB transitional Secretariat in Bangkok, where the ICE Network is seated. There I participated in trainings, English language document production, cross-network communication, and conference planning and preparation for the 'ICE II' conference on *Climate Change, Sustainability and Resilience*, which took place in Seoul, South Korea in Spring of 2015. Moreover, I participated in analog forestry trainings at Belipola and Islander Center in Sri Lanka; natural-build and permaculture trainings at the Gaia Ashram & Gaia Education on the border of Laos and Thailand; the Chulalongkorn University Right Livelihoods program in Bangkok, threaded with ICE affiliate applied pedagogy and the engagement of Participatory Action Research, or PAR (Bernard & Gravlee, 2015; Hagey,

1997); with ICE Network affiliate initiatives in rural and urban Thailand; Climate Change course trainings for clergy in South Korea, Sri Lanka and Thailand; and Organic farmer-to-farmer applied learning exchanges on the Myanmar-Thai border.

Additional participant observer work involved time with ICE Network affiliates, Green Thai Markets fishing cooperatives, and consumer collaboration workshops near Trat, Thailand; Mangrove restoration projects embedding sustainable livelihoods and education components in southern coastal Thailand; numerous climate change education and action visits in Sri Lanka, Thailand, India, and South Korea; art and nature workshops, biodiversity restoration, livelihoods training and organic farming at the Islander Center; volunteering at market and education stalls at the Good Market in Colombo and 'deep hanging out' in the community meeting spaces of the Good Market Shop; volunteering and participating in ECO-V education programs and climate change Yatras, participation in Belipola sari upcycling and conscious consumerism trainings as well as work on the organic farm and maintaining analog forestry systems; participation in trainings, activities, and unplanned convergences of ICE network actors on visits to Belipola in Sri Lanka; visits to Sewalanka Foundation, an ICE Network core affiliate in Sri Lanka; participation in soap making and zero-waste classes with local community children at Deer Park, India; and attending ecotemple planning sessions and new ecotemple launches in Tamil Nadu, India, and Myanmar (supported by ecotemple and sustainable energy cooperative initiatives in Japan, Northern India, Cambodia, and Thailand).

I also visited ICE Network affiliate programs in Japan and South Korea involving sustainable energy cooperatives and ecotemple initiatives alongside nuclear energy protests. I attended the Conference of Parties 19-21 and the IUCN World Conservation Congress 2016, and the September 2017 Agadir, Morocco *Climate Chance* forum of non-state actors, with ICE Network affiliates. The sites for participant observation and interviews were chosen for two

key reasons: 1) a great deal of activity was shown to be catalysed and generated in these spaces, and 2) through generative learning in first phase interviews and participant observation, awareness grew of 'out-webbing' initiatives across ICE Network and generated deeper questions requiring time spent (Participant Observation in additional sites), and further interviews with a wider span of actors to be undertaken.

The following sections provide an in-depth discussion of my research methods, including criteria for selecting study participants and a sample frame from the span of ICE Network affiliates, the methods applied for data collection, and the process of data analysis. Included in these discussions are some reflections on the strengths and weaknesses of these approaches.

a. Population & Sample: Case Study & Research Participants

Sampling and Selecting Participants in Field Research

The broader study population, or entire group of elements in which this study is interested (Bernard & Gravlee, 2015), includes emerging alternative, interfaith climate change networks, primarily in Asia. Some examples include the Hong Kong-originated (but global) *Our Voices* platform (Our Voices, 2015) and *Green Faith*-- born largely from the *Our Voices* platform; the *People's Pilgrimage* ("The People's Pilgrimage," 2015)*;* the African *We Have Faith* ("Act Now for Climate Justice - We Have Faith," 2015), *TILCEPA* (TILCEPA Groups | IUCN, 2015), and *Gaia Foundation* (Gaia Foundation, 2015) networks; and finally, the case study selected for this research, *the Inter- Religious Climate and Ecology (ICE) Network* (The ICE Network, 2016). (See Appendix for the sampling frame list.)

There were several reasons why I decided to focus on the ICE Network as a case study, as opposed to wider populations of emerging climate change networks. Some of these reasons

include 1) the current gap in awareness of stakeholder networks and activities within the dominant centralized-state institutions of climate change and development circles, as well as in the wider public; 2) the current lack of climate change adaptation, mitigation, or resilience models for most vulnerable communities (mvcs) emerging apart from those preferred by development and climate change institutions; 3) the likelihood that very different models for addressing impacts and vulnerabilities of climate change are liable to emerge out of the case study affiliates' eco-cultural relationships, values, and approaches than those found within current global climate change and development agencies; and 4) case study stakeholders (spiritual and religious actors and groups) are more likely to simultaneously influence behaviour change and activity within mvcs, while also influencing policy-making at national, regional, and global levels.

The ICE Network encompasses a broad range of multiple-overlapping and collaborating networks, groups, and organisations who've come together to focus on climate change concerns. All the above-mentioned networks in the study population are also ICE Network affiliates (see appendix for the sampling frame list), or 'friends' of the ICE Network. ICE Network is relatively the most established, not only having been formed in 2012 but also having at because its core network affiliate organizations and other connected networks have been working on climate change and sustainability concerns long before the ICE Network was formally established. These 'origins networks' contributed to early organizational formation, values, and ethos (process and core tenets).

In addition to the above reasons for selection of this case study, given my prior knowledge of some affiliates of the and key drivers of the ICE Network's formation --due to research conducted in Sri Lanka in 2002-2003, and my professional engagement in Sri Lanka during the civil war and 2004 tsunami response-- there was an established trust which provided

access to the broader network. This enabled a large number of interviews to be conducted, a plethora of opportunities for participant observation in projects and meetings, and other data collection prospects and access across multiple countries, cultures and languages—all within a relatively limited period of time.

The study sample was drawn from the study population of the Inter-Religious Climate & Ecology (ICE) Network- affiliates and 'stakeholders' including individuals and entire organizations or overlapping networks within and outside of ICE Network engagement. Selection of interview participants (the study sample) for this research was determined according to the following criteria: 1) core leadership within ICE Network; 2) organisations with same or overlapping 'facilitation origins' of the ICE Network— the International Network of Engaged Buddhists (INEB) and Sathirakoses Nagapradeepa Foundation; 3) most involved in ICE Network activities; 4) most involved across the ICE Network affiliates—collaboration, meeting, facilitating, sharing; 5) intentional balancing of Buddhist INEB origins with Muslim, Islamic, Animist / Shamanic and Christian ICE Network affiliates; 6) generative identification of research participants emerging from participant observation, qualitative interviews, and focus groups.

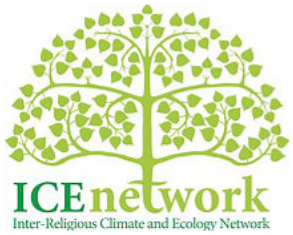
The affiliate members and individuals ('stakeholders') of pan-Asian ICE Network selected for interviews and participant observation included deep ecology education and action groups, permaculture and eco-village and/or eco-temple groups, grassroots sustainable markets forums and other national and regional sustainable market 'webs,' biodiversity restoration community cooperatives and networks, Indigenous groups including Sri Lankan Vedda shamans and Vietnamese and Lao hill tribe animists; Thai and Southeast Asian, and South Asia, organic farmer cooperatives, sustainable fishing villagers, spiritual leaders and practitioners of animist, Hindu, Christian, Muslim, and Buddhist disciplines; Zero-waste

temples; Asia regional Islamic environment and education forums, and many social justice activist groups. There are many individual affiliates who engaged with ICE Network on a personal basis while professionally working for businesses, International or National Non-Governmental Organisations (I/NGOs), Inter-Governmental Organisations (IGOs) or government.

The sampling objective was to cover a broad spectrum of viewpoints and experiences across the ICE Network, while generating an understanding of network formation, relational values and cultural dynamics, decision-making, communications, and engagement. Due to the need to understand core network formation and decision-making, the emphasis on INEB-originated organisations similar to the ICE Network may have resulted in a slightly 'Buddhist- weighted' sample proportion, but this is largely balanced with a diverse sampling across affiliates, countries, spiritual practices and organisations. The generative aspect of the research, along with a diverse span of sampling and archival records, allowed for triangulation and checking of interview statements (Bernard & Gravlee, 2015; Strauss, 1998a). Nearly one half of the study sample affiliate research participants identified as Buddhist (or 'small *b*' buddhists – see Chapter 4) nearly one fourth identified as Muslim, while the remaining 'sample' represented fairly equally Hindu, Christian, Animist / Shamanic and agnostic ICE Network affiliates (please see Appendix for a detailed spreadsheet of interview participants). As is further discussed in Chapter 4 under the subheading 'Gender and Generation,' many of these organizations in earlier generations had a semblance of hierarchical structure, reflecting some religious formations (particularly within Hindu societies), the dialectic formation of local organizations in response to donor structures and requirements from decades ago, and some Asian cultural 'leadership' models; what is interesting is how the residual hierarchies have been diminishing as a new generation of largely female-facilitated and self-organizing initiatives emerge and carve out new

collaborative pathways (see chapter 4).

Figure / Image 2: ICE Network logo



b. Case Study Overview

The pan-Asian Inter-Religious Climate and Ecology Network has been headquartered in Bangkok (although in 2016 it began transitioning to Seoul), seated within the International Network of Engaged Buddhists (INEB) Secretariat. INEB was established in 1989 (INEB, 2015). Along with its 8 'sister organisations' (6 of which were included as research participants in my study sample), INEB came into being under the auspices of the Thai social activist Sulak Sivaraksa's Thai NGO Sathirakoses-Nagapradeepa Foundation (SNF, founded in 1968), along with Venerable Thich Nhat Hahn, H.H. Dalai Lama, and other key Buddhist spiritual and thought leaders. This is relevant, as the ICE Network was launched from a 2012 INEB Sri Lankan-hosted conference of spiritual, faith, and community leaders from more than 26 countries, focusing upon the human drivers of climate change and biodiversity conservation (see appendix for affiliate list of INEB and the ICE Network).

The ICE Network describes itself in Box 3:

Box 3: "*The ICE Network (Inter-religious Climate and Ecology Network) is a pan-Asian, local-to-local, collaborative network of diverse spiritual communities seeking to share experiences, learning, and wisdom that will build resilience and empowerment to action in the face of climate change. Our purpose is to wisely influence national public policy within Asia and to stimulate and strengthen diplomatic discussions around climate change at international level. We aim to do this in cooperation with various stakeholders, such as faith-based and civil society organizations, gender and age based groups, and business networks. We seek to encourage healing in a world struggling with equality and vulnerability, both intensified by climate change. ICE Actions, a tripartite approach will guide actions resulting from the network, addressing the key strategic areas where an integrated faith-based response can organise and engage directly to mitigate impacts and integrate adaptation responses, and importantly, solutions which recognize the human drivers of climate change and biodiversity loss:*

Micro Level: Faith traditions continue to play a strong role in the everyday life of communities across Asia. Faith leaders should collaborate across inter- and intra-faith networks to educate and raise awareness among faith leaders and faith communities around Climate Change and biodiversity, and to facilitate community actions for mitigation and adaptation, rooted in long-term sustainable, equitable development.

Macro Level: At a policy level, faith leaders have an essential role in advocating values and ethics, while leveraging their position within society, to influence global negotiations and direct national and local policies - that are at this time rooted in national interests - for immediate and long-term health, safety and socio-economic-environmental well-being of political constituents.

Paradigm Change: At all levels, from grassroots communities to local and national awareness and onto the global stage, a faith-based response has a critical role to play in advocating a paradigm change in values and orientations towards our planet and the way we coexist within it."

Source: http://www.ice-network.net

The ICE network operates both within formal (registered organizations) and semi-formalized networks and informal geo-relational-spaces -"Affiliates" or "Gathering of Friends," Sister Organizations, and "Associated *Kalyanamitra"* or "spiritual friends"- such as explored in part as Whittaker's and Jepson's "Gentlemen Friends Network" (Whittaker & Jepson, 2002; Sivaraksa, 1998) Its founders claim to be 'anti-structural' both in values and organizational and network formation (Chungprampree, 2015; Sivaraksa, 2015; Hutanuawatr, 2015; ICE Network, 2015; INEB, 2014). 'Anti-structural' in this case is both against the 'structural violence' a la Galtung (Galtung, 1979; 2001) perpetuated by hierarchical corporate and governmental / militaristic and economic systems of power, extraction, exploitation and subjugation, but also 'anti-structural' in the manner in which they self-organize, together. There is a clearly and oft-articulated intention to avoid organizational structure that is itself hierarchical, centralized, and dependent upon a 'boss' or 'leader' prescribing and / or dictating activity or engagement. There is no membership, no MOUs (contracts and Memorandums of Understanding). Rather there is affiliation and friendship, a gathering of

spiritual friends who voluntarily collaborate *or do no*t, who do not wait for permission to act or not act, who are self-determinant and come together through an endogenous and responsive drive to do so. Everything is voluntary, fluid, with a trust that everyone will be where they need to be, when they need to be there. They operate through a trust in the natural *flow* of life.

c. Methods of Data Collection

The methodologies chosen for this study helped form, and were formed by, the theoretical framework and research questions outlined in this dissertation. The early catalysing interest for this research originated in my direct involvement with the international development and humanitarian field, disaster risk reduction (DRR), and community-based climate change adaptation (CBA). This involvement inspired my search for different systems and relational approaches to climate change challenges in most vulnerable communities. The discovery of emerging Asian and African local-to-local climate change networks --apart from the international development, humanitarian, and climate change institutions- led me to the ICE Network. I first learned of the ICE Network through Sri Lankan colleagues with whom I'd worked in the Wanni conflict zone fifteen years prior. Field research data underpinned by an extensive review of relevant academic literature, contributed to the formation of a theoretical framework. This framework examines the relational, values-based, formative dynamics of an interfaith climate change action network through a lens of collective action and systems change (revitalization movements), integral to (general / earth) systems theory, and sacred / spiritual / deep ecology.

The qualitative case study research methodology was designed to support and create spaces for participants to safely and openly explore their stories (or micro-narratives), perceptions, and attitudes in relation to what they experienced as ICE Network affiliates engaged in

climate change action. Along with the examination of activities of the ICE Network and ICE Network affiliates, I designed my research methodology in order to explore the network itself --its relational formation, decision making, communication and collaboration aspects — for consideration as a potential new model in the dominant climate change discourse.

The methods applied in this research include a) **ethnographic / ethnographic-participatory approaches**, such as participant observation (Bernard & Gravlee, 2015; Hicks, 2010; Zangmo, 2013): ICE Network and ICE affiliate planning meetings, conferences, debriefing sessions, collaborative mapping, participation in spiritual ceremonies and rituals; participation in climate change 'A-to-Z' workshops for faith leaders, participation in training sessions and courses on natural build techniques, organic permaculture, 'analog forestry,' climate-adaptive and resilient farming and fishing; conscious consumerism classes; online and pen-and-paper daily journal keeping, and 'deep hanging out' (Wogan, 2004); b**) archival records** review such as conference reports from ICE Network in Sri Lanka, Japan and South Korea, conference reports from INEB, ICE Network meeting notes for conference planning debriefing of projects and project / working group planning; the SNF/INEB *Seeds of Peace* magazine, funding proposals and activity reports, and exhibitions such as the collaborative presentations of Participatory Action Research (Hagey, 1997) and Right Livelihoods by local Towards Organic Asia farmers and CURLS 2015 students, Mindful Markets forum documents, the Good Market internal documents and online standards and procedures, ICE Network and INEB websites and social media pages (ICE Network, 2015; INEB, 2014); and c) **semi-structured and unstructured qualitative individual and focus group interviews** (5 general areas of inquiry):

- Climate Change
- Sacred / Spiritual / Deep Ecology; Ritual & Belief; Ethos (values, attitudes)
- Pedagogy, Facilitation and Education
- Livelihoods (Buddhist / Islamic / Hindu Economics) & Wellbeing; Perspectives on

Development
- Network (formation, linkages, gaps, bridges, decision-making culture, communications and collaboration, concept and practices, phases and levels)

Reliance upon a singular case study may be challenged as a weakness in this research. The most common criticism of a single case study is a perceived difficulty of verifying the relevance of research findings to other social settings. Appreciably, the nature of this interfaith local-to-local pan-Asian network as a case study is exhibited through its diverse comparative local applications-- across a great variety of languages, spiritual practices, nations, and social, geo-political and economic contexts. Furthermore, Michael Burawoy identifies in *The Extended Case Study Method* (Burawoy, 2000) two key methods for case study work: the interpretive case method and the extended case method. The extended case method examines the influence of external factors upon a case, while the interpretive case method is one in which macro principles and applications can be identified through the micro-context of a case study. It is not necessary, therefore, to draw a comparative analysis across case studies. A singular case study suffices with interpretive methods.

Many postmodernists challenge interpretive roles for qualitative and ethnographic research, suggesting this is 'pretension' and state of 'privilege' to (partially) interpret experiences for another; these critics, such as Haraway, have instead promoted networks of 'situated knowledges.'(Haraway, 1991;2008; Leino & Peltomaa, 2012) This research bridges the spaces of interpretive case studies, acknowledging that any writing or depiction of another (and even of the self) requires a degree mutable and partial interpretation. However, this case-study research employs an idea of connected, situated knowledges, wherein the micro-narratives of groups and individuals come together to form a greater understanding, or an aspect of truth, among many potential truths (Hurley, 1974; Lévi-Strauss & Charbonnier, 1969; Lyotard, 1988). A *Verstehen* (German for 'understand' a la Max Weber) approach

further reflects the nature of my strategy with research methods in this study, befitting the semi-structured and unstructured interview techniques utilized in the qualitative research (Nauerth, 2016; Turner, 2016). The Verstehen approach attempts to move the researcher and research participants from the subject-object divide into spaces of shared understanding (Bernard & Gravlee, 2015; "Focused (Semi-structured) Interviews," 2016; Spivak, 1990; Benford & Snow on Geertz, 2000).

Ethnographic and qualitative research approaches have been challenged for 'problems of reliability' and the subjective nature of experiential perspective (Kirk 1986). In *The Nature and Validation of* Knowledge (Bernard & Gravlee, 2015), Michael Schnegg discusses Malinowskian-style ethnography, noting that "most of the work done in the analytic tradition is based on the correspondence of the theory of truth. Empirical research defines indicators for the statements being made and proposes ways to examine and measure those indicators. The epistemological challenge to justify that a belief is true is met through the control of data collection and analysis. In the scientific paradigm, a statement is said to be a *justified* true belief- and thus knowledge."

Postmodernists and radical constructivists in anthropology would argue that Malinowski's work was "unsympathetic and impatient," and reflects an impossible presumption of objectivism—and that we cannot describe the world in an objective manner (Bernard & Gravlee, 2015). One voice or perspective is not necessarily more or less valid than another, but in coming together, the conversation becomes richer. This reinforces a methodological research strategy intended *not* to champion a 'one right way or truth,' but rather to deepen and widen discourse so that the voices of most vulnerable communities—and their alternative coping strategies around the challenges of climate change—are brought into a greater, shared discourse. Seeking 'validity' itself is a way of suggesting there must be one truth, one right

answer.

Schnegg writes of the postmodernist shift away "from the objective single-source purveyor of anthropological knowledge, to a collective, multi-source set of knowledge claimants. What is at work here is not the ability to translate other cultures, but rather the ability of the lone ethnographer, using a standard mode of writing and representation of the fieldwork observations, to be a justified source of knowledge claims made. This shift is toward providing multiple sources, possibly justifying multiple knowledge claims within the same piece of ethnographic writing (see also Zenker and Kumoll 2010)."(Bernard & Gravlee, 2015)

With this in mind, I utilized a full spectrum of qualitative methods to triangulate, deepen and contextualize data – the stories people tell, the way people perceive themselves in relation to others, to systems, and to 'nature.' Qualitative research methods included archival data from the exhibitions and presentations created through Participatory Action Research (PAR) engagements with ICE Network affiliates (CURLS 2015 Right Livelihoods experiential education program), and organic and Traditional Ecological Knowledge (TEK) utilising farmers and fishing groups. Among several reasons (further discussed in following sections) driving the decision to apply a semi-structured and unstructured interview technique, one was to mitigate my own presumptions or biases that could possibly limit the direction of the interview, given the potential of such limitation to blind me to unconceived ideas, experiences, relationships, insights or other ways of understanding of the network.

d. Maintaining Ethical Research Standards

At the University of Oxford, in the School of Geography and Environment (SoGE), *Research Involving Human Participants* (CUREC), requires approval of an ethics committee. After

completing a CUREC checklist, I submitted to the departmental research coordinator (who submitted to the ethics committee) a 'CUREC 1A form,' as required, a consent form and research and ethics information sheet to be shared with each individual I planned to interview for the dissertation project. The ethics committee approved my consent form, information sheet, and application form. Prior to each interview, I provided the participants with an information sheet, which we read through and discussed. Then I asked the participant to sign a consent (one that included options for anonymity, partial-anonymity, or willingness to have name and / or images used for the purposes of the research). I have kept all consent forms on paper and digital filing systems, with backup on cloud and external hard drives. Please refer to Appendix to view the template ethics consent form and research information sheet.

e. Timeline

The qualitative field research undertaken with my study sample drawn from the ICE Network, was done primarily with participant observation from December 2014 through October 2015, with additional periods for participant observation in person available in the autumn of 2013, autumn of 2014, and summer 2016. The qualitative individual and focus group interviews began following CUREC approval in May, 2015, and continued into October, 2015, with some remote follow-up interviews. The archival research was undertaken consistently throughout the year I spent based in Bangkok and traveling across Asia with the ICE Network affiliates, as well as in the lead-up to arrival in Thailand, and in follow up generative inquires ('grounded theory' informed process) (Juliet & Anselm, 2008). Please see Appendices for a detailed timetable of research activities.

f. Participant Observation

Participant observation is a qualitative method dating as far back as sociologist Beatrice Webb's work in the 1880s and is pervasive across the social sciences. Kathleen Musante (DeWalt) defines participant observation as a "method in which a researcher takes part in the daily activities, rituals, interactions, and events of a group of people as one of the means of learning both the explicit and tacit aspects of their life routines and culture." (Bernard & Gravlee, 2015).

Participant observation enhanced, triangulated / checked and contextualised the data I collected through interviews, focus groups and archival research. The method helped to develop relationships of mutual exchange and trust between research participants and me. Participant observation also enhanced the quality of my data interpretation, given the deeper context, and the knowledge gathered, observed, and shared fluidly outside of more formalised spaces. Several months were spent primarily in a participant observer role within the ICE Network and core group actors, particularly in the INEB Secretariat housed in the Sathirakoses-Nagapradeepa Foundation (SNF, under the patronage of the H.H. Dalai Lama), along with ICE Network affiliates INEB University, the Spirit Education Movement, students from Wongsonit Ashram, Thai Green Network—geographically nearby other ICE Network affiliates and 'INEB siblings' such as the School for Wellbeing, Towards Organic Asia, the Mindful Markets Forum, the Conscious Consumers Network, the 'Garden of Fruition' or Suan Nguyen Mee Ma publishing house and social enterprise, Siam Baandin Natural Housebuilding Social Enterprise, Tongkla, Santi Pracha Dhamma Institute, and Documentary Arts Asia (see appendix of sampling frame for a fuller list). This allowed for deeper understanding not only of the dynamics within and between these groups, but also enabled me to discover root collaborations, long-term relationships, and cross-over of actors and histories across ICE Network and its affiliates that did not arise in interviews, and was not found initially in archival data.

During the fieldwork stage of my research, and previously for short planning trips, the hub for gathering was the Sathirakosis Nagapradeepa Foundation, the ICE Network's first 'home.' Initially I stayed in a boarding room (where visiting monks or students may stay) on the grounds of SNF, the INEB / ICE Network Secretariat—an enclosure on the grounds of Sulak Sivaraksa's childhood home, once surrounded by farmland, now an oasis within a hectic, polluted Bangkok of high rise condominiums, freeways, and mega-malls. The grounds hold a library with English and Thai books as well as in several other Asian languages (most books donated to Sivaraksa over the years with social, political, spiritual relevance). There is a (very) small local cooperative café and book store with a fish pond and outdoor seating, selling Thai social, economic, environmental and political books and magazines, as well as upcycled and organic products from the broader network of affiliates. Also on the grounds is a large meeting room, offices for Sathirakoses Nagapradeepa Foundation (SNF), INEB, the ICE Network, Spirit Education Movement (SEM), INEB University a meditation room, a kitchen and outdoor eating area that served as the central location for many events, daily meals, and discussions. Eventually I moved into a flat and travelled into the office daily as most people in the offices did (although some live on the grounds, particularly Burmese staff and monks and nuns) –when I was not traveling around Thailand or to other ICE Network affiliate locations in Asia.

In the offices, I would lend support with English writing and editing for reports and communications, note-taking in meetings, fund development and other documentation. This proved valuable in many ways. I had direct access to the discussions, processes, procedures and activities ongoing for the ICE Network and affiliates, I was able to contribute something of value to the Network without compromising my distinct role as researcher, and through the process, we were able to build relationships of mutual trust and understanding, opening the doorway to deeper sharing and engagement when the period for interviews began. During

this time, internal documents, annual reports, and other archival data not otherwise available were shared with me freely. While documents, meetings and work gatherings proved very useful, it was often the ‘space in between’- meals, break times, traveling together, that ‘deep hanging out’ time, where deeper understanding and insights became possible (Wogan, 2004).

In Thailand, Sri Lanka, Korea, Japan, India, and to a lesser extent in Malaysia, on the Lao and Burmese borders, Cambodia, and Vietnam, my participant observation methods, as detailed in the timeline (above and appendix), included working on organic farms and permaculture or analog forestry plots; city and community clean up and temple zero-waste initiatives, meetings and workshops with fishing and farming cooperatives and consumer groups; natural build projects, courses and trainings; planning and debriefing meetings, conferences and workshops, working in and visiting urban green markets and city organic farms and their connected shops and restaurants, Right Livelihoods courses and Participatory Action Research training, and site visits to eco-temples, biodiversity restoration and climate adaptation projects, solar and wind energy social enterprises, among many other activities (see appendix for a detailed spreadsheet of activities). I documented my observations daily in pen-and-paper journals as well as in a digital computer folder. I took photos, audio and video recordings, as forms of documentation.

Participant observation as a research method allowed me a generative process for engaging with interviews and archival research, raising questions, highlighting activities and issues that had not been mentioned otherwise. It also allowed me deeper insights into Thai, Burmese, Lao, Cambodia, Vietnamese and Malaysian cultures—as well as the unique culture of organisations arising from SNF, INEB, and deeply informing the ICE Network's cultural origins and formation. Participant observation facilitated and catalysed the formation of new research questions and hypotheses grounded in the context of ICE Network and its affiliates.

Of course, there are potential disadvantages to the involvement of participant observation. Critics of the method suggest there is a risk of becoming too involved in the culture of the case study, potentially compromising the ability to write analytically objectively about it (Bernard & Gravlee, 2015; Tedlock, 1991). Mindful of the criticisms and potential risks, I dedicated a portion of my daily journal entries to mitigating bias, raising and exploring criticisms or challenging questions related to my observations . Some argue that everyone brings a degree of bias to his or her experiences and reporting (Bernard & Gravlee, 2015; Mitchell & Slim, 1991); so my intent was to maintain awareness of this and to pose difficult questions to myself and throughout my field research inquiries. In this process, I found an articulated organisational practice helpful for raising and directly addressing conflict and difficult questions within the ICE Network core group and affiliates.

Given my professional tendency for raising critiques and conducting assessments internal to my organisation as well as within public spheres, I feel confident that this same degree of critical analysis was employed during this field research (Parry & Duplat, 2010; Parry, 2010). That said, the potential advantages and benefits gained from the participant observation approach seem to far outweigh the potential risks—particularly with a self-reflective practice threaded throughout the data collection period.

In the tradition of Glaser & Strauss' "discovery of theory through data" with 'grounded theory,' my research topic evolved from participant observation work. The theoretical framework generated through data shifted greatly (Glaser, B. G., & Strauss, 1999; Glaser, B.G., & Strauss, 1967). I came to learn about the social-ecosystems thinking and deep ecology / sacred ecology roots of the work of ICE Network (and INEB/SNF), and the very different values (from those of development and humanitarian institutions) and relational formation that is implanted in the roots and evolving manifestations of the ICE Network's

sacred networked approach to climate change issues.

I also observed a facilitation, education and training pedagogy, rooted in ritual, as the transformative and central catalysing dynamic of all of the networks' and network affiliates' activities. One advantage to the grounded theory approach is that the reflexive dynamic of the theories naturally fit, and could more closely reflect, the data of my research context. This process also enabled the discovery of activities and discourses that have received little attention in the climate change and development fields, catalysing and motivating this research endeavour.

g. The Interviews (Individual & Focus Groups)

The individual, 'person-centred' interviews (Bernard & Gravlee Levy & Hollan, 2015) were conducted as semi- structured, open-ended interviews, with some unstructured interviews as appropriate. The focus groups were conducted in small numbers, maximum eight in one group, and were also semi-structured, open-ended discussion- styled interviews. Interviews were recorded with digital sound recording subject to consent of the interview participant, and with detailed field notes. The field notes provided summary and key points raised during the interview, as well as questions and ideas generated from each interview. The quotes included in this dissertation derived from both field research notes and the direct quotation from the digital recordings.

A general research question, "How do relationships and values influence climate change action?" was identified prior to designing the interviews. This research question, as well as the sub-research questions, were then explored and refined in the process of data collection, and then finalised through the data analysis process. Finalising the research questions in the process of analysing data provides an advantage that ensures the questions are rooted in the issues of greatest priority to the interviewees. Sub-questions and their analysis involved a

holistic review of field notes and audio recordings, and creating and refining field codes relevant to the research questions and emerging from research data. This necessitated a meticulous degree of care in order to incorporate the full range of perspectives into the data analysis and findings presented in this dissertation.

While I did undertake a great deal of reading for this generative and iterative research methodology prior to my field research, I utilized in part a 'grounded theory' method, which involved the discovery of theory through the analysis of data, and a dynamic influence between participant observation, shaping the semi-structured coding and emphases of the semi-structured interviews. This approach is integrated in theoretical components throughout this dissertation (Juliet & Anselm, 2008; Strauss, 1998). Grounded theory is an approach which operates in a different methodical order from most social science research—the research data informs the emerging theory. The hypothesis evolves through the data analysis and dynamic engagement with the data collection process.

Analysing data collected in the early stages of participant observation, I marked key points and consistent patterns through a series of codes extracted from the text. The codes included, for example, 'Climate Change Action,' 'climate change and community based adaptation and mitigation,' 'Spiritual / Sacred / Deep Ecology,' 'spirituality- centred transformative trainings,' 'behaviour change,' 'power and threats to power,' 'Social Justice and Movements,' 'biodiversity restoration and permaculture as climate resilience,' 'Education for Social Change,' 'Head-hands-heart and holistic climate action,' 'Structural Violence and Economies,' 'Network formation and Collective Action,' 'sustainability, resilience and development,' I grouped the codes into similar concepts to support emerging themes and ideas.

The field codes for semi-structured interviews:

- Climate change
- Sacred / spiritual / deep ecology; ritual & religion; Ethos (values, approach, attitudes)
- Pedagogy, Facilitation & Education
- Livelihoods, Markets (Buddhist economics) & Wellbeing
- Networks for Collective Action (linkages, gaps, hubs, bridges, facilitators and 'pollinators,' decision-making culture, communication, collaboration, concept v. practice, phases and degrees).

While these codes were guideposts for lines of inquiry in each interview, the interview was not conducted in a sequential, subject-limited manner. Rather, I facilitated the interviews with a conversational tone, keeping in mind these fields of inquiry and at times guiding the conversation back to specific elements of the fields—yet in general, the interviews were purposefully open-ended to allow for a fluid narrative from the interview participant (Bleyl, 2000); to create space for the interviewees to identify what was most important to them and their experiences; and to avoid 'blinding' or limiting the findings according to my pre-interview understanding or potential biases.

Michael Scriven developed an interview technique that I utilised (I have been trained by Scriven in this technique) that could allow for a free-flowing, open discussion, yet ensure that the fields of inquiry for the research are addressed and explored (Cook, Scriven, Coryn, & Evergreen, 2010; Scriven, 1991). There were instances when there may have been key elements or specific questions generated from previous interviews with other participants or with the same participant, or from my own participant observation and archival review, that would guide some aspects and directions of a particular interview.

The primary research question (*Why does the ICE Network appear to thrive and expand through network webs while explicitly eschewing structure and centralised program management as is usually considered essential for networks to succeed?*), was

comprehensively addressed by reviewing all interviewee comments relating to engagement with the ICE Network and / or other networks and network formation, decision-making processes, ritual and training processes, values and beliefs, communication and / or collaboration within and across organisations, relationships, systems and stressors. The primary research question's subquestion (What characteristics of the ICE Network enable this very different formation and enigmatic governance to sustain) was addressed by examining the patterns of belief and perception, behaviour, and consistent qualities emerging from across ICE Network affiliate actors and initiatives The five preliminary subquestions helped as a means to identify and articulate key elements of this climate change networked movement, or engagement, most particularly as involve relational formation, behaviour change and action related to climate change.

In order to address preliminary subquestion 1 (*What role or contribution, if any, do relationships between people, and people and nature, play in catalysing behavioural change around climate change issues*?), I examined interviewee comments regarding their values and perceptions in respect to nature, relationships within organisations and networks, relationships to ecosystems, behaviour change, education and trainings, catalysts, or action. I compared and contrasted the primacy interviewees gave to the importance of relationships in catalysing climate change action or behavioural change, and the differences and distinctions they perceived in relevance of relationships between people, and relationships between people and nature.

Prelim-Subquestions 2 and 3 (*What role, if any, do sacred ecology, eco-cultural perspectives and organismic systems play in the formation of working relationships for climate change action? What role or contribution, if any, does ritual, faith / religion play in building relationships for climate change action? (Why are religious actors getting involved in*

climate change efforts?) was addressed by drawing out and analysing interviewee discussion of sacred, deep, or spiritual ecology, ecosystems and systems within institutions and networks, ritual and ceremony, religious attitudes towards ecology and climate change, and discussion of systems change and climate justice. I searched the interview data for examples where sacred ecology was explicitly linked either to climate change action or a systems critique, or both, including examples of activities, challenges, and opportunities these spaces may or may not have created. I identified, compared and contrasted the responses according to geographical location, self-identified faith or spiritual practices of the interviewees, and level of engagement within the ICE Network.

Prelim-Subquestion 4 (*Are there identifiable, practical-action examples emerging separately from the dominant international climate change and development systems, that can offer new models for relational formation and action? Could aspects emerging from new local-to-local climate change networks, in part, answer the call for creative and innovative methods and systems, designed to confront the challenges of climate change*?) led me to search and organise interview data according to discussion of specific climate-change oriented projects involving Education, Markets / the Buddhist Concept Right Livelihoods (explained further in Chapter 6), climate change resilience adaptation or mitigation initiatives, and any mention of the network itself as a tool, model, or method to address the challenges of climate change. I was particularly interested in the degree of endogeneity and ownership of projects, who and what they involved, and the way in which the initiatives were undertaken from start to finish.

h. Archival Data

Archival data for this research included the review of documents on the ICE Network website- including conference reports, articles, and other documents (ACCCE & the ICE Network, 2015; INEB, 2012; The ICE Network.), as well as on the INEB website (INEB,

2015), and websites for School for Wellbeing (School for Wellbeing, 2015), Towards Organic Asia (Towards Organic Asia, 2015), the Mindful Markets Forum (Mindful Markets Forum, 2015), the Garden of Fruition (Suan Nguen Mee Ma social enterprise, 2015), the Good Market (Good Market, 2015), Belipola (Belipola, 2015; Senanayake, 2011), Gaia Ashram and Gaia Schools (Gaia Ashram | Gaia School Asia, 2015), Global Ecovillage Network Oceania Asia (Global Ecovillage Network, 2015), Wongsonit Ashram (Wongsanit Ashram | Global Ecovillage Network, 2015), Sathirakoses-Nagapradeepa Foundation (SNF - Sathirakoses Nagapradeepa Foundation, 2009), Spirit Education Movement (Spirit in Education Movement (SEM), 2015), Muhammadiya (Pimpinan Pusat Muhammadiyah, 2015), Solidaritas Perempuan Aksi!(Solidaritas Perempuan Gelar Aksi Dukung Pergub Cuti Melahirkan, 2015), Gusdurian, Indonesian Islamic Forum, Hansallim, Eco-Asia University, GaiHaHiTa, Korean Christian Movement Solidarity for Integrity of Creation (김봉한 et al., 2007), IKIM (IKIM, 2015), Deer Park Institute (Deer Park Institute, 2015), the Sewa Lanka Foundation (Sevalanka Foundation, 2014), Sarvodaya (Sarvodaya, 2015), Seeds of Peace (Seeds of Peace, 2015), Japanese Network of Engaged Buddhists (JNEB) (JNEB, 2015), S.P.E.R.I. (SPERI, 2015), Dhammadrops (Dhammadrops, 2015), Kalyana Mitta Foundation (Kalyana Mitta Foundation, 2015), FK Norway (FK Norway, 2011), TILCEPA, Socially Engaged Monastic Schools (of Burma), Niwano Peace Foundation, We Have Faith, NGOs Forum on Cambodia, and Plum Village, and others (affiliated with the ICE Network).

In the (SathiraKoses Nagapradeepa Foundation) SNF/INEB library, I was able to review to books written by Sulak Sivaraksa and Thich Nhat Hanh documenting the early formation of the networks as well as the formative values and thought. In addition, I had access to *Seeds of Peace* magazines dating back over a decade, published by and kept on file in the INEB

office. ICE Network, INEB, SEM and TOA staff also provided me with internal documents, from funding applications, concept notes, annual reports, organigrams, photos and videos of projects, and PowerPoint presentations. I was provided with similar archival digital documents from the JNEB office in Tokyo (English versions). These archival documents also include exhibits and documentation from presented Participatory Action Research (PAR) from the CURLS 2015 (Chulalongkorn University Right Livelihoods summer school), where students collaborated with ICE Network affiliate organic climate-smart farmers, urban green farmers and activists, sustainable energy groups, to map their conditions, efforts, and concerns.

i. Methods of Data Analysis

The process for collection and analysis was cyclical, iterative as well as generative as the research work unfolded. The participant observation served as a contextual foundation for the research framework and research questions.

The audio recordings of interviews, meetings, focus groups and conferences were logged, and interviews transcribed (all by me). With the field codes created from participant observation, and honed and reinforced with interviews and archival records, I used the codes to organise key quotations and discussion from the interviews, using a spreadsheet to organise the quotes in sections according to each field code, while marking the geographic location, organisation, language and faith-identification of interviewees. I included an additional section with a listing of components necessary for Wallace's revitalization movements, and organised data accordingly.

While the majority of interviewees consented to their names being used in the research, unless there was a statement made publicly or otherwise made more significant by the

standing and position of the speaker, I opted not to use names as identifier tags—instead I used initials. I utilised NVivo software to manage, organise and manipulate data (in order to identify patterns, relationships, themes), as well as to serve as additional data back-up. In addition to NVivo, data was stored in multiple locations for protective measure—on my computer, on a cloud drive, on flash drives, and on a large external hard drive.

The organized, coded comments were examined for any common patterns as well as distinctions and 'outlier' perspectives that did not fit with emerging patterns. With preliminary findings and patterns identified, I shared those findings with core leadership within the ICE Network for discussion and feedback. This helped me more clearly articulate findings for analysis, and gain further contrasts across the shared and differing perspectives and ideas within network leadership. These processes of organisation, pattern identification, discussion, and feedback helped in the systematic development of my analysis, critiques, and overall assessments and conclusions—as explored and expanded upon the analytical chapters to follow.

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Chapter 4

Transitioning and New Systems: Markets, Food and Forests in the Time of Climate Change
Livelihood Innovation through a Sacred Ecology Lens in Asia

The 2015 Sustainable Development Goals (SDGs) include wide-ranging mandates for action on climate change and its impacts. The UNFCCC's 2015 climate talks integrated core sustainable development values into the Paris Agreement. The siloed walls of the development field appear to be becoming more porous as cross-discipline engagement with climate policy makers, scientists, and activists is emerging. Nevertheless, overburdened near-Leviathan bureaucracies can be slow to change and slow to collaborate. For example, Climate Finance in the UNFCCC arena emphasizes generating funding streams, while the current

distribution mechanism for climate funds remains dominated by donor states. Design and implementation of climate adaptation, mitigation, and resilience (including disaster management) programming is generally left vague and undetermined.

It is largely presumed that the funds will move through existing institutional channels that function separately from each other and necessitate exogenously designed top-down, scale-able uniform program activities and deliverables. Such program mechanisms are often found to be wasteful of resources, ineffectual, unsustainable, and inappropriate to diverse local bio-cultural values, behaviours, and social-economic-political-ecosystems worldwide (Farmer & Sen, 2005; Sen 1933-, 1999). In the best of circumstances, these interventions are still not enough to address loss and vulnerability (Nussbaum, 2011; Slim, 2002; Slim & Mitchell, 1990). An urgent context of interconnected global complexities necessitates creative innovation to address the many facets of climate change risk and impact. It is vital to explore other ways of doing, knowing, and relating around climate action apart from the existing international development and humanitarian paradigm, and its institutions.

In this chapter, I review the notion of development and exponential growth as a vehicle for addressing poverty and inequality—and as a means of promoting community wellbeing and sustainability—relative to increased global-warming stressors. Through case study findings, I examine the practical examples of alternative sacred- and deep-ecology-informed market models in Asia emerging across ICE Network affiliates and their networks. These alternative market models serve to strengthen climate change mitigation, adaptation, and resilience through shifting relational values, while clearly articulating their intent to facilitate transitional and new markets as part of greater cultural transformation for systems change.

Such initiatives help define new parameters for climate-sensitive livelihoods, eco-cultural communities, resilient and sovereign food systems (including 'deep organics'), and healthy social-eco-systems. I explore relational and values-based strategies to catalyse behavioural change and strengthen climate-smart markets alongside approaches toward leveraging scale of impact without formulaic top-down replication. Markets are a natural space to find health and cohesive complementarity through diversity. As Elinor Oström points out, a potentially hopeful aspect of all markets is their capacity to 'read' a situation and adjust more rapidly to it than lawmakers and regulators can (Oström, 2010); of course this adaptive capacity is contingent upon guiding values and purposes, and can just as well prove detrimental to climate solution goals. They can also help get to root causes of climate change and monolithic exponential-growth-based capitalist systems.

A key to igniting a global level of appropriate and sustainably effective climate change mitigation with adaptation may reside within lessons from Buddhist Economics co-arising with E.F. Schumacher's Burmese-inspired 'Small is Beautiful' ethos. 'Small is Beautiful' values small-scale, local, and mindful market systems, challenging the 20th Century 'gigantism' of mass production and hyper-consumption (Schumacher, 1974; 1999; 2015). Schumacher's lessons spring from the geographic region and communities where Schumacher's ideas were first born and nurtured—Buddhist Southeast Asia. Several generations after Schumacher's first visit to Burma (now Myanmar), a network of Buddhist, Muslim, Hindu, Christian, animist, and shamanic climate actors are creating and facilitating market systems to reflect these sacred whole-systems values in the present day. 'Small is Beautiful' has become their oft-recited credo.

I. Development, Global Governance, and a Growth-based Economic Model

a. Sustainable Development Goals (SDGs) 2015, the COP21 Paris Agreement: a bridging of silos?

There appear to be small fissures opening up across the siloed top-down institutions of the international development field and international climate change institutions—most notably the United Nations Division for Development and the United Nations Framework Convention on Climate Change (UNFCCC). The United Nations' September 2015 Sustainable Development Goals (SDGs) establish 17 areas of commitment to be met or exceeded by the year 2030 with non-binding agreement from nation states' leaders. In an exceptional expansion beyond a conventional frame of development, the SDGs include a call to protect the planet. Most SDGs incorporate some aspect of sustainability and environmental care with implicit nods to climate change, among them calls for resilient infrastructure, renewable energy systems, sustainable agriculture, restoration and protection of terrestrial ecosystems, and marine conservation. (United Nations, 2015)

SDG #13 explicitly calls for urgent action to be taken on climate change and its impacts, while "acknowledging that the United Nations Framework Convention on Climate Change is the primary international, intergovernmental forum for negotiating the global response to climate change." (United Nations, 2015) This overlap and convergence of development and environmental concerns is ground-breaking in the often-territorial segregated silos of the United Nations as well as development and humanitarian international organisations.

The UNFCCC has met the SDGs halfway in bridging goals and institutional priorities. In Paris, the Conference of Parties (COP) 21 saw 195 countries adopt the first universal legally binding global climate agreement in December 2015 (United Nations, 2015). The Agreement includes a long-term goal to maintain global average temperature 'well below' 2ºC above pre-industrial levels with a hard-fought aim to limit the global temperature increase to 1.5ºC.

This is considered a sustainable development and climate justice 'win' for communities around the world who are vulnerable to the risks and impacts of climate change (Parry, 2016). Such steps toward bridging and overlapping initiatives between international development and climate change systems are arguably momentous. Yet, a year after COP21, the early inter-disciplinary report of what 1.5ºC means in application (and how to implement a 1.5ºC cap) reveals gaps in mutual understanding and the need for a shared lexicon. It barely skims the surface of the very complex internal challenges and conflicts within each system (Parry, 2016; University of Oxford Environmental Change Institute, 2016).

While these bridging initiatives should be applauded and encouraged, it has become clear that the challenges of merging and coordinating across monolithic highly bureaucratic and statist institutions are enormous. Attempts to build collaborative spaces for implementing cross-over climate and SDG commitments through these systems will likely require much time, the willingness to act, and cultural and systemic shifts. An institutional path dependency has become ingrained within large bureaucratic hyper-structures that have emerged from the era of the Bretton Woods institutions (Kirshner, 1996). The institutional cultures and the organisations themselves become less agile and more rigid and concerned about self-perpetuation (Bingeman, Berkes, & Gardner, 2004; Chakravarti, 2005). Consequently, there is a coordination, faciliaton, communication and implementation gap between the rhetoric of the UNFCCC and that of the UN's SDGs and the practice of development and climate change mitigation and adaptation.

Many voices from within the UNFCCC's development and humanitarian agencies call for new and creative ways to address the complex, interconnected challenges and threats of climate change ("COP21 Religions" 2015, "Pilgrims of climate justice plan to impact COP

21 in Paris — World Council of Churches," 2015.; Reid, et al, 2014; Huq, 2006). Yet this call seems to have gone largely unanswered. Those working within the structures and systems of the United Nations and international development, environmental, and humanitarian agencies are limited by the institutional path dependency of their organisations and working cultures (Gómez & Atun, 2013; Matthews, Lo, & Byrne, 2015). The possibilities for envisioning and exploring strategies to approach the complex threats and challenges of climate change are largely pre-set by the internal structure, outlook, and assumptions of these institutions.

Can findings from a case study of the pan-Asian ICE Network, emerging apart from the funding and institutional mechanisms of the development, humanitarian, and climate change intergovernmental organisations, offer new, different, and creative models that the existing systems lack? Can such a study at least help point a way to facilitating different approaches that address the stressors and threats of the Anthropocene?

The aforementioned intergovernmental institutions may be seen as inherently problematic, given their donor-directed, top-down, 'replicable to scale,' exogenous approaches to poverty, climate change vulnerability, and impacts (Holcombe, 2014; Malunga & Holcombe, 2014a, 2014b; Reid et al., 2014; Sen, 1999). Internal and external critiques of United Nations agencies, International Finance Institutions (IFIs), and International Non-Governmental Organisations (INGOS) range from charges of wasteful and ineffective (Klein, 2014; Klein 1970-, 2007) to the suggestion that the institutions are being perpetuated on the backs of the poor (Farmer, 1994; Farmer, Nizeye, Stulac, & Keshavjee, 2006; Farmer & Sen, 2005; Said, 1977; Zinn, 2005); holding up systems of neo-colonial or neo-imperial global hegemony; profiting from disaster and suffering (Klein, 2007); and creating or aggravating conflict, violence, and inequity in beneficiary or stakeholder populations (Duplat & Parry, 2010; Slim, 1997, 2007, 2015).

b. Development Equals Growth?

> "Since the 1950's, development has been conceived of as rich and technologically advanced countries helping poor countries develop—a delivery system of development. The dominant development priority has been economic growth as opposed to livelihoods and social / human development. With some interesting exceptions, development, seen as development assistance, has largely been top-down, or *exogenously* driven." – Susan Holcombe (2014)

For the most part, exogenously ('from the outside,' top-down) derived Economic Development is growth-based and situated in direct conflict and competition with 'environmental protection and conservation' interests. At COP19, for example, government representatives of Mexico maintained that deforestation for the sake of economic development was necessary to create jobs (for the Indigenous peoples forcibly removed from those forests and sacred spaces into urban spaces). Notably, a Mexican government representative stated "biodiversity can be taken care of later." (Anonymous, 2013)

Similarly, in a meeting between development organisations and government officials in Burundi, environmental destruction caused by oil companies dredging Lake Tanganyika was framed as an unfortunate yet necessary trade-off for more "immediate and urgent economic development" (Anonymous, 2012).The 'Singapore Mall' development model currently spreading across Asia also promotes unmonitored and unmitigated construction, clearing slums, woodland, and open fields to make way for 'mega-shopping malls' and high-rise condominiums. This displaces much human and non-human life and destroys natural habitats. Overall, such conflict illustrates an artificial segregation of naturally integral social-ecosystems — a divide wedged by structures established to perpetuate a globalised consumerist economy. (Senanayake, 2015)

The history of environmental and biodiversity conservation has presented often poor or disenfranchised human societies as being in direct conflict with conservation. John Muir, credited with spearheading a conservation movement in the United States through a National Park model, "detested" the Indigenous Ahwahneechee and Miwok nations of California's Yosemite Valley and Sierra Mountain range (Parker, 2014, pers. comm with EP; Pich, 2009; Usher, 2009). Muir wrote in 1894 that "Indians had no right place in the landscape," and that he "could not feel the solemn call of wilderness when Indians" were present (Muir, 1894; Usher, 2009).

Muir helped establish an 'American Model' for conservation that saw native and Indigenous peoples as harmful to biodiversity and natural habitats, arguing that they should be removed from protected areas, despite the fact that the Miwok and similar peoples had long-established sustainable 'land use and tenure systems' (Hecht & Cockburn, 2010; Usher, 2009). Muir's *Sierra Club*, along with the International Union for the Conservation of Nature (IUCN) and the World Wildlife Federation (WWF), drove a campaign to export this American conservation model to Thailand, India, Korea, Indonesia, and Japan, among other countries. The IUCN defined national parks as large spaces "not materially altered by human exploitation and occupation" (Colchester, 1997). Included in the 'American Model' of fortress conservation was a policy for forcible removal of Indigenous and local communities who were in actuality applying Traditional Ecological Knowledge (TEK) (Berkes, 2008) and local bio-cultural wisdom to live in balance with their ecosystems. TEK is defined by Berkes Colding and Folke as "a cumulative body of knowledge, practice, and belief, evolving by adaptive processes and handed down through generations by cultural transmission, about the relationship of living beings (including humans) with one another and with their environment" (2000).

Often, justification for the removal of local and Indigenous populations from a site is tied to governmental or corporate obfuscation of the condition of the environment during the period in which local peoples inhabited those spaces—sometimes applied retroactively. This blurring of circumstances has been used to advance agendas to clear-cut forests for lumber export, then plant conventional, mono-cropped rubber tree or palm oil plantations, for example, under government or corporate ownership. This has been done under the auspices of 'tree planting' and forest 'restoration.' (Khisbyah, 2015a, 2015b, 2016; Usher, 2009) Positioning human societal interests against those of 'the environment,' as these examples suggest, seems neither just, balanced, nor conducive to the promotion of social-ecological wellbeing and sustainability. (Berkes, 2012; Kiessel, 2007; Sponsel, 1995, 1996) A divisive framing of competing interests between human societies and 'nature' does not align with the sacred ecology values and eco-cultural perspectives of many human societies around the globe.

c. Poverty, Development Economics and Earth Systems' Tipping Points

For decades within the global development and poverty alleviation field, the core indicator of progress for development was measured by the changes in GDP, or the total averaged financial sum of all the (documented) goods and services produced by a nation state within one year. (Kallis, 2011; Sen, 1999) Martha Nussbaum, in her book, *Creating Capabilities: the Human Development Approach* (Nussbaum, 2011), challenges the adequacy of Gross Domestic Product as an appropriate metric for indicating success in development programs if development is intended to make a positive difference in the quality of people's lives.

> "All over the world people are struggling for lives that are worthy of their human dignity. Leaders of countries often focus on national economic growth alone, but their

> people, meanwhile, are striving for something different: Meaningful lives for themselves. Increased GDP has not always made a difference to the quality of people's lives, and reports of national prosperity are not likely to console those whose existence is marked by inequality and deprivation." (Nussbaum, 2011)

When the Human Development Reports launched in the 1990's, metrics expanded to include other factors beyond the GDP, such as life expectancy at birth, expected years of schooling, and mean years of schooling ((HDI) | Human Development Reports). While this expansion was an improvement upon the singular metric of the GDP, the indicators were nevertheless exogenously derived and employed. Moreover, they were limited to reductive quantifiable measures.

Development and growth, in this sense, have been challenged as paternalistic, given the connotations attached to the term "development," that presume a spectrum of growth or maturity (Conradie, 2016). Critics have also suggested that the initial intent of such development has been to 'exploit' and increase profit (Araghi, 1997; Bretton Woods Project - Critical voices on the World Bank and IMF; International Monetary Fund; "World Bank Group - International Development, Poverty, & Sustainability; Eichengreen, 1996) (Bretton Woods formation charter, 1944; IMF Articles of Agreement 1944). Development as narrowly defined economic growth has been conflated with a basis for justice or wellbeing (Sivaraksa, 2011).

Kate Raworth discusses the unsustainability of 'green growth' and other growth-based models in her work on what she calls 'donut economics.' She suggests that new models and new creative approaches to our market systems are needed. In a panel talk, "The Myth of Sustainability,' with Erik Gómez-Baggethun at the Oxford University Centre for the Environment (2016), Raworth said, "We need new terms for the way we think about markets, about our relationships to each other, and the world around us. We need new, creative ways

of doing and being. I've stopped using the term 'natural resources,' and instead refer to the 'living planet.'" (2016)

Raworth's linguistic shift also suggests the need for a relational and values shift (Crawhall, 2014; Crawhall, 2011; Steffensen, 2012; Turner, Davidson-Hunt, & O'Flaherty, 2003), implying that how we think and the language we use to discuss our ideas influences the ways in which we act and relate to each other and other living beings on the planet. (Crawhall, 2014)

In Asia, very different eco-cultural languages, applied values, and relationships are already emerging through local and regionally networked engagement on climate change, including in the way 'development and growth' is perceived and the way markets are co-created. This epistemological chapter identifies and analyses these particular "new ways of doing and being," including their voices in the global climate change discourse.

II. Case Study Findings: Catalysing and Inspiring 'Climate-Smart' Markets Across ICE Network Affiliates

The findings that emerged in my case study research of the pan-Asian Inter-religious Climate & Ecology (ICE) Network reveal a dynamically interactive, 'mutually co-arising' (Macy, 1979, 1991; Macy, 1979) interfaith network. The network catalyses and strengthens a wide range of holistic, integrated, locally endogenous, yet regionally and globally interconnected climate change-related initiatives, driven by 'shared values of appreciation' (see further discussion in Chapters 4 & 7). These 'shared values of appreciation' include sustainable livelihoods and market systems, strongly seeded by Buddhist Economics (Schumacher, 1966; 1973), with holistic standards and values meant to serve and protect the wellbeing of sacred

social ecologies and ‘eco-cultural' protective practices. (Berkes, Folke, & Colding, 2000; Comberti, Thornton, Wyllie de Echeverria, & Patterson, 2015; Editors, 2013; Mowe, 2014; Nhat Hanh et al., 2013; Sponsel, 2012.) (See further discussion in Chapters 4 & 7 regarding the distinction between “shared values of appreciation” and “common values” terminology.)

A primary purpose of the ICE Network is to collectively act to address the human drivers of climate change and biodiversity loss while managing the stressors created by the shifting unpredictable conditions of the Anthropocene. This is undertaken comprehensively across ICE Network affiliates through a systems-change focus on economic markets and livelihoods. The Network facilitates awareness through education, modelling, and catalysing holistic locally-driven programs. Such programs integrate mitigation and adaptation initiatives within more fluid, collaborative, social-ecological wellbeing efforts. Affiliates of the ICE Network strive to influence policy on climate change, resilience, sustainability, and biodiversity locally, nationally, regionally, and globally.

ICE Network affiliates voice strong criticisms of the dominant globalised economic system, which is seen as a Galtung-esque instrument of ‘structural violence’ upon all living beings on the planet (Cresswell, 2015; Galtung 1971, 2011; Sivaraksa, 2015; Manjusri, 2015). Galtung, whose work was influenced by Buddhism and contact with INEB in particular, defines structural violence as “an avoidable impairment of fundamental needs, the violence wherein some social structure or institution may harm other beings by preventing them [from] meeting their basic needs.” (Galtung & Hoivik, 1971; Galtung, 2011). *Structural violence* is recognised by a broad swath of ICE Network affiliates from socially engaged Buddhists to Quakers to Islamic leaders and Vietnamese animists (Hanh, 2008; Sivaraksa & Sathāban Santi Prachātham, 1993; Sivaraksa, 1988; Wallapa van Willenswaard, 2015; Varma, 2015) and is perceived by them as destructive to cultural, political, and social ecosystems (Berkes et

al., 2000; Farmer, Nizeye, Stulac, & Keshavjee, 2006; Hawken, 2007). It is also thought of as aggravating anthropogenic climate change/global warming as well as affecting its impacts and vulnerability.

The interviews, focus groups, activities, and reports of the ICE Network sampling frame collectively critique a globalised hyper-consumption-driven 'Western imported' capitalism, viewing it as a root cause of climate change, environmental degradation pollution, disaster vulnerability, poverty, inequality, and social-ecological injustices. (Thilini, 2015; Weerakoon, 2015; Fazal, 2015; van Willenswaard, 2015, 2016; Sponsel, 2012.) The loss of eco-cultural values, or TEK (Berkes, 2000, 2008), and spiritual wisdom are also emphasised, particularly as they relate to stewardship of the 'living planet (Raworth, 2016; Crawhall, 2016) towards equilibrium in which desire or 'want' does not overrule the satisfaction of basic needs.

In the ICE Network, critiques of existing systems are almost unanimously accompanied by new ideas and collaborative actions, usually involving creative experimentation. Proposed and active solutions and new relational systems address problems through processes that engage local capacities, share wisdom, and leverage experiential knowledge of the collective rooted in spiritual processes, ritual, and belief. As a critique of the dominant globalised economy, one key manner in which ICE Network affiliates act on climate change is through the creation and strengthening of alternative market models. As the founders of at the Good Market (ICE Network affiliates) expressed,

> "*We grew tired of fighting against the problem, and instead wanted to put all of our energies into creating solutions. We only have so much time, so much energy, and we'd rather dedicate it to finding better ways that we can exist together on this planet*." (Samaradivakara, 2015; Kiessel, 2015)

Interviewee 73, Interviewee 28, Sri Lanka, Markets

A small sampling of a much larger (and dynamically evolving) ICE Network revealed great diversity, collaboration, overlap, and innovation in climate-smart market models. This includes (but is not limited to) up-cycling, circular and sharing economies, local organics, food forests and permaculture, analog forestry, consumer education, consumer-producer relationship building, comprehensive standards, and social-ecological values with the overall intent being to form root systems of new markets. ICE Network actors strive to build and strengthen sustainable market webs locally, nationally, and regionally. This is not without its challenges, as will be discussed in this chapter, but it also offers a different perspective for considering high-scale impact without necessitating a 'replicable, scalable' model for economies, development, or livelihoods. It should be noted that each isolated activity in these markets is not what is being presented as 'new' in the findings from this research. Rather, the values and foundational standards themselves, the relational formation and collaboration, and the unique expression of climate action found across the 'Mindful Markets' of ICE Network affiliates offer new perspectives, models, and processes to the greater climate change discourse.

A unique holistic model for 'climate sensitive' markets across Asia has formed through (and is strengthened by) the ICE Network. This model is rooted across shared values of sacred ecology and 'duty to protect and care,' according to the distinctive faith and spiritual beliefs, specifically those found in the ICE Network itself.



Photo xvi (E. Parry): The Dharma Wheel of the Noble Eightfold Path atop the Tibetan temple at Deer Park Institute of Himachal Bir, Norther India. Deer Park is an affiliate of ICE Network and INEB, part of ICE Network eco-temple groups, Zero Waste and Conscious Consumerism campaigns, organic and natural building, eco-education for children, natural soap making and other natural healing organic products, and climate and social-ecological education activities, among others.

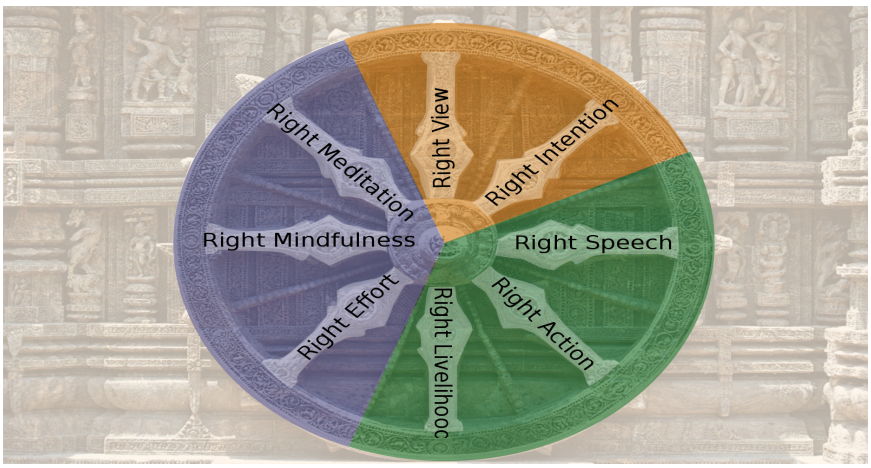
Interviewee perspectives: The interviewee quotes provided throughout the findings-and-analysis sections derived from open-ended and generative questions during semi-structured and unstructured interviews related to livelihoods and wellbeing; perspectives on sustainability, resilience, and development; economic systems and markets; structural violence; climate change and ecology; and related activities within their organizations and with other affiliates of the ICE Network. (Please see Chapter 3 for in-depth overview of interview methodology.)

a. Buddhist Economics & Right Livelihoods: Nature Values

In 1955, following a trip to Burma as an economic consultant, German-born E.F. Schumacher coined the term 'Buddhist Economics' (E. F. Schumacher, 1955; 1966). Buddhist economics brings Buddhist spiritual and philosophical values to the functions, motivations, and processes of economic activity. It seeks to draw awareness to questions of 'want' and 'need' when consumerism is highly incentivized, to do no harm when current market systems create great damage ecologically, socially, and spiritually, and to live compassionately for and with all living beings.

The concept of Buddhist Economics was and perhaps still is novel to European and North American cultures . Yet it is as ancient as the Buddha himself. 'Right Livelihood' is a key teaching from the Buddha's first sermon after he attained enlightenment under the Bodhi tree sometime around 535 BCE (Gyatso, 2008). The Noble Eightfold Path or 'The Middle Path,' often illustrated on the Dharma wheel (Image 1 below), outlines core teachings of the Buddha, offering a pathway of practices leading to enlightenment ('nirvana') and liberation from 'samsara,' or the suffering of this human experience on earth and the cycles of rebirth. The teachings follow: Right Understanding (View), Right Thought (Intentions), Right Speech, Right Action, Right Livelihood, Right Effort, Right Mindfulness, Right Concentration (Magnuson, 2016; Sivaraksa, 2005, 2011; Thathong, 2012). In a 1966 essay, 'Buddhist Economics' (Wint, 1966), Schumacher reasoned that "'Right Livelihood' is one of the requirements of the Buddha's Noble Eightfold Path. It is clear, therefore, that there must be such a thing as Buddhist economics." He offered Burma's integrated view of religious values and economic progress as an example, observing that "spiritual health and material wellbeing are not enemies" but natural allies (Wint, 1966).

Figure / Image4: The Noble Eightfold Path as illustrated on the Dharma Wheel:



Source: Krisse - Own work, CC BY-SA 3.0, https://commons.wikimedia.org/w/index.php?curid=22705627

Examining Right Livelihood as a teaching and pathway, Joel Magnuson notes that originally it was thought of as a commitment to earn one's livelihood in a manner that does not use violence or threat of violence, deceit, usury, slavery, intoxicants, or prostitution. The modern interpretation is articulated by Thai activist Sulak Sivaraksa, the 'grandfather' of the ICE Network and founder of Sathirakoses Nagapradeepa Foundation (SNF), the International Network of Engaged Buddhists (INEB), and many other ICE affiliate organisations (see chapter 3). Sivaraksa describes 'Right Livelihood' as "not engaging in a profession that brings harm to other beings" including cultures, ecosystems, and all beings of the living earth (Sivaraksa, 2011, 2015b).

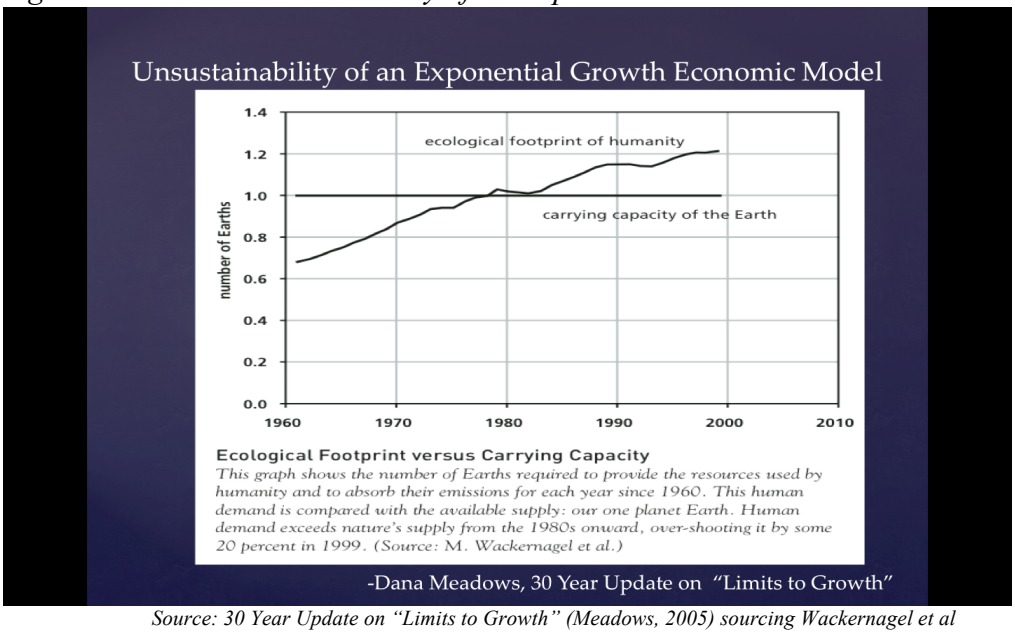
That very simple statement opens up worlds of complexity in application. Thich Nhat Hanh, founding board member of INEB, and whose Plum Village community is an affiliate to ICE Network, commits to practicing Right Livelihood "so that I can help reduce the suffering of living beings on Earth and reverse the process of global warming" (Pistono, 2013; Hanh, 2014). Seeded by the values and relational formation of INEB and SNF, the ICE Network reinforces, expands, and puts into practice Thich Nhat Hanh's explicit linking of climate change with economics within an interfaith regionally networked context.

Schumacher points out that belief in a natural alliance of spiritual health and material wellbeing came into conflict with Western economic, and often hegemonic (Chomsky, 2003; The Whirled Bank, 2002; Zinn, 2005) postcolonial development practices in the 1950s and 1960s. These practices were associated with the Bretton Woods institutions, the World Bank, and the International Monetary Fund (see chapter 1), particularly as Structural Adjustment Policies (SAPs) and their severe social and economic conditionalities and cuts were introduced (IMF, 2016, World Bank Group, 2016).

Many ‘lesser developed countries’ (LDCs), such as in Southeast Asia and South Asia, were made to model their economic development plans according to ‘modern economics,’ importing policy and planning advisors from what are now termed ‘MDCs’ (Most Developed Countries) (Schumacher, 1973; Hellinger, 2003). MDC advisors would set forth a Five-Year Plan for development without comprehending, let alone taking into account, that “a Buddhist way of life calls for Buddhist economics just as the modern materialist way of life has brought forth modern [materialist] economics” (Wint, 1966). Often, such as in Thailand, the 20th Century economic and governance models were based upon colonial systems of governance (Kasetsiri, 2007).

Schumacher’s insight is echoed in what Holcombe writes half a century later, discussing mismatched priorities and interests driving ‘top-down’ exogenous development at the expense of most vulnerable communities (mvc’s) and their social ecosystems. According to Holcombe, such development was conceived for the purpose of growing economic capital, which was generally to the advantage of wealthy countries implementing a top-down development policy (Holcombe, 2014). As Donella Meadows illustrated, there are limits to exponential growth (D. H. Meadows, 1985, 2005; D. L. Meadows et al, 1972), with increasing scarcity of fossil fuels currently powering the globalized economy. Even more so, a pressing need to ‘keep it [fossil fuels] in the ground’ pushes back against dominant economic systems as carbon emissions continue to elevate global temperatures. (McKibben, 2015c)

Figure / Table 5: Unsustainability of an Exponential Growth Model



Source: 30 Year Update on "Limits to Growth" (Meadows, 2005) sourcing Wackernagel et al

Steven Lord asserts a current trajectory aimed at maintaining humanity's current rate of production and consumption, and 'lifestyle' expectations for goods and services, is driving humanity towards a cliff, a 'breaking off' or tipping point where the consumption and production cycle breaks the system and 'falls off' (Lord, 2016). This is essentially a warning about systems collapse. Kate Raworth's *Donut Economics* references Rockström's work on planetary boundaries and Earth systems in order to contextualize the relationships between a growth-based economy and what our Earth System can sustain:

> "The environmental ceiling consists of 9 planetary boundaries as set out by Rockström, et al (Rockström et al., 2009), beyond which lie unacceptable environmental degradation and potential tipping points in Earth systems. The social foundation consists of eleven top social priorities identified by the world's governments in the run-up to Rio+20- and below this foundation of resource use lies unacceptable levels of human deprivation such as hunger, ill- health and income poverty. Between social and planetary boundaries lies an environmentally safe and socially just space in which humanity can thrive" (Raworth, 2016.)

When Raworth asks for new ways of doing and being, new language, and new thinking, she is asking for models and pathways for striking a balance within social and planetary boundaries that allow for social justice and environmental safety or wellbeing. The ICE

Network's vast panoply of spiritually, eco-culturally, and endogenously derived approaches to ‘mindful markets’ and Right Livelihoods may be able to help formulate such a middle path towards flux equilibrium, planetary and social-ecological health. (‘Endogenously-derived’ can be defined as coming from within a local bio-culture, from a local community, or from some other focus of an initiative or project emerging from or was driven by those living within that focus area, according to their priorities, needs, values, and whole-systems functions. In the case of the ICE Network, the initiatives may be catalysed, inspired, or deepened by learning from each other across countries and regions. Nevertheless, the initiatives implemented by each affiliate are derived locally and from within, with affiliates, or *kalyanamitra* friends of the ICE Network, sharing examples to inform each local-solution.)

ICE Network affiliate (and former Theravada monk) Pracha Hutanuwatr of Thailand’s Ecovillage Transition Association and Wongsanit Ashram, Somboon Chungprampree of INEB and ICE Network, INEB and ICE affiliate Vandana Shiva of India, the Indian economist Amartya Sen, and countless others around the globe share the belief that pre-packaged, exogenous, top-down development programs are at best inappropriate, ineffective, and ill-suited for the diverse localities where they have been implemented. At worst, they are intentional perpetuations of neo-colonial, exploitative, extractive systems (Alkire, 2003; Chungprampree, 2015; Hudson, 2014; Hutanuwatra, 2014, 2015; Sen, 1999; Shiva, 2013).

> “*Going back 50 years ago in Burma, 50 years in Thailand, a lot of good traditional values and spirituality were still intact. But they leave these things by continuing the mistake of the foreign approach, the American development—and become submissive to the development discourse created and operated by the West. Of course, the Burmese cannot close their doors any further [*now*]—so how to move into the future bringing what good things they have? And what harm will this modern development thinking bring to them*?” (Hutanuwatr, 2015)

Interviewee 32, Thailand, Education & Ecotemples

> *"Rapid economic and globalized changes will make Laos less Lao. Lao people's way of life is changing, and I am worried about who will benefit, or that it might impact negatively on some groups*." (Ratawit Ouaprachanon, 2015)

Interviewee 114, Education, Markets & Ecotemples

A key lesson from Schumacher's work over half a century ago still bears repeating today: markets are sustainable and appropriate when they reflect and resonate with local traditional bio-cultural values and beliefs, such as Schumacher's Burmese Buddhist Economics example (E. F. Schumacher, 1973). Such markets may be a key to modelling climate change efforts in a manner that could also transform the underlying drivers of climate change, inequality, and structural violence.

Holcombe and Malunga's discussion of the practical effectiveness, sustainability, and appropriateness of endogenous development in Africa resonates and converges with the active discourse emerging from the ICE Network in Asia: "in the histories and cultures of many societies of Africa we can find many political, social, spiritual, ecological, and economic norms, values and knowledge that have something to teach, inspire, and facilitate development efforts in the twenty-first century" (Holcombe, 2014; Malunga & Holcombe, 2014a). Traditional, Indigenous and local wisdom across the Asian continent varies. Within that variation is an opportunity to bring new cultural and interconnected ways of thinking that can aid in the understanding causes of problems and potential solutions. In the case of the ICE Network, such lessons and inspiration could help model and catalyse systems change, supporting climate change resilience across a variety of bio-cultures and social-eco-systems without creating another exogenous model to replicate and apply in a top-down manner.

> *"All the NGOs at that time [I became a student activist] were talking about 'economic sustainability' but not the green politics. Actually, I joined the [SNF/INEB*

> *Wongsanit] ashram because they organized very different activities like seminars, workshops and trainings in green politics-and they were leading the topic. […] I remember one time a workshop of P' Pracha when he was the director of Wongsonit Ashram. He was a facilitator—and he talked about green politics and the concept of using and seeing nature just only as a resource or property. And just make use of that. And as a scientific point of view—I think that is the way most of the people do. If it is hot, then you develop air con technology. And if it is still too hot, you produce a new technology to get rid of that one problem. But that way of thinking is not really sustainable. It is important for me to see more interconnection- not just linear thinking."* (Paiboonsittikun, 2015)
>
> -Interviewee 4, Network, Ecology and Education

The culture of western scientism, according to this interviewee, is what has led to myopic and linear mechanistic problem-solving and disconnected development strategies. The work in which she and others have engaged has sought to return to their traditional eco-cultural values of interconnection, of sacred social-ecosystems (Pilgrim & Pretty, 2013). Their beliefs of interconnection are cyclical, process-oriented, and similar to what is found in Earth Systems Theory, General Systems Theory, and Deep Ecology, wherein humans are seen as part of Nature and where influencing one aspect or being affects the whole of the system, the society, and the planet. Their concern is for the wellbeing of the collective, a collective that includes human and non-human beings equally.

Part of the overlapping and interconnecting work of ICE Network affiliates approaches wellbeing through the GNH or Gross National Happiness initiatives that have emerged from Bhutan, and took root in practice across Southeast Asia and the Himalayas. As ICE Network affiliate and member of Towards Organic Asia and the School for Wellbeing Thanapol Kheolamai explains,

> *"I was working for the organization the School for Wellbeing Studies and Research. We'd started off as an academic think tank focusing on developing the idea of policy on wellbeing, based on GNH indicators, or Gross National Happiness. But later we started to be interested in the organic agriculture issue because we could see the connection between wellbeing and happiness related to the organic agriculture as a practical example of how the idea of wellbeing can be applied—for the wellbeing of all beings. And so, my role was the project coordinator for Towards Organic Asia or*

> *TOA. TOA is a project in the School for Wellbeing. The idea of GNH-- initially it started from Bhutan in the '70's. It was the King of Bhutan at that time who saw that Bhutan is a small country and considered 'underdeveloped,' in terms of material wealth and production and that kind of thing. But he saw it was more important for the people to be happy than rich. And so, he said that Gross National Happiness is more important than the GDP or Gross Domestic Products. That's how the idea of GNH started, and then later it evolved […] around methodological indicators, with statistics to determine what is wellbeing, how a nation can measure the level of wellbeing of the people, so Bhutan has been working on that for a long time."* (Kheolamai, 2015)
>
> -Interviewee 6, Education, Markets, Sacred Ecology & Deep Organics

It should be noted that within ICE Network affiliate discourse, 'wellbeing' is a term that often replaces or directly challenges the term 'development.' While reflecting the majority view, this replacement is not unanimous across the network as affiliates are diverse and dynamic and there is no 'top-down' structural requisite or dominant mono-culture. Nevertheless, most affiliates challenge the term 'development' and prefer the use of 'wellbeing' or language such as 'sufficiency economies,' Right Livelihoods, sustainability, and resilience. (Concepts of 'wellbeing' and Gross National Happiness, or GNH, are discussed in-depth further in section III.b of this chapter.) While the terminology may vary, there tends to be a consistent critical engagement with meaning and assumptions within ICE Network spheres as well as with applications of ideas—whether the language of development, wellbeing, or some other phraseology is applied. As SNF and INEB founder Arjahn Sulak Sivaraksa has said, "Kalyanamitra, good friends, are those who tell you what you don't want to hear" (Sivaraksa, 2016). In this, there is an invitation to speak honestly, to disagree, to face contradiction and inconsistencies, to deal critically and openly with difficult complexities.

When speaking about "development from the bottom up," or endogenous wellbeing initiatives, Sivaraksa shares a Thai proverb: "In the field there is rice; in the water there are fish." Sufficiency in balance is ever-present. He asserts that, "before colonialism, the fertile lands of Southeast Asia ...provided food for all its people. Plants grew everywhere, wildlife

was plentiful, jungles produced teak and other hardwoods, and the human population was sparse. Communities farmed their own land, wove their own cloth, and were governed and protected by their own institutions [...] Production was cooperative and geared towards self-sufficiency and maintaining the balance of nature" (Sivaraksa, 2011; Sivaraksa, 2015a, 2015b).

There are many within the ICE Network who embrace the transformations and possibilities available due to modern technical advances and who do not wish to "throw the baby out with the bathwater" (East, 2015; Kiessel, 2015)—utilizing technology to support 'lean start-up' businesses and to promote and cultivate platforms for vendors, products, and market investment, to crowdfund and access markets online, for instance. And yet, in many ways, Sivaraksa's repetition of the above Thai proverb serves to reflect nostalgia for a pre-colonial era, before traditional cultures and wisdom came into contact with global and largely 'western-derived' forces that are now pervasive across Asian macro-economies, institutions, and governance.

For many in the ICE Network, pre-colonial life represents a balance of culture, nature, and society. The traditional eco-cultural, social, and ecological knowledge, spiritual wisdom and practices found in traditional spiritual mythoi and religious texts serve as major drivers for ICE Network engagement on climate and transformative systems change. (INEB, 2012; Hutanuwatr, 2015; Sivaraksa, 2015; Sunisa, 2015; Weerakoon, 2015)

> *"We can observe that the business sector has co-opted (if not hijacked) the value of freedom, in line with the spirit of colonialism: the freedom to conquer human and natural resources by 'free' competition and 'free' markets attributing power to violence, money and rationalized self-interest. With disastrous impact, completely unsustainable. Fortunately, we can also see that the business sector reforms itself—in pioneering circles and often not without external pressure- towards more responsible and sustainable business, and economy of sharing, wellbeing economics."*

Interviewee 2, Network & Education

Buddhist Economics and Right Livelihoods are core values underpinning the ICE Network, informed by 'origins organisations,' Sulak Sivaraksa's Thai-based Sathirakoses Nagapradeepa Foundation, and the International Network of Engaged Buddhists (INEB) as well as A.T. Ariyaratne's Sarvodaya in Sri Lanka (see chapters 3 and 4). These values propel a diverse and mushrooming engagement with creating and strengthening very different models for sustainable sufficiency economies. Across the network, such engagement also focuses activities through a climate change lens while shared capacities and resources are leveraged.

An emphasis may appear to be on Buddhist economics or, as Magnuson writes, 'socially engaged buddhist Economics,' (Magnuson, 2016), because INEB is a hosting / 'springboard' Secretariat for the ICE Network. While this cultural foundation is significant, research has documented that the way in which organisations and networks emerge from SNF and INEB is anti-structural, decentralised, and fairly 'hands off' unless support is requested (Parry, participant observation, 2015; Paiboonsittikun, 2015; Chungprampree, 2015; Armour, 2015; Kheolamai, 2015). Within the ICE Network, the convergence of 'shared values of appreciation' across faith and spiritual traditions has also revealed convergences across faith attitudes regarding markets and economies.

The findings demonstrate that the ICE Network facilitates broad-spanning interfaith engagement with the human drivers of climate change and biodiversity loss. The network accomplishes this, in part, through the convergence of faith-rooted and TEK-informed values and ecocultures applied to a reformulation of structures and systems of market economies. Across this diverse network of actors and beliefs, a general consensus has surfaced in the critique of a dominant, globalised, capitalist system; its causal relations to the Anthropocene;

and the ways in which development is historically (and currently) implemented to perpetuate systems of structural violence, inequality, and harm to the earth's sacred social-ecosystems. From the first gathering of the ICE Network, discussions evolved around understanding of climate change within home communities and countries, how that is experienced and communicated in villages and cities, with peers, in faith groups and in local and national governments. The initial discussions were between climate scientists, faith / spiritual leaders, village representatives and ecologists. These discussions are ongoing across expanding networks of ICE affiliate villages and urban communities, exploring the devastating effects of extreme storms, to the forms of vulnerability complexities present in their congregations or sanghas, and linking risk, disasters, complex emergencies, and food and livelihoods insecurity to their collectively growing understanding of climate change and biodiversity loss.

A. Mapping of Climate Change through Sharing of Stories: Mountain Ecosystems Plains and Agriculture, Rivers Lakes Wetlands and Water Security, and Marine and Coastal Changes, Energy and Disasters

The first gathering of the ICE Network started with a sharing of stories between climate scientists and monks, priest and Indigenous and village representatives, mapping the unfolding of climate change impacts across Asia. After establishing some basic science about the fossil fuels, carbon emissions and greenhouse gases, people began sharing experiences within their own communities. They began with the Himalayas and tracked the relational changes across the Asian continent. Those from the Himalayas spoke of glacier and snow melt, andfloods down the mountains into the rivers; in India flooding was a common experience, and those from Bangladesh spoke of floods, sea level rise and severe

storms. Sri Lankans had stories of drought, food insecurity, loss of fish diversity, coastal erosion and flooding. Thais were becoming accustomed to regular Bangkok floods, and Burmese were coping with landslides, floods, and food insecurity. Filipinos across their archipelago islands were constantly picking up the pieces from one devastating cyclone, only to have another follow on its heels. Following the path of sequential impact of the glacial ice melt from the Himalayas to Southeast Asian islands created a sense of interconnection in the experience of climate change impacts and vulnerabilities--and in fact is what inspired the acronym, the ICE Network.

Stories and Study visits (examples)

- A visit to a Pavakkulama Tank in Sri Lanka with the surrounding fishing community; severely affected by unusual changes of season and of prolonged drought;
- A visit to Manik farm with high numbers of displaced (Sri Lanka);
- Myanmar: Inle Lake, polluted by chemical aquaculture, ecosystems dying and food security undermined;
- Thailand: Bangkok cyclical urban flooding;
- Thailand: fishing village near Trat, loss of coral reef, coastal erosion, severe storm impact and fish diversity loss;
- Himachal Bir Pradesh, India: the snow fall has lessened but the rains are very heavy, and the roads are being washed away up in the Himalayn mountains. Landslides are becoming more common, and travel during winter is becoming very difficult;
- Himalayas, Nepal: two Indigenous villages who lived for millennia by the same lake, within the same ecocultural home, were forced to migrate as the lake had dried up. Buddhist monks joined the Indigenous villages in developing rituals to carry the spirits of the land, of their ancestors, to a new home. The monks also helped facilitate the process, legal and land rights access, and logistics of the move, supporting a natural build ecovillage strategy in their new home, combining TEK with ecovillage and permaculture strategies;
- Sri Lanka: Coastal erosion in Mattar, including buildings half-fallen into the sea;
- Myanmar: nuclear and dams perceived as threats to ecocultural wellbeing
- Japan: Fukushima, nuclear and energy economies-- the fall out and recovery.
- South Korea: dams and nuclear--protests and nuclear emissions.

Many participants in the initial and ongoing climate discussions shared about ways they were confused or uncertain about what climate change is and how it impacts their communities. through the discussions, trainings, and site visits, this understanding grew, and many faith

and spiritual leaders took it upon themselves to continue their learning and studies of climate change, and to conduct workshops and discussions to an ever-increasing range of
The multi-faith 'Clergy Climate Change A-Z' workshops -dreamt up by the monks and priests and bishops themselves- inspired deeper conversation about root causes of climate change and biodiversity loss, including economic drivers, corporate responsibility, energy use, power and influence, and more broadly. These discussions segued into the need to envision different systems, new markets that reflect the ecocultural values and concerns for climate change and biodiversity loss by protecting them.

There are still those (a minority) within the Network who embrace globalised capitalism, and approach organic agriculture, for instance, on a global trade scale. However, such differences do not threaten the resilience or validity of the network. It functions in a fluid, collaborative, and responsive manner and does not depend on conformity of thought or action in order to thrive or to provide 'value-added' to ICE Network affiliates. The space and support to be unique and yet still part of the whole is an important component that keeps this model healthy, sustainable, and effective.

Convergence is not only found through shared values of appreciation deriving from diverse cultural and faith understandings. It emerges across practices that address the problems of development and global economics through advocacy and education, while also creating alternative economies with inclusive values and relationships. The myopia of the Gross Domestic Product (GDP) metric may become apparent when contrasted with integral, collaborative, and dynamic engagements to promote and strengthen 'wellbeing for all beings' across the ICE Network's affiliates. From the first ICE Network conference in 2012, the globalised fossil fuel economy and the role of macro-economics was critiqued alongside

exchanges regarding localised practical solutions for food systems sovereignty, health, and climate change resilience.

When Schumacher first encountered the concept of Right Livelihoods and Buddhist Economics in Burma, Sulak Sivaraksa was a Thai student attending the University of Wales in Lampeter (Sivaraksa, 1999). That is where Sivaraksa encountered Quakerism, the concept of 'speaking truth to power,' and the ostensible alignment of values between eastern Buddhism and western Protestantism. This experience planted a seed in Sivaraksa's founding work and ensuing organisations for the bridging of faiths and cultures that would become integral to the ICE Network. (Pistono, 2013; Sivaraksa, 2005, 2011, 2015a).

The interfaith ICE Network opens up more spaces for climate change action collaboration and mutual learning, sharing ideas and solutions. It pools experiential knowledge, training, and resources among Islamic, Christian, Hindu, Baha'ì, Buddhist, animist, and shamanic spiritual leaders and practitioners. And it emphasizes dynamic interaction in order to build a basis for a 'spiritual friendship' or Kalyanamitra (Kheolamai, 2015; Armour, 205; Khisbiyah, 2015, 2016; Krishna, 2015; Queblatin, 2015). Livelihoods are intricately linked with concepts of wellbeing and ecosystems and are therefore incorporated directly into projects such as ICE affiliates' collaborative eco-temples, sustainable energy cooperatives, disaster recovery and Community-Based Adaptation initiatives (the dynamics and formation of the network are explored further in chapter 7). This research has found expressions of appreciation to be consistent and complimenting without an expectation of 'sameness' (singularity / conformity) across diverse cultural and faith articulations.

Throughout interfaith and intercultural gatherings of 'spiritual friends' or Kalyanamitra, discourse regarding perceived root causes (human drivers) of climate change and biodiversity

loss segued consistently to discussion of economics and the capitalist, globalised, consumer-based economy. Through such discussions, Buddhist Economics discovered a kinship with Mohammadiyah's interpretation of Islamic Economics, "a term used to refer to Islamic (...) ideology of economics based on the teachings of Islam that takes a middle ground between the systems of Marxism and capitalism" (Roy, 1994); with Hindu Economics (Morse, 2003; Raju, 1995); with the relational and eco-cultural values of Vietnamese animists; and with Christians who tell the story of 'Jubilee' (ICE I, 2012; INEB, 2016). What emerges are not uniform activities or 'one-size-fits-all' market models for climate change action and sustainability, but rather a process and vehicle that allows unique cultural and geo-locational social-sacred ecosystems to be expressed, promoted, and protected while still being part of a dynamic, stronger, and unified 'whole.'

> *"...we may- in our search for a new development paradigm… recognize, with due caution, a resonance between the Three Jewels of Buddhism: the Buddha, the Dhamma, and the Sangha, and the values of the French Revolution. Without declaring them synonymous we may recognize the value of freedom or liberation; and the driving force for independent civil society. The Dhamma—the law of nature—which is equal for all living beings can guide our efforts to realising equality through democratic governance. And in the Sangha we recognize the values of brother- and sisterhood, community spirit and mutual cooperation. The spirit of Sangha, in a broad interpretation can guide us towards creating mindful markets and wellbeing economics. This is the spirit of 'Right Livelihood' or a symbiotic economy, symbolized in the daily food-offering of laypeople to the Buddhist monks and nuns*."
>
> -Sulak Sivaraksa, speech at the Right Livelihoods Conference (2014)

***

b. Sufficiency Economy and Systems of Power or Development

Across the ICE Network, transitions to organic agriculture, healing herbs, and other goods-production, as well as permaculture and foods forests, has been a major shared—although not absolute or singular—aspect of affiliate attitudes and approaches to holistic (social-ecological) health; building climate resilience to shocks and diminishing climate risks along with climate mitigation (carbon-sinking) through local organic food systems; and seed and

food sovereignty (generally the term ‘food sovereignty’ is used in preference to ‘food security’). Strategies to transition to organics, to support organic and sustainable and often traditional (rooted in traditional ecological knowledge or TEK) locally-driven and managed sustainable food, clothing, health, and beauty systems, are viewed within the network as a systems approach towards supporting resilience against stresses on globalised food systems and livelihoods. There is a clearly articulated intent to make mindful (educated, informed, aware and intentional) decisions, and support consumer and producer education that reflects his mindfulness, regarding processes and relational actions that will affect entire local social-ecosystems through the full connective cycle of creation, markets, consumption, and concepts of waste and regeneration. A core aspect is challenging the mega-mall hyper-consumerism and mass production model that has permeated the Southeast and South Asian economic landscape in recent years.

> *“We have to ask ourselves: What do I need, rather than, what do I want, or desire?”*
> -Interviewee 112, ecotemples food systems & education, Myanmar

In Thailand, a consistent bio-cultural value is articulated in the concept of balance in all things. Just as balancing of 7 essential tastes (sweet, bitter, astringent, acrid, nutty, salty, and sour) is important for health and enjoyment in cooking (Chokevivat & Chuthaputti, 2005) or balancing the four elements and humors in a person (wind, water, earth, and fire) in Thai traditional medicine (TTM) (Salguero & Jacobsen, 2013), balance is also considered vital in relationship to nature, to the living earth, to Right Livelihoods and wellbeing. Buddhist monk Venerable Phra Sangkom, an ICE Network affiliate and a member of ICE Eco-temples group and INEB, notes the Thai phrase that captures this duty to live in balance in relationship to all living things and to facilitate Right Livelihoods:

> **“โคกหนองนา โมเดล" ปลูกป่า ๓ อย่างให้ประโยชน์ ๔ อย่าง ตามแนวทางพระราชดำริฯ:**

> *The 'Nong Na Nok' model is the 4 benefits according to the Royal Way: to have 30% of space protected for water, 30% for forest (and reforestation), 30% for restored land, and 10% for shelter. It brings balance in living, and I find this a beautiful. This is what King Bhumibol taught in his philosophy of sufficiency economy. It is a way for us to live in harmony with nature, to take care of everyone's needs, all beings.*"
>
> -Interviewee 126, Ecotemples, Education & Mindful Markets

The late King Bhumibol holds a high spiritual significance in Thai culture; he's been "semi-deified as the 'Father of Thai Water Management' and the 'Royal Rainmaker'" (Blake, 2015). Venerable Phra Sangkom's Maab-Euang eco-temple embraces and promotes the values which were set forth by the late H.M. King Bhumibol for sufficiency economy, interpreted through the eco-temple and spiritual ecology lens as well as through a Buddhist Economics lens. H.H. King Bhumibol Adulyadej's philosophy has recently been reframed by the Kingdom of Thailand's Ministry of Foreign Affairs as aligning with 2015 Sustainable Development Goals (Ministry of Foreign Affairs, 2017). Yet the ideas for Sufficiency Economy grew out of the Thai King's 1946 tour of his country.

He came into contact with the poverty and suffering of Thai farmers and responded by formulating economic goals oriented toward 'having enough,' a sufficient economy to meet everyone's basic needs. Sufficiency Economy approaches were promoted by the King to counter the Asian Tiger strategy of hyper-production (Ministry of Foreign Affairs, 2017; Oaas, 2013; "Thailand: 'Sufficiency Economics' King Bhumibol's Best Legacy – Analysis – Eurasia Review"). Thai Theravada Buddhism and Buddhist Economics, including Schumacher's work on *Small is Beautiful* (Schumacher, 1966) heavily influenced the King's plan as well, including the concept of following the Buddhist 'middle path' of moderation and balance. (The Eleventh National Economic and Social Development Plan, 2012-2016)

The Thai Government public relations department defines sufficiency economy as resting "upon three important components: moderation, prudence, and self-immunity. It emphasizes

the application of knowledge as well as ethics and virtues. The Thai government uses this guidance to develop the country in accordance with the United Nations Sustainable Development Goals (SDGs).” (parenthetical reference for this quote?) The Thai government has directly linked these values in application to concepts of development, the Sustainable Development Goals, modernization, and capitalist globalized economy.

Government and corporations in Thailand link the King’s Sufficiency Economy ideas to ‘development’ and modernization in the globalized economy. They support modernizing investments and contracts with large multinational corporations, such as Monsanto.

There are widely varying ideas across government, business, and local / religious groups in Thailand as to how to bring the Sufficiency Economy values into practice. The Maab-Euang Center interprets King Bhumibol’s concept of sufficiency economy through the localised practice of organic agriculture, food forests, and permaculture for the land, regenerating and protecting water systems, engagement of youth and community in education and experiential learning programs, community planning and collaboration for organics and other sufficiency economy activities, natural-build temple structures, and solar energy, among other initiatives. The focus is on building locally strong, climate-smart, resilient, and holistic values-based practices as well as micro-markets that are inclusive of eco-cultural perspectives and traditional ecological knowledge for healing and balance in social-ecosystems. It is their idea of *Small is Beautiful*.



Photos: Above xvii, monks working on nature-build temple as part of sufficiency economy & ICE Network ecotemples initiatives; Photo xviii, sign (below) at the entrance to Maab-Euang Meditation & Training Center for Sufficiency Economy; monks and local villagers work on their eco-build temple and the Bauddha, outside of Chiang Mai, Thailand.



For Maa-Euang and many other ICE Network affiliates across Thailand, from Gaia Ashram to Wongsanit Ashram to Pan Pan ecovillage, Dhammadrops, and hundreds of rural villages, peri-urban and urban farms and shops (particularly with Towards Organic Asia and Spirit in Education Movement), there is a clear interest in stepping out of the current globalized economy (viewed as a Western import). They turn a critical eye toward multinational corporations (MNCs), from palm oil to fossil fuel industries, Coca Cola, Monsanto, and the Thai conglomerate Charoen Pokphand (CP) (CP is the principle foreign licensee of Monsanto's DeKalb Genetics, where it has developed its own hybrid seeds, distributing them for free to farmers in the region) (Phuket Times, 2014). This critique is accompanied by the creation of new market systems and economies that operate not according to a growth-based consumerist model, but through a balance that meets the needs of humans and non-humans alike in order to experience wellbeing. Their initiatives originate in a consensus of spiritual beliefs in practice, while they also recognize that the power and influence of corporations and governments may be far greater than their own.

> *But Monsanto and CP are destroying our country. They are wanting people to grow corn for them—which we don't eat. They are wanting them to do mono-cropping with GMOs and chemicals. This destroys the country, destroys livelihoods, makes slaves of us, makes us unable to be protected from shocks and disasters, and it creates more disasters.*
>
> -Interviewee 94, Organics & Consumer Education, Thailand

Some ICE Network affiliates across South and Southeast Asia have taken to creating their own farmer cooperatives indigenous seed banks to preserve local seed diversity and traditional food sovereignty and to protect biodiversity and eco-cultural traditions from corporate seed monopolies. In some cases, such as in the Philippines, the informal seed sector has experienced restrictions that can, in effect, make such seed banks illegal. In an act of 'speaking truth to power,' several communities in Asia choose to continue banking seeds for local sovereignty in spite of potential legal risks and repercussions.

Creating alternative systems, engaging in alternative market models, education, and practice is not without its risks. It can be perceived in some states as a threat to power structures, or to the status quo. Students who are part of the INEB, Spirit in Education Movement, and other Sathirakoses Nagapradeepa Foundation (SNF) offshoots are regularly arrested or monitored by Thai police (Parry, pers.obs., 2015; TIME staff, 2015). INEB and SNF founder Sulak Sivaraksa has been arrested and in exile several times under 'lese majeste' laws for teaching Thai history or critically analysing power and economic politics; he is currently awaiting trial, at the age of 84, under his (recently revived) 127th lese majeste charge for a lesson he taught in a history class (ABC News, 2017). ICE Network affiliate, Lao ecologist, and community social-eco-activist and director of the Lao Participatory Development Training Center (PADETC), Sombath Somphone, was 'disappeared' into a Vientiane police car in 2012, several weeks after the first ICE Network conference in Sri Lanka, and shortly after inviting international actors to join in a community training session on ecosystems, climate

change, and biodiversity protection (discussed in Chapter 5). (Parry, pers. Obs, 2012; Human Rights Watch, 2016; RSBTWSNews-Sombath, 2016). He has not been seen or heard from since.

c. Gross National Happiness and 'Organics for All' The Laboratory for Interfaith, Spiritual and Biocultural Values Metrics:

Organics, or transitioning to organic, chemical-free, local, traditional food-and-goods systems is a popular experimental space for climate-smart and climate-sensitive strategies among ICE Network affiliates. This movement towards organics was catalysed consistently across affiliates in each country, faith or spiritual practice, and culture, from spiritually-rooted values to harm none and a duty of care for all beings.

In research interviews of the network, a connection between conventional macro-economic agriculture (and mono-cropping) and expensive and harmful chemicals has been repeatedly suggested as a way to patch together an out-of-balance system. For these Asian network actors, the harm caused and the vulnerabilities created by large-scale globalized agricultural systems serves both as an illustration of the larger Earth systems imbalances linked to climate change as well as a major contributor to carbon emissions, loss of biodiversity and carbon sinking capacities, and global food insecurity. For many in the network, organics, new food systems, and new markets are practical initiatives linked to ideas that have emerged from Gross National Happiness in Bhutan (Youk, 2015; Dhondrub, 2015; Jamwiset, 2015; Wallapa van Willenswaard, 2015; Hutanuwatr; Chungprampree, 2015).

The Bhutanese philosophy (and later index) of Gross National Happiness came to King Jigme Singye Wangchuck in 1979, challenging the assumptions inherent in the Gross National

Product (GNP) index as a determinant of wealth and poverty rates by country. According to GNP at the time, Bhutan was classed as 'under-developed' in terms of material wealth, production, and the balance of trade. As one ICE Network affiliate stated, "The King saw it was more important for the people to be happy than rich." (Dhondrub, 2015).

The first GNH conference was held in 2000 in Thimpu with several network affiliates participating in coordination with the Kingdom of Bhutan, including from SNF, Spirit in Education Movement (SEM), Suan Nguen Mee Maa social enterprise, and INEB. Similar to the way in which the ICE Network was formed from an inter-network conference, the School for Wellbeing was formed at the 3rd GNH conference, held this time in Thailand (Wallapa van Willenswaard, 2015). The School became instrumental in exploring conceptual and practical aspects of Gross National Happiness for communities in Bhutan, Cambodia, Thailand, Vietnam, Myanmar, Japan, Sri Lanka, India, Nepal, and Laos.

> *"School for Wellbeing was actually started after the 3rd GNH conference. Suan Nguen Mee Ma-- the social enterprise that is affiliated with SNF—they co-organized the 3rd GNH conference here in Thailand in 2007—with a lot of partners from inside the country and outside the country. After that conference, the main organizers-- Suan Nguen Mee Ma, Chulalongkorn University, also the Center for Bhutan Studies (CBS) based in Thimpu, and SNF—but SNF and Suan Nguen Mee Ma are the same anyway, really. So these organizations think that after the conference they should have a body to carry on the work of GNH and the conference. It shouldn't be a one-time event. After the conference, the organizations met, and then think we should establish a body to carry on the work of promoting and learning more deeply about GNH, which became the School for Wellbeing."*
>
> -Interviewee 6, Towards Organic Asia, School for Wellbeing, Southeast Asia region; education and organics

In Laos, Sombath Somphone, the Executive Director of PADETC, facilitated workshops exploring values of happiness and wealth. He also supported the production of the film, *Happy Laos* (Sitthirath, 2012; Sombath, 2012.). Interviewed in this film, Sombath discussed

the purpose of development and asked some focused questions about meaning and material life:

> "*What are we developing for? We develop because we want happiness, but we see happiness as material things. We develop to reach our material goals, but actually that is not true happiness. American people, for example, earn a lot of money. But when I asked them whether they are happy, they often said no*."
>
> Phouttasinh Pimmachanh asks Sombath, "*So, if we take economy as the centre of development, it is not sustainable?"*
>
> Sombath: "*We do not deny that the economy is important, but it has to be balanced. The economy, society, environment and human spirit—these four factors have to be balanced, and then we will find happiness. If a school teaches you to compete with others—to be better than others—that's temporary happiness. You get ahead of one person, but you will need to get ahead of another person and another like this…It never ends. Because our education and development these days make us lost, we end up following false happiness."*
>
> -Sombath Somphone, INEB and ICE Network affiliate, executive director of PADETC, Laos (Sitthirath, 2012)

While some among the network found value in GNH metrics, such through the metrics work Sabina Alkire's team has been developing with the Kingdom of Bhutan (Alkire, 2013; Wangdi, 2013), most were interested in more personal and applied aspects of GNH and put less credence in the metrics (Dhondrub, 2015; Hong Giang, 2015). What Gross National Happiness may offer up to Asian local communities is an articulated space to question the embedded assumptions within the power structures and economic and social institutions in which one lives. It changes the question from 'how much money do you have?' to 'what makes you happy?' therefore shifting from an external or exogenously implied assertion of meaning and purpose (to make money / to produce / to consume) to an opportunity for self-knowledge and self-determination.

A young woman who is part of the Towards Organic Asia initiatives shared her perspective,

> *"The meaning of happiness is to live each day depending on how we want to live. Live for who? For ourselves, for others or for society? It is our decision. True happiness does not depend too much on other people or materials."*

-Interviewee 100, Organics and Education, Myanmar

Two monks at an ICE Network gathering discussed concepts of happiness. The younger, Thai monk said,

> *"For some people, happiness is wealth. For me, happiness is being satisfied with what I have."*

To which an older Lao monk responded,

> *"There are two things regarding happiness. One is being physically healthy, and another is having a peaceful mind inside you. Inner peace is moral happiness without greed, hatred, and losing your way."*

-ICE Network II conference workshop participants (E. Parry, per. obs., 2015)

Towards Organic Asia- and Organics for All

> *"The School for Wellbeing Studies and Research-- We'd just started off as the academic think tank focusing on developing the idea of policy on wellbeing, based on GNH indicators, or Gross National Happiness. But later we started to be interested in the organic agriculture issue because we could see the connection between wellbeing and happiness related to the organic agriculture as a practical example of how the idea of wellbeing can be applied."*

-Interviewee 13, Education, Markets, Deep Organics

A shift took place rather quickly from conceptualisation to collaboratively experimenting with practical applications. ICE Network affiliate Towards Organic Asia has facilitated and supported processes of farming and fishing villages, urban and peri-urban communities, market vendors, consumer groups, village-wide social-eco-enterprises, and innumerable other innovative initiatives imagined, prioritized, and implemented by a wide range of communities in Thailand, Vietnam, Cambodia, Laos, and Myanmar, and later even in Sri Lankan and Indian communities also affiliated with the ICE Network.

TOA has facilitated countless processes such as farmer-to-farmer mentorships, trainings, and experiential learning for transitioning to organic food production with a network of resources and learning support, including market chains and 'webs' that have evolved through the TOA networks. TOA programs range from organic city farms and greening urban structures to

communities raising the funds to buy back land from corporate shrimp farmers in order to restore the native mangroves while supplementing this effort with locally managed, sustainable tourism income (with village homestays); collaborative learning, relationship-building, and problem-solving between rural sustainable fishing villagers near Trat and urban Bangkok consumers; and a network of urban and rural shops, cafes, and restaurants run by community cooperatives and sourced from sustainable, ecologically responsive, climate-smart organic supplies in urban, rural, and peri-urban geographies.







Photos clockwise from upper left: xxix. Trat Towards Organic Asia Consumer-Sustainable Fisheries workshop; xxx. Smart Consumer Workshop TOA worm composting; xxxi. sustainable fisheries TOA consumer-producers program; xxxii. Community Mangrove restoration.



A Thai farmer of the Towards Organic Asia project who also contributes to the Right Livelihoods CURLS education program and joins in the Mindful Markets Forum (discussed below), shared how she came to transition to organic food systems. Several years prior to the interview, her husband had died prematurely from cancer. The farm had always run as a conventional mono-cropping agri-business, sourcing local and ASEAN markets and utilizing expensive chemical fertilizers and pesticides as

recommended by agriculture extension agents. When her husband died, the entire family felt certain that her husband's cancer was linked to the chemicals used on the farm. She considered this extensively. She said she realized this meant that not only had they been poisoning themselves with these farming techniques, but they were poisoning the soil, the air, the water, the food they were producing, and thus poisoning the people who would eat that food, the plants, the insects, the birds, the mammals, the fish, and the reptiles of the area as well.

With this realization, she said, she felt a great deal of shame. She explained that she is a Buddhist The Buddhist belief is to harm none and carries a commitment to *karuna*, taking compassionate action to diminish the suffering of others. She decided that she could not farm another day the way they had been farming. For three years, they let the land rest, detoxify, and regenerate, and they found ways to make their existing resources stretch. When she learned about Towards Organic Asia, she joined with other farmers to learn from their experiences transitioning to organic farming. She received practical support and advice from those who'd successfully done so. Now, she says, she is a Buddhist farmer.

This Buddhist farm is the result of a unique process of discovery and cultivation. One can navigate the farm by a water system of canals and then by foot. The canals are part of a water management system this TOA farmer created in order to mitigate the impact of drought. She was able to keep water for her farm for up to 45 days of drought without bringing inputs. The planting has evolved collaboratively and interactively, through trial and error, according to the plants, insects, soil, and natural fertilizers that work best together. Climate-smart planting is employed, responsive to drought, longer or sporadic rainy seasons, and new conditions. When asked how she determined what, where, and when to plant in response to climate change, she said,

"I don't decide. I listen. I listen to what the plants, the soil, the insects are telling me. Nature knows how to adapt, how to respond. If a species does not do well in this new climate, it will die off, and others will arise and come into balance with the systems. It is my job to pay attention, to listen to what Nature is telling me, and to help her along. I collaborate with nature. But it is not my job to kill off any species. If I find an insect that is eating my plants, I don't squash her. I pick her up and put her in a pot with soil. I watch her. I try to understand what she needs, what she does. And then I find out how what she needs aligns with what the farm needs, and I help her find her new role, a way to help. This one, I found, is good at enriching this soil."

-Interviewee 38, Towards Organic Asia, Mindful Markets, Right Livelihoods

To create new, organic, climate-smart food systems and markets within a dominant vast field of industrial agriculture utilizing policies and market mechanisms to encourage chemical fertilizer and pesticides is not without challenges—one of which is neighbors. The Wongsanit Ashram, where some of the first organic pilot projects evolved for Towards Organic Asia and the Mindful Markets Forum, well understands the potential facets of interconnection. Borders, more often than not, are connectors.

While sitting in a Wongsanit training session discussing strategies for organic transitioning, the wind shifted. Instead of the usual sweet smells of Wongsanit's lush local ecosystem, a distinctly chemical wave of pesticides passed over the group. The neighboring farmer was spraying chemical pesticides and the breeze had brought them right into the middle of the ecovillage. In an interview, I asked one of the co-founders of Wongsanit and Towards Organic Asia about this challenge:

"We've been working on this kind of challenge from many different directions. We've approached the neighbors and have invited them to join in some of the programs and events we hold here at Wongsanit, so they can learn about chemical sprays and organic approaches to agriculture. Some neighbors have begun to join in our programs but they haven't decided yet if they are willing or interested in transitioning to organics. There is often a short-term cost and loss when first making the change, and that can be a very big hurdle for small farmers to get over. We've been thinking about ways to help subsidize while incentivizing these transitions, and strengthen the market network of support for entry, but we've not yet come to a

straight-forward solution. We won't give up, and we will keep building relationships with surrounding communities and inviting them in. We also do outreach and education to the public, many of the farmers in TOA will invite family and friends to events, so they can see what we are doing. These social times often help bring new changes in engagement."

-Interviewee 27, Education, Towards Organic Asia, Mindful Markets, Southeast Asia region

Another organic farmer has a different strategy for dealing with non-organic neighboring farmers.

"I've created a layered border area of plants and a first-line waterway that will absorb and filter out the chemicals that may be blown here from the neighboring farms. The first waterway filters and flows outward—not into the crops. I chose a boundary of plants and bushes for their ability to absorb and block out chemicals, and keep them from entering the farm."

Interviewee 39, TOA, Mindful Markets Forum

As mentioned above, while the majority of ICE Network affiliates engaged in organics and new markets systems are interested in building locally linked 'small is beautiful' farms and markets, not everyone in the network shares this strategy. Two Malaysian businessmen, one working more through INEB and ICE Network, the other through the Right Livelihoods and Mindful Markets Forum, are champions of organic farming, but in a manner that fits within the existing macro-economic, industrial agriculture, large-scale production, linear multi-sage supply chains, and global trade model that would feel familiar to most ASEAN economics. While many in the network openly disagree with their approach, what is interesting is that there is not the usual dynamic of a majority view pushing out a minority view, so often found in organizations. There is not an expectation that everyone will approach these values and challenges in the same way. Rather, there is a place for everyone, and there is little interest in dictating to others what they should do or how they should do it.

This is also significant as a demonstration of plurality and diversity that is not simply tolerating other perspectives, but is actually openly engaging with others mindsets, with a willingness and interest to learn from alternative perspectives. The farmer and the insect eating her plants has to find their flux equilibrium. Everyone has a role to play.

A young Tamil organic farmer at the ICE Network affiliate Islander Center in Sri Lanka made a point about all our food systems

> *"Any agriculture, including organic agriculture, is a kind of violence to the earth, a violence to ecosystems. But this we need to eat, while we need to work on changing our food systems. Organics is better than conventional farming. Permaculture is better than organics alone, but requires a full transformation in the way people live in their environments. So we try to do the best we can, but we need to remember, we are still causing harm in a way,"*
>
> -Interviewee 92, Organics, Good Market, Islander Center

Branching out from the School of Wellbeing, the Towards Organic Asia project, Suan Nguen Mee Maa, SEM, INEB, and many other initiatives of ICE Network affiliates, the Green Market Network builds organic, permaculture, and transitioning markets across Asia under the linking umbrella of the Mindful Markets forum. It presents itself as a platform to collaborate and support organic, climate-smart, sustainable endogenously-derived, locally-appropriate markets within and between Asian countries and communities that under the GDP indicators were classified as impoverished. They seek to discover innovative strategies for building a strong network of climate-smart, holistic, values-based markets: to create access to broader customer bases; and to deepen solutions from process to packaging to circular and regenerative systems. 'Deep organics,' drawing upon the concepts of 'deep ecology,' have become the new call of this forum—organics for all, and deep organics, where change in food systems is about an interconnected change from within.

The Wongsanit Ashram is perhaps foundational to Towards Organic Asia, from which the Green Asia Network and the Mindful Markets Forum was formed—all enmeshed and overlapping across the Asian interfaith climate and ecology network. Wongsanit was largely founded on the principles of deep ecology, also known as sacred ecology or spiritual ecology (as discussed in Chapter Two and Chapter Four). The founder of Wongsanit Ashram, P'Pracha Hutanuwatr, when asked about deep ecology, responded by discussing modernity:

> *"Modern society creates a value system that worships wealth, power, fame- this is at the core of the crisis because if you put those as the aim of life, then you limit yourself from the call of true human value. You can call it 'True Self' or 'True Value.' Once you go from that part of life, you lose touch with compassion. On top of this is the strong advertising climate in which we are all living, especially in the free enterprise capitalism like yours and mine. We are bombarded with the idea that we are not good enough, if we don't buy this, buy that, everyday. Many times a day is this deep spiritual crisis underway- I call this a spiritual poverty. Schumacher said it is a metaphysical issue. This is because…this issue of presenting this experience as a game of life—to win wealth, power, fame, all of this—underlying it is a metaphysical crisis, in trying to satisfy a human need, human nature of self-actualization. Even the shallow level of self-actualization, it applies: You can be a good architect, but you need to be a business man. You can be a good artist but you can't do that because you need to make a lot of money, etc. etc. And this is for me just a very shallow aspect of self-actualization. There is a deeper self-actualization, where you are able to use compassion as the main motivation in your life, and understand things as they are. Understand the Non-Self nature of the universe and yourself."*
>
> -Interviewee 32, ecotemples, organics, deep ecology, education

Just as P'Pracha, many of this study's interviewees framed their exploration of spiritual or deep ecology, new markets, and deep organics by first discussing the conditions of existing systems, structures, attitudes, and perceptions as well as the global economically-rooted ecological crisis. It is an important aspect of the values system across the network to look clearly into the perceived root of suffering—the cause of the problems—in order to envision a pathway that brings healing. This is how they consider climate change and the earth-

systems crisis relative to the manner in which spiritual and mutually shared values are at the center of new systems formation.

> *"In a way, deep ecology goes back to Non-Self teaching of Buddhism. Because you see intrinsic value in everything, including things that may not be useful for human beings. You don't take human species as the centre anymore. So this is the non-self in the Macro-scale. Non-self in terms of species, side-by-side in terms of non-self personal practice. In a way, we embrace deep ecology partly because it laid out for us the idea of inter-relatedness, this core teaching of the noble path. And also we have been teaching for a long time that non-human life is as valuable so we are teaching not to harm other beings, not only human.*
>
> *Schumacher's 'small is beautiful' means to us, partly because we are of the society where we worship being fast, big scale, long distance, very inhuman. So when we come to being small, being-slow, it means we come back to being human, being ordinary. The whole modern ethos teaches us not to be ordinary. To be someone else, somewhere else, something else all the time. We've lost touch with our base—our human base, our nature base. So, deep ecology and this small is beautiful is guiding us back to who we are as an ordinary being."*
>
> -Interviewee 32, ecotemples, deep ecology, organics, education

d. The Good Market & the Mindful Market Forum: alternative Asian models for Transitional Economies

Most of the pan-Asian ICE Network affiliates engage to some degree with sustainable (or 'Right') livelihoods and climate-smart sustainable markets as a key aspect of their commitments to act on the global climate crises and initiatives for systems change. These efforts range from facilitating farmers' transitions to organic agriculture, trainings models and initiatives for permaculture and food forests and analogy forestry for biodiversity recovery (with some examples mentioned above), to circular and sharing economies in temple zones, in local markets, and through local cooperative initiatives. These market-based approaches include the establishment of youth-owned cooperative entrepreneurships through eco-restorative practices, supplying eco-products in shops and restaurants ranging from organic foods and local traditional healing herbs, organic soaps, lotions, shampoos, clothing, shoes, bags, sustainable tech accoutrement, and other ecologically-considerate goods. The

processes and values foundational to and imbued within these regenerative markets are rooted within shared values of deep ecology, and the converging sacred texts that call for stewardship, respect and care for all beings, and for the Living Planet.

The affiliates of ICE Network share with each other, in small and large gatherings as well as through online forums, examples of their strategies and processes, problems they've encountered, and how they've addressed them. They commit to supporting interested parties in the networks to facilitate their own locally-appropriate climate smart / right livelihoods initiatives. These climate-smart markets include sustainability standards and values, and climate-sensitive considerations of local, Indigenous, and appropriate food systems, ecosystems, energy systems, sufficient income generation, and incorporation of local and shared eco-cultural values for caring for and protecting the health and wellbeing of the whole sacred-social-ecosystem in each locality.

A few examples (from many) of these enterprises by ICE Network affiliate organizations include Mohammadiyah, the largest civil society organization in Indonesia, who facilitate ecologically sustainable social-enterprises and community eco-builds (Khisbyah, 2015; Natsution, 2015); the Deer Park Institute in Himachal Bir, India, and Foundations of His Sacred Majesty in Tamil Nadu, who support education and training on sustainable eco-soap and lotion making, toy-making, and other products through upcycling what would otherwise be sent to landfill, as part of their Zero Waste commitments (in Sangha with temples across Asia), and solar energy cooperatives (mentioned in Chapter 4) (Varma, 2015; Kumar, 2015; Prahbu, 2015); the ecotemples and social-enterprise cooperatives for solar energy production and organic foods in Japan and in China (Watts, 2015; Okochi, 2015, 2016; Ren Da, 2017; MiaoHai, 2017); the Spirit in Education youth cooperatives for organic restaurants, circular

economy and eco-sustainable products in Inle Lake Café fueled by restorative aquaculture initiatives in Myanmar (Armour, 2015; Gum Sha, 2015; MyaThida, 2015), and Sufficiency Economy initiatives of many eco-temples, eco-mosques, and eco-churches across the region (Khisbyah, 2015; Abdul 2015; Baharuddhu, 2015; Sangkom, 2016, 2017; Sunisa, 2015).

There are also education and training programs for analog forestry, permaculture and food forests, organic farming, natural building, composting and zero-waste infrastructure creation (composting toilets included), and other skills that have been monetized for educational training programs at graduated fees. This income supports climate-smart enterprise initiatives and allows for further education and training for local, climate-vulnerable communities at low or no cost. (Parry, pers. obs. 2015; Samaradivakara, 2015; Jamwiset, 2015; Chungprampree, 2015; Jurianz, 2015) These strategies have enabled the hosting space to further its ecological and climate concerned initiatives, while springboarding new engagement from among those involved in the trainings. The host and participants in the trainings continue to support each other, and 'micro-webs' of new enterprises as well as new trainers spirals out into a wider web. The relationships formed in the training programs become deeper than trainings and certification, and move into kalyanamitra or spiritual friendship, reinforcing goals and values for climate resilience, sustainable livelihoods and wellbeing.

This section focuses on two key, and at times overlapping and directly interconnected, climate-smart markets—actually market webs across Asia—evolving from and through ICE Network actors: South Asian *The Good Market* and the Southeast / South Asian *Mindful Markets Forum*. While distinguishing the two markets for the purposes of this section from other livelihoods and climate-smart market activity of ICE Network affiliates, the lines are

actually much more porous, and the spaces for collaboration much more dynamic and poly-centric than space for this chapter permits.

As mentioned above (section b), the Mindful Markets Forum grew out of the *Towards Organic Asia* initiative, a practical application of Gross National Happiness (GNH) concepts, and the engagement and learning from the School for Wellbeing. (Kheolamai, 2015; Wallapa van Willenswaard, 2015; van Willenswaard Hans, 2016) This section will explore the processes and formation, inter-connection and values of these climate markets, with focus on the Good Market's Standards, the Participatory Guarantee System (PGS) for organic agriculture, and market strategies of the Mindful Markets Forum. The analysis considers potential pitfalls, such as creating markets only 'elite' and high income consumers can or will access, the challenge of creating new market models and food systems in the midst of a contrary and dominant existing economy. Key signals for lessons learned emerge from processes of establishing and then ratcheting up new-values markets standards, gaining access to consumers and resource support through new technologies, collaboration rather than competition among vendors, producers and consumers, and a consideration of the nimble and dynamic fluidity of local yet regional market webs.

Preliminary Relational Formations: *Convergences*

The Good Market origins in Sri Lanka can be traced back to the Colombo-headquartered Sewa Lanka Foundation, with influences from Towards Organic Asia and the Mindful Markets Forum, whose main offices are Bangkok. The Sewa Lanka Foundation is a national Sri Lankan non-governmental organisation (NGO), the first and most long-lived to include an equal balance of Tamil Hindus, Tamil Muslims, and Sinhalese Buddhists in its own staff, as well as in its sustainable development, humanitarian relief and recovery programs

nationwide, throughout the many decades of conflict and post-conflict (Parry, 2003; Parry, pers. obs., 2012, 2015; Abeyasakera, 2015; Tennakoon, 2015; Tambiah, 1986). In 2002 and 2003, Sewalanka Foundation began to explore initiatives for breaking free of the donor-dependent nature of NGO development and humanitarian work and what it felt to be negative obstacles to locally appropriate, holistic and sustainable programs in Sri Lankan vulnerable, fiscally impoverished populations (Navaratne, 2003, 2015; Kiessel, 2015; Bodikotuwa, 2015; Tennakoon, 2015). The organization began to explore and facilitate creative self-sustaining livelihood and for-profit initiatives with community actors in rural, peri-urban, and urban spaces.

Through a social-mobilisation and participatory community-driven process, sustainable social-enterprise *Sewa Societies,* or locally led and determined micro-enterprises, were formed from grassroots and local cooperatives in some of the most vulnerable and fiscally impoverished communities across Sri Lanka. These populations, many of whom had previously been considered 'target stakeholders' or 'beneficiaries' by international non-governmental development and humanitarian programming, had seen little improvement in their lives; most programming brought in by international NGOs was dictated by the INGO itself, or the INGO's donor agency, and the programs were identical across the country and region (Abeyasakera, 2015; Bodikotuwa, 2015). The Sewa Lanka Foundation found it increasingly difficult to patch together donor monies appropriately within participating community initiatives, and wanted to facilitate programs for sustainability, self-direction and strong community capacities, to in effect 'work ourselves [the Sewa Lanka NGO staff] out of a job' (Tennakoon, 2015; Royce, 2015). Simultaneously, the decades of conflict, high levels of forced migration inducing slash and burn agriculture, along with increased unpredictability and severity of weather patterns (drought, flooding), landslides, and the 2004 Indian Ocean tsunami, had devastated forests, water systems, and larger landscapes, increasing

desertification and coastal erosion across Sri Lanka. (Palihawadana, 2015; Kiessel, 2015; E. Parry pers. Obs. 2006)

From the start, an incorporated interest in the Sewa Societies and other Sewa Lanka Foundation supported micro-enterprises was concerned about environmental sustainability, chemical-free and organic agriculture, and biodiversity restoration, albeit in early stages of interest, research, and discussion (Royce, 2015; Navaratne, 2015; Kiessel, 2015; E. Parry pers.obs. 2002-2003). The early social-enterprise cooperatives included sewing groups, upcycling of saris and other materials, sustainable fishing, and organic (or transitioning to organic) farming. The fishing cooperatives and farming cooperatives in particular were struggling with the low prices set by the market 'middlemen' they supplied (these 'middle men' had refrigerated transport and capacity to access bigger markets in Colombo and internationally). Village discussions raised the idea of collaborating across cooperatives to try to set prices together, and to explore niche markets, such as the organics and sustainable markets, that seemed to offer higher income potential in the long run, that could help offset the initial losses that often accompany newly transitioning organic farms (OECD, 2017). Rotating savings funds for micro-enterprise finance were the only source of funding for these early initiatives (Navaratne, 2015). In some ways, this period signalled a departure from conventional development to the 'shallow ecology' of sustainable development (a concept raised in Chapter Two)—while still navigating the existing dominant economic system, the values incorporated into these livelihoods initiatives began to emphasize social-ecosystems and holistic sustainability with care for the environment.

A few years following the Indian Ocean tsunami, the Sewa Lanka Foundation was in the process of deeper decentralization and reduction of offices and programs—both in response to reduction of donor funds available after the first stages of the emergency had passed, and

due to an interest in furthering the ‘work ourselves out of a job’ process—strengthening local capacities and reducing dependency on INGO and UN development and relief funding. The CEO and Executive Director, Harsha Navaratne came into contact with the International Network of Engaged Buddhists, at that time still under the presidency of Sulak Sivaraksa. Thai-based Sivaraksa had long been acquainted with Navaratne’s uncle, A. T. Ariyaratne, the Sri Lankan founder of the spiritually-led, engaged Buddhist, education-for-social change organization, Sarvodaya (with whom at the time both Sivaraksa and Navaratne had a falling out; now all are reconciled). Sivaraksa introduced Navaratne to the School for Wellbeing, the Towards Organic Asia (TOA) Initiative, and the Spirit in Education Movement across Southeast Asia. Before long, farmer-to-farmer, fisher-to-fisher experiential learning exchanges were underway, with Sri Lankan farming and fishing entrepreneurs visiting Thai and Burmese TOA organic sustainability initiatives, learning about their transition to organics and sacred-social ecosystems restoration. (Navaratne, 2015; Abeyasakera, 2015; Thilini, 2015; Macy, 1993; “Sarvodaya – Sri Lanka’s Sarvodaya Shramadana Movement")

The next stage of the exchanges included Thai fishing and organic agriculture (including permaculture and food forests) farmers and technical experts visiting the Sri Lankan sites to assist in problem solving and creative strategies appropriate to each local culture and values system. These initiatives helped facilitate transitions to Sri Lankan organic agriculture, inquiry into Sri Lankan-based knowledge of biodiversity restoration, climate mitigation, and food systems, while building relationships across Southeast Asian and South Asian networks. This local-to-local exchange between villages and small communities of Sri Lanka and Thailand marks a further break away from conventional exogenous, top-down and Western-driven assumptions and approaches to development. The initiative was born through the meeting and agency of local actors, mutually recognizing shared concerns and complementary capacities, with a co-determination to apply traditional and experiential

knowledge, and to further learning collaboratively to cope with the ecological, social, and livelihoods vulnerabilities they all faced.

These were the fledgling building blocks that, on their own, were frail and dependent upon existing globalized capitalist export-import markets or residual foreign donor support. Yet with the Good Market and Mindful Markets launch, they came to serve as some of the first vendors for a new markets network across Asia. Some early-days vendors exhibited more of a sustainable development or shallow ecology (a concept raised in Chapter Two), while others, particularly those central to the spiritual or religious central movements, already reflected a deep ecology and local eco-cultural values (through Sri Lankan Traditional Ecological Knowledge, and through Buddhist or Hindu practice) approach to livelihoods. On their own, although local communities experienced improvement in food security and quality of life, there was not a sufficient existing market web at the time to support them, or to expand their market base. Moreover, such a climate-smart social-ecologically-centred market did not exist in Sri Lanka at that time. (Kiessel, 2015; Royce, 2015; Bodikotuwa, 2015) Navaratne joined INEB, and it was not long before he was nominated and chosen to replace retiring Thai founder Sivaraksa as the INEB President. In 2011, after several years of planning, the INEB-hosted Inter-religious Dialogue on the Human Drivers of Climate Change and Biodiversity Loss forum was held in Anuradhapura, Sri Lanka, at the Islander Center (INEB, 2012). Over five hundred participants attended from across Asia, representing hundreds of organizations across (often overlapping) networks of Buddhist, Hindu, Muslim, Christian, animist, and shamanic engagement with their local communities, Civil Society, and national policy makers. Many affiliates of Sathirakoses Nagapradeepa Foundation and INEB were also in attendance: the Islamic Forum of Indonesia, Mohammadiyah, IKIM of Malaysia, direct representatives of HH the Dalai Lama, Vandana Shiva's organization in India, India's Deer Park Institute, Global Ecovillage Network Oceania Asia, School for Wellbeing and

TOA, Spirit in Education Movement, Suan Nguen Mee Ma, to name a few of the most prominent attendees. It was at this forum that the Inter-religious Climate & Ecology (ICE) Network was launched. (INEB, 2015; Parry, pers. Obs. 2012)



Photo xxxiii*: Contrasts: biodiversity restoration on Islander Center lands and the environs*

The Islander Center, Highlander's Education for Social Change, ICE Network Origins

Just a few years prior to this gathering, The Islander Center was established by the Sewalanka Foundation, in a drought-engulfed war-devastated landscape bridging the northern Wanni Zone (previously held by the Tamil Hindu LTTE fighters) and the southern, predominant Buddhist Sinhalese, part of the country (during the conflict, held by the Sri Lankan National government) (Tambiah, 1986; Palihawadana, 2015). Islander Center, through the Sewa Lanka Foundation with the support of Sri Lankan ecologist Ranil Senanayake and Sewalanka Ecologist Ajantha Palihawadana, restored the biodiversity of the area within 3 years with a technique called analog forestry (see photo description below), returning thousands of species (INEB, 2015; Senanayake, 2012, 2015c; Palihawadana, 2012; Belipola; Islander Biodiversity Report, 2012). In addition to richly restored biodiversity offering carbon-sequestering value,

food forests and organic farms were created on Islander lands. Education and trainings on climate change, ecosystems, sustainability and organics, and market engagement for surrounding villages, as well as for people around the country and continent, were facilitated.

The Islander Center was named both in homage to Myles Horton's Highlander Center (discussed in-depth in Education for Social Change Chapter 5), and to celebrate a unified Sri Lanka of Tamils Hindus, Tamil Muslims, and Buddhist and Christian Sinhalese and Indigenous minorities, for whom it was all their one island. Following the war's end in 2009, the Islander Center served to facilitate conflict transformation sessions between Buddhist monks and Hindu priests, employing art, music, and many strategies found in the Highlander Center for building social change movements (see Chapter 5), as well as values and strategies from Johann Galtung (conflict transformation and structural violence concepts) and John Paul Lederach (Galtung, 2011; Galtung & Hoivik, 1971; Lederach, 1997). These clergy were transformed in attitudes and their relationships with each other, which brought a changing influence to political processes and community perspectives. Soon the Buddhist-Hindu engagement evolved beyond peacebuilding to sacred ecology, climate change, sustainability and resilience-and to include collaboration with Tamil Muslim Imams, and the Indigenous Vedda animists of Anuradhapura.



This photo xxxiv. was taken at a training of monks, priests and community climate and resilience actors (all affiliates of the ICE Network) in Beliopola, Sri Lanka. The training was on analog forestry, an approach developed by Sri Lankan ecologist-biologist-entomologist Ranil Senanayake. It is a type of silviculture that offers strategies for rapidly restoring ecosystems, while meeting diverse needs for food (food forests), traditional healing plants, and income generation for local communities. In Senanayake's own words, "Analog foretry is an approach to ecosystem restoration that considers the process of forest formation and the functioning of forest services to be critical in establishing a sustainable ecosystem characterised by a high biodiversity to biomass ratio. Design is produced through a synthesis of traditional and scientific knowledge. It seeks to optimise the productive potenital of the design rather than maximise the production of one crop and to maximise Ecosystem Services by increasing the volumetric mass of the photosynthetic component." (Senanayake, 2015, 2015 b). In this photo, Buddhist monk Venerable Manjusri Balangoda spontaneously climbed up a tree to 'connect differently' with the tree itself. While the photo does not show it, he is approximately 12 metres off the ground. (Photo credie: Emilie Parry, 2015)

This spiritual and interfaith engagement on the global-and-local ecological crisis marked a clearly articulated shift in Sri Lankan context from the shallow ecology of sustainable development approaches towards a deep ecology approach reflecting spiritual and faith values of the Sri Lankan Buddhists, Hindus, Muslims and Animists engaged with these efforts. (Please see Chapter 4 for a detailed examination of these facets.)

At the Islander Center-hosted INEB interfaith climate change and biodiversity forum, which formed the ICE Network in Anuradhapura, Sri Lanka in 2012, *The Good Market* was also launched. It was launched by two former Sewa Lanka staffers who would help facilitate the creation of the Islander Center, with direct support (including half-time work hours) and commitments from several Sewa Lanka staff and its executive director, Harsha Navaratne.

Many of the Sewa Societies and Sewa Lanka-facilitated micro-entrepreneurs were the first to engage with the creation of a Sri Lanka-wide Good Market climate-smart, new systems and new values market web.

The Good Market

In the back office of The Good Market in Colombo, Sri Lanka, there is a small piece of printed paper, taped above the light switch by the door, so that only the market staff can see it. On this paper are printed the words: "*We make the road by walking*." This is also the title of a book documenting conversations on education and social change between Myles Horton (of the Highlander Center) and Paolo Freire (Horton, Freire, Bell, Gaventa, & Peters, 1990) (See Chapter Five). The Good Market felt that the smaller, disconnected attempts at sustainable, climate-smart, regenerative, and Right Livelihoods initiatives (such as Sewa Societies) as 'stand-alones' were limited in their potential. They were vulnerable to collapse without a market web, a dynamic, diverse, and integrated whole market system that functioned in alignment with the values driving these fledgling businesses and cooperatives.

The catalysing concept embedded within the Good Market platform, retail shops, and weekly vendor events asserts that should necessary pathways or systems not exist, then together they will create them through the process of doing. *We make the road by walking.* This reflects an aspect of self-agency, endogenously directed self-confidence and knowledge, and a creative space that allows for—in fact requires—trial and error in order to learn and evolve, to form a new economy, a new markets system. Immediately, the model for process and function differs greatly from the donor-driven, restrictive, pre-determined models for climate action and sustainability existing within the dominant UNFCCC, UN, and INGO development and humanitarian institutions.

> "*Markets are social institutions. Any time we humans choose to trade with each other or establish a market place, we have underlying assumptions and explicit rules. These assumptions and rules are a reflection of our priorities and our values at that particular time. […] Our markets are complex systems, just like ecological systems, and they can evolve over time. Some of the assumptions and rules that we now take for granted, are in fact relatively recent. For example, corporations have not always existed and they weren't always so easy to set up. In order to be granted a charter, a corporation had to demonstrate that its activities would benefit society. Corporate charters were granted for a limited time and could be revoked if they exceeded their authority or caused public harm.*
>
> -Interviewee 28, The Good Market, Mindful Markets Forum

This is a practical-action message refusing the yoke of dependency, refusing victimhood, refusing poverty of mind and spirit projected upon them by other cultures and worldviews. The Good Market has several retail shops, several 'Events' (large-scale open-air markets, held twice weekly, in three different Sri Lankan cities), an online Sri Lankan vendors platform, a new global vendors platform, and emerging mechanisms for investment crowdfunding and online sales for vendors.

Actors within The Good Market suggest that the current view of globalized corporations and capitalist economies are assumptions of static states, when they are merely agreed-upon social formations like any institutions or systems. Today, corporations have a fiduciary duty to generate ever-increasing profits and financial returns over time. Success is measured in quarterly earnings and annual returns, creating pressure to continuously expand and grow. This cycle has reinforced an assumption that the sole purpose of a corporation is to maximize financial gains for its shareholders—to the extent that some countries, such as the United States, have included this purpose as a legal requirement.

For the Good Market founders and vendors, assumptions in existing markets have been a driving force behind climate change and social and environmental challenges.

> *"Decisions are being made based on short-term profits and returns to investors, not the long-term impact on our health, our communities and our environment. We live on a planet with finite resources and a finite capacity to absorb our waste. In a closed finite system, infinite growth is not possible. Our current economic system is not sustainable. The good news is that since markets are social institutions and we make the rules, we have the opportunity to change the rules to reflect our values and our priorities. This is already happening*."
>
> -Interviewee 73, The Good Market, Mindful Markets Forum, Islander

The Good Market's stated purpose is to create a local-to-local, nationwide, and potentially far-reaching markets system founded in encompassing values more than to simply increase profit earnings for shareholders—values that reflect the local eco-cultural spiritual values in Sri Lanka, the sacred ecology duty to harm none and to care for all beings, human and non-human, "choosing to prioritize people and the planet." (The Good Market, 2015)

What they aim to create is a new regenerative, carbon-sequestering, climate resilient, holistic markets system, a new economy reflecting deep ecology and shallow-to-deep ecology values (sustainable development as shallow ecology), supporting a local social-livelihoods-ecosystems balance.

Standards

Like Mindful Markets Forum, of which the Good Market is a part, the Good Market determined to serve as a facilitative platform for shared values-based markets across Sri Lanka and recently expanding beyond Sri Lanka. Unlike the Mindful Markets Forum, however, the Good Market made decisions to rapidly initiate a lean-start-up, high tech model with fundamental standards in place and a ready-made model to move into full markets operations.

Through research and inquiry into other attempts at alternative market models, they found that it does not work well to incorporate meaningful standards and values after a market system has been established. It is essential to set a baseline from the beginning reflecting core standards and values, which allow for an entry point for many different vendors, and then to provide support and community to continually 'ratchet up' the shared market standards and responsibilities.

> "*So the idea with the Good Market is, that it is a social institution, and we make the rules. And there are really clear rules as to how the Good Market works. And if we tried to introduce those rules later, after the market was already set up, it wouldn't have worked. We know other groups in the region that have tried that, but it is really hard to put these things in place after the start. Because these rules and standards have been there from the very beginning, before we had any vendors involved, it makes it really easy.*"
>
> -Interviewee 28, The Good Market, Mindful Markets Forum, Islander

The market is 'curated' with a process of vendor vetting to meet minimum sector standards and ratchet up standards and ratings. The minimum standards for each sector are 1) Energy, 2) Place, 3) Source Materials, 4) Middle Maker, 5) Final Makers, and 6) Services. The Good Market's approach is through curation, transparency, crowdsourced monitoring, multi-lingual (whole nation) translation, facilitating community engagement, relationship building, education, and enjoyment. The Good Market has set standards for organics, free range, packing, seed planting and material, organic Participatory Guarantee Systems (local farming cluster groups co-monitor and support each other in meeting an IFOAM certification level standard of organic productions), among an array of integrated and increasing standards for vendors. From interviews with vendors and customers, it appeared that over time vendor sustainability and eco-credentials were increasing as were the overall diversity and standards of the products sold in the markets.

<u>Whole Foods Effect?</u>

> "*Good Market started as a volunteer-driven initiative. Sri Lanka has many organic farmers, fair trade initiatives, social enterprises, and responsible businesses. It also has well-educated consumers that want healthy food and socially and environmentally responsible products. The idea was to have a small weekly marketplace to bring these groups together. From the beginning, the market was curated. In order to participate, vendors had to be "good for people and good for the planet" and meet minimum sector standards*."
>
> -Interviewee 87, The Good Market, Sri Lanka

One critique of the Good Market was that, while the messaging was about 'organics for all' and Right Livelihoods, wellbeing for all people and the planet, that the market could be priced too high and seemed to attract the western and Sri Lankan wealthy elite. When this concern was raised with the Good Market, the issue was acknowledged. It was suggested that this was part of the early ebbs and flows of the market, but that when some vendors attempted to price too high, other vendors would offer lower prices for similar products, gain more customers, and in effect bring the overall pricing back down to accessible rates. While this may be the case, the question does still remain whether the organics and sustainable products could feasibly be in reach of low-and-middle income Sri Lankans.

Additionally, the Good Market shared stories of vendors helping each other, promoting their wares, and assisting in bridging links to new customers. These stories were shared to demonstrate the nature of collaboration versus competition among the Good Market vendors in the spirit of shared values to create a new market and a new economy. While it is recognized that both can be true and yet seem to contradict each other, the solution proposed for the potential of elite markets in these spaces was answered with a traditional 'free-hand of the competitive markets' response.

To be fair, the Good Market is not quite six years old, and has developed remarkable engagement and impact across Sri Lanka and beyond its borders. As Good Market facilitators

and collaborators themselves note, they learn by doing, they make mistakes along the way and hopefully learn from them. They make the road by walking.

> "*The underlying thing is if you look at climate change, or look at any of the big problems that we're facing now, it is rooted in how our economic systems work at the moment. That is fundamental, there's no getting around it. When Arjahn Sulak [Sivaraksa] is talking about structural violence, this is the root, this is where it's at. And a lot of times when we're talking about it, things get tangled up. We talk about markets and we talk about capitalism as if they are the same thing. And it really confuses people. Because they are not the same thing. Markets are something that human beings have done in every society from the beginning. And that is a form of trading. It doesn't always involve money. Sometimes it is bartering…but it is a natural human behaviour of trading things. We know from experience that market systems can be a really efficient way of getting to where we need to go."*
>
> -Interviewee 72, The Good Market, Mindful Markets Forum

This Matters—creative spaces for unique, holistic approaches to systems change in the Anthropocene

Within emerging models for faith or spiritual engagement on climate change concerns, there are many cross-cutting elements that include adaptation *with* mitigation and overall resilience; comprehensive or 'holistic' resilience of social-ecosystems (or 'sacred social-ecosystems'); transitional and new climate-smart, sustainable, endogenously-driven regenerative ***market models*** that extend already across countries and regions; and climate education for social change and systems change.

These, combined with other aspects, can be pivotal for catalysing and strengthening broad societal behavioural change, policy directives, climate finance (strategic distribution mechanisms), education for social change in the Anthropocene, and creative or innovative programming with the freedom (and therefore benefit) to make mistakes and learn from those mistakes (something rarely found within current IFI / donor-driven initiatives). In many ways, the markets aspects of my research case study provide a tangible response and

application to the questions Kate Raworth (and Saleemul Huq, Hannah Reid, and many others) pose, while opening up areas that suggest further research.

The ICE Network has approached the challenges climate change poses to sustainability and resilience partly through an economic, livelihoods, and markets lens. The models and examples for action through the Network offer a unique lens on systems change and climate change collaborative, holistic resilience and capacity building through interfaith and sacred ecology actors. Through a value-formation discourse of convergent shared values in sacred texts and practices of sacred / deep ecology, the ICE Network has created applications for complex climate and sustainability challenges. This chapter argues that the ICE Network affiliates in Asia offer significant alternatives to the models for programming proposed through development, humanitarian, and UNFCCC circles. ICE Network strategies have the potential to re-frame, or at least influence, the way climate-sustainable economies are understood and facilitated. Such models could be effective in generating new ideas and strategies to address climate change while offering insights

In Asia, among the networked and grassroots societies affiliate with the ICE Network, UN, INGO-Growth-Based Development, and IFI donor dependency is giving way to new systems and models for holistic wellbeing according to local eco-cultural values and priorities. The reconsideration of markets, livelihoods, and wellbeing in the context of climate change is one model among many that expresses these community values of sacred, or deep, ecology and the commitment to living such beliefs. These examples offer up process models to inspire and catalyse others but also provide clues to transitional pathways for climate finance and alternative funding mechanisms as existing climate governance seeks new, creative, and alternative options.

There are of course weak areas and challenges to the ICE Market affiliates approaches to market systems as potential problems and solutions in the climate change field. Yet the approach itself makes good learning use of problems and transforms them into new opportunities. Some of the challenges include limited and constrained resources and a refusal to accept donor funds due to past difficulties with conventional, international and exogneous 'mission-driven' donor relationships. One opportunity is that in working with what they have and leveraging capacities and resources through collaboration with others along the way, there is a better chance of long-term sustainability and relationships strengthened throughout the markets network.

While this can become a strength, it also slows progress and catalysing dissemination can mute impact, causing some opportunities and initiatives to disintegrate due to lack of upfront funding. A policy and climate finance consideration would be worthwhile, particularly if working through a P-2-P online funding platform that could keep investment seed fund for climate markets at appropriate and effective levels. This ICE Network climate-smart markets model could offer the UNFCCC and GEF creative avenues for climate finance distribution for the most vulnerable communities through a deep ecology-influenced market approach.

The Good Market, Mindful Markets, and other ICE Network affiliate strategies for wellbeing and Right Livelihoods helps people extract themselves from the 'development and growth paradigm' and IGO / INGO exogenous top-down structures and programming. It offers new holistic locally-appropriate strategies that support carbon sequestering overall social-economic-ecosystems resilience and mitigates risk through local food systems (when rice crops fail due to drought or floods in another part of the planet, it will not impact their local food security or, as they refer to it, food sovereignty).

These models have the potential to mitigate risk of impacts by global climate change on globalized food economy by building comprehensive, local, accessible, and affordable food systems, market systems, livelihoods, and economies. More can be made of the existing and shared resources with re-application of existing materials, assets, and capacities. The ICE Network affiliate approach naturally taps into wisdom and knowledge for collaborating with ecosystem and traditional ways of life. These initiatives are helpful in providing examples and lessons that can inform strategies for facilitating and supporting similar efforts in other parts of the world.

Yet the model itself is a process that enables and supports local knowledge, systems, and bio-cultures to be applied, reinvigorated, and strengthened. It also illustrates the importance of linking existing local and national efforts bilaterally and multilaterally overtime. These longer-term relationships and earlier generations of social action have been vital for establishing foundations and springboards for this kind of network formation in this current moment.

Additional key lessons can be helpful in informing strategies to support existing new-values markets while facilitating spaces for others to emerge. When establishing values-based markets, it is important to have the values embedded into the standards from the beginning—enabling in-roads to local entrepreneurs so they may gradually improve their practices—and then as a markets community continuously ‘ratchet up’ the standards and engagement. Adaptation and livelihoods are integral to holistic programs in a systems-based approach to climate change. The uses of free and cheap, fast technologies can transform markets rapidly, making it possible for small markets actors to leapfrog and access markets and strengthen, attract investors, clients, and greater support. While the future of the internet is dependent on the same systems made vulnerable by climate change, in this moment, at least, new

opportunities are possible with new technologies. Climate change itself places enormous stressors on all systems, institutions, and on society. The way in which communities like those in the ICE Network respond may determine the direction and systems transformation we see in the next century.

> *As for climate change, I think I would say we need more than what the big global systems are doing for climate change—for us we can't wait until the big change comes, until the big government to change, big companies to change. That would be too late. We need to change ourselves. Even how small we are, we have to do it."*
>
> -Interviewee 28, Right Livelihoods, Ecotemples

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Gender and Generation: Where friction teaches ICE Network thrives and expands
(*and functions like an adaptative ecosystem / eco-cultural-system*)

ICE Network's predecessors contribute to foundational values, capabilities, and organisational decision-making processes, but they also inject some contradictions and friction evident across generation and gender. What could become fatal flaws for most organisations instead illustrates the adaptive, resilient, corrective, and self-organising characteristics of the network. A "small is beautiful" ethos presents numerous challenges when enveloped by dominant conventional farming and industrial market systems. The functional models emerging from this network potentially apply to climate finance mechanisms, transitional systems considerations, and particularly climate-smart markets that enable sustainable and sovereign local livelihoods. There are few studies conducted on interfaith-Indigenous climate change collaboration in network spaces, particularly not in Asia. This study could provide a roadmap for navigating the complexities and challenges of the Anthropocene in a manner that respects and restores the agency, wisdom and variety of eco-cultural values and

practices around the world. It offers potential for a transition into more sustainable, harmonious ways of living, informed by traditional Indigenous wisdom, yet transformed through challenges and opportunities of the Industrial Age.

Gender and Generation (and Feminine rising)

In April 2015, there was a large gathering of ICE Network affiliates in Seoul, South Korea, to discuss climate change action, sustainability and resilience. What bubbled up from the activities, site visits, rituals and conversations was a decision to collaborate across shared interests and build activities to share with others who were interested: this included areas of further climate and ecology education (specifically for faith leaders), solar and ninenergy training, eco temples, organics and food forests, analog forestry, and policy / advocacy work. This was a spontaneous gathering across shared interests, with a lot of enthusiasm about coordinating visits, learning exchanges, and shared initiatives across geographies-- to build upon what had grown in the previous three years. Determinations for steps forward had been discussed when the executive director of another organization that is very respected among ICE affiliates (recall, ICE Network had no executive director nor secretariat nor board, intentionally) requested that no further steps be taken until he had sorted some details. The group acquiesced out of respect and politeness.

Respect and politeness, particularly to elders, is highly valued across the many diverse Asian cultures represented in the ICE Network. The foundational organizations that helped support ICE Network organizations, while articulating more self-organizing and decentralized values, still have some residual Asian hierarchies in their organizations, where the Chairman's photos is up in every office, and if the Chairman shouts, everyone rushes to oblige. This is a generation of male leadership that found to maintain autonomy and sovereignty in the context of the World Bank's StructuralAdjustment Programs and finance policy that undermined local cultures, agency and dignity.

The values of the ICE Network, and the way of working and collaborating, decision-making is very different. The respected Executive Director of another organization had asserted himself, and the collaboration between affiliates seemed to be stopped in its tracks. I met with this Executive Director several times to press to learn why he'd requested this. Finally

he told me that he was appointing a South Korean to head up the ICE Network, because he was sure she would be able to procure sizeable funding for ICE network activities. This was an astounding thing to hear, given the way the ICE Network was formed, and had functioned harmoniously and effectively for years, collaboratively, with little-to-no injection of funds, and no hierarchy or centralized structure to guide. They had leveraged their shared resources, knowledge, capacities and interests, and moved forward with creative, holistic and exciting climate and ecology initiatives. Now this assertion of old systems, donor driven decision-making, and 'money chasing' seems to be rearing its ugly head. It seemed to me at the time that this was perhaps a short-lived experiment, absorbed back in to dominant systems.

Nonetheless, the research continued. I discovered that instead of the ICE Network being crushed by this interference of external elder authority, affiliates had simply adapted their pathways for cooperation. Stunningly, like pulling a thread and discovering an entire woven villages, my research uncovered initiative upon initiated, collaborations across ICE affiliate countries and actors, moving faster and fanning out so that it was impossible to track them all. Like a healthy ecosystem, it was resilient, adaptive, and found a multiple pathways to take root and flourish--to thrive and expand. The convergent ecocultural and ecospirutal values, the rituals and practices together formed multiple threads of close bonds, a kinship that moves beyond concepts of 'work' separate from 'family.' Everyone becomes family, and together family driven to work out of love and care for each other, for all Beings.

Table 6: Some examples of expanding and catalysing collaboration across ICE affiliates

A few small examples of longer list of ICE Network expansion and thriving:
Green ReLEAF (Philippines) with Good Market (Sri Lanka and Thailand)
Soil Soul Story (Philippines / global)
The Good Releaf App (Global disaster to local green markets)
Mindful Markets Forum becomes a network and links to the Good Market and Towards Organic Asia and School of Wellbeing
Global Ecovillage Network collaborates with ICE Affiliates across Asia
Suan Ngueyen Mee Maa collaborates with CURLS and Earth Trusteeship
The buddhist leadership & INEB schools; expansion of CURLS
Ecotemple and markets in Tamil Nadu
Belipola Analog Forestry and Good Market catalysing new cooperatives
ECO-V continuing in Lanka and expanding in Delhi
HH Dalai Lama audience on ICE Network for support
Sri Lanka Good Market strong in Sri Lankan, expanding to global while retaining local /

endogenous nature and small is beautiful but linked through market webs and networks
A South Korean "ICE chapter"
Gaia Ashram and Climate Education established; Gaia education and training centre, permaculture and ecovillage established
Sufficiency Economy University formed in Chiang Mai
18 new ecotemples and training centers formed in past 2 years
Muhammadiay built 6 community eco-centers (natural build, sustainable energy, education and training)
Chinese monks support solarization of 100 eco-training centers and ecotemples across ICE network affiliates
7 climate Yathras or educational climate pilgrimages undertaken across Asia
DiversEarth Bhutan and Tibetan pastoralist restoration activities
Japanese ecotemples and community sustainable energy cooperatives

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Chapter 5: Conclusion

From within globalised climate, development and humanitarian institutions, the call for new, different and creative ways for approaching climate change have grown louder. Many voices from within the UNFCCC's development and humanitarian agencies speak openly of the gap in knowledge and vision, repeating this summon for new and creative ways to address the complex, interconnected challenges and threats of climate change ("COP21 Religions" 2015, "Pilgrims of climate justice plan to impact COP21 in Paris — World Council of Churches," 2015; Reid, et al, 2014; Huq, 2006, 2014). Yet this bid seems to have gone largely unanswered.

Those working within the structures and systems of the United Nations and international development, environmental, and humanitarian agencies are limited by the institutional path dependency of their organisations and working cultures (Gómez & Atun, 2013; Matthews, Lo, & Byrne, 2015). The possibilities for envisioning and exploring strategies to approach the

complex threats and challenges of climate change are largely pre-set by the internal structure, outlook, and assumptions of these institutions.

Recently having stepped down from her position with the UNFCCC, former Executive Secretary Christiana Figueres sounded her own call, “We need nature-culture-based solutions to climate change, but we don’t have any” (Oxford Martin School, 2018)--outlining the gap for these kinds of new models and nature-culture-based solutions, asserting they are absent in markets, industry, energy, transport, land management, and global governmental and NGO spaces.

I argue that this is not wholly the case. Creative, innovative solutions are emerging and converging around planet Earth-- not only for biodiversity recovery and climate change adaptation, mitigation, and resilience, but for transitioning and unique and regenerative systems: market systems, organisational systems, human-ecological systems. The potential for this inherent within faith and spirituality-based initiatives is great. The Interreligious Climate and Ecology (ICE) Network in Asia presents a particularly exciting example of the kinds of creative, eco-culturally derived solutions and unique systems underway, when one looks outside of the existing dominant institutions slated and funded to tackle the challenge of climate change. Eschewing structure, centralised or linear program management, membership requirements, and with limited fiscal resources, the ICE Network thrives and rapidly expands its sphere of influence, catalysing and inspiring endogenous, eco-culturally-appropriate climate change and biodiversity programming through an expanding web of interconnected faith networks across Asia.

The characteristics that enable this very different formation and enigmatic network governance to sustain and expand include: a convergent spiritual ecology ethos across faiths and local eco-cultural traditions; self-organising, dynamic and mutually co-responsive self-regulating systems in the network formation and functions akin to those found in the Gaia theory (ritual and liminality of energy as governance); endogeneity and eco-cultural confidence of values and practices; a process of facilitated engagement patterned throughout ICE Network affiliates that initiates with ritual and 'spiritual awakening,' and follows a cycle into critical and experiential education including Traditional Ecological Knowledge (TEK), applied learning allowing spaces for trial-and-error, and leveraged capacities across the network through practical action. A pervasive critique of the structural violence of dominant 20th century economic, social and political / power paradigms fuels engagement for creating new systems, new markets, and healing an artificial divide between humans and the ecosystems around them.

The facilitating presence of the ICE Network's generational forebears contribute to the foundational values, capabilities and organisational decision-making processes that have helped the ICE Network to flourish-- but they also inject some contradictions and friction evident across generation and gender. Decision-making sometimes is overridden by elders (of the foundational organisations), yet some incidents that would be fatal flaws for most organisations instead serve to illustrate the adaptive, resilient corrective and self-organising qualities of the network. The anti-structure values of the network are taken to heart by affiliates, who do not wait for permission to act, to collaborate, or to take decision with inspiration strikes.

“Small is Beautiful” is a motto across ICE Network affiliates, and the local-to-local network offers a new consideration of concepts of scale, where local independent activities still can build regional and global change. Initiating very different markets, systems, and social ecological systems when embracing a ‘small is beautiful’ ethos presents numerous challenges when enveloped by dominant conventional farming and industrial market systems. Yet refreshingly, challenges, problems, difficulties and mistakes are brought consistently into discussion, to face and transform the problems together. Not all the initiatives work, and there is no claim to the contrary. ICE Network affiliates view themselves as answerable to themselves and to the Earth.

This is important because not only does this richly respond to the call for new nature-culture-based solutions to climate change, it goes to a research gap, as there are few studies conducted of interfaith-Indigenous collaboration in networks, particularly not in Asia. It responds to the theory set forth by Roy Rappaport (see the literature review, Chapter 2), who proposed a singular universal faith to fill the religion gap of 20th Century Durkheimian scientism, an ideology viewing science as the only objective means by which society should determine normative and epistemological values (thereby eliminating religion and nature-spirituality, including Indigenous eco-cultural beliefs, from intellectual and political discourse)(Hart, 2003’ Durkheim, 2012). Even more, this research has implications for expanding global climate change discourse. It could provide a roadmap for navigating the complexities and challenges of the Anthropocene in a manner that respects and restores the agency, wisdom and variety of eco-cultural values and practices around the world, with potential to transition into more sustainable, harmonious ways of living, informed by the wisdom of the past, yet transformed through the challenges and opportunities of the last century.

The liminality of energy (Wagner, 2017; Turner, 1969; Durkheim, 1912; Ramp, 2008) created by the ritual spaces and practices of ICE Network gatherings and affiliate activities, serves as the connective tissue for the broadly diverse and anti-structural ICE Network. Ritual is central to the processes, eco-cultural values, and perspectives of the ICE Network. Ritual, and the energy created through it, serve as a form of governance for the network (which is not a *leaderless movement*) and facilitates a self-regulating system akin to that described in Gaia theory and Earth Systems theories. This serves as a potential model for humanity re-learning or re-connecting with a sustainable way of life in harmony with the Earth, informed by the traditional ecological knowledge (TEK), eco-cultural practices, and wisdom of all of humanity's ancestors with special recognition to the vibrant surviving and evolving practices of many kin: Indigenous, endogenous, religious, and spiritual.

I argue that the ICE Network model presents a greater potential for sustaining new and transitional systems as they are born of values deeper than consumerism, capitalism, industrialism, or nationalism. For ICE Network affiliates and friends of ICE Network, behavioral changes and commitments to climate change adaptation, mitigation, resilience, and ecological renewal / protection are born of a deeper memory and knowing, a sense of interconnection to all life. This way of living becomes for them an act of love, responsibility, and care that is enjoyed within a mutual reciprocity.

It is not about behavioral change born of guilt, discomfort, austerity, or enforcement by authorities. It is about engagement that is largely free of (desired or predetermined) outcomes, one in which death is as inevitable as life, deeply intertwined with it, and the ways in which we experience and engage as central themes. In many of the spiritual perspectives of

the ICE Network affiliates, we cannot outrun death, but we can greet it with loving compassion and respect for the life it enables.

Beyond this, learning from the ICE Network offers an understanding of humans as part of nature, with contributions to make, and collaborative roles to play. This facilitates a perspectival (and therefore active) shift in our relationships to ourselves and our placement within Earth ecology, and to, as General Systems Theorist Joanna Macy states it, *The World As Self* (Macy, 2007).

This study has been initiated in a search for unique and creative approaches to address the root causes and impacts of climate change and biodiversity loss, initiatives emerging outside of the dominant international climate change regime. The findings of this research also serve as a response to UNFCCC's Figueres request (Oxford Martin School, 2018) that there be new models for nature-based (nature-culture-based) climate change solutions.

Convergent while remaining uniquely diverse, these affiliates, their ecocultures, and the climate and ecology solutions they develop are different *for* each other. Their spiritual ecology approaches to climate and ecological challenges elicit responsive, unique and transitional roadmaps for organising and collaborating around climate and ecology concerns. They offer responses beyond the limitations of the pragmatic logical-framework lens of UN, INGO systems—spirituality, faith, and energy ushering in ritual and nature-based spirituality in a central role in order to shift our relationships and the collective understanding of who we humans are on this Earth.

Such a shift could catalyse an awakening to the *Ecocene* as an alternative to the Chthulucene. The Ecocene differs from Haraway's vision of a Chthulucene where nature remains separate

from humans, rising up as humanity declines. In the Ecocene, if lessons from the ICE Network study prove out, humans may come back into relationship with each other, back into harmony with Gaia / Earth—*with* and *as* nature.

As this dissertation concludes, we revisit the research question posed at the beginning of the study:

> ***Why does the ICE Network appear to thrive and expand while explicitly eschewing structure and centralised program management as is usually considered essential for networks to succeed?***
> ***Sub-question:*** *What characteristics of the network enable this very different formation and (enigmatic / ambiguous) governance to sustain?*

The ICE Network does not exist within some idealized world. It is present in a world of turmoil, of upheaval, of power politics and vulnerability, of differences of perception and understanding, and a myriad of cultures and ways of doing and being. As in any societal space -as in any ecosystem really- within and on the edges of the network, there are moments of friction, of difference and parting ways. Imprisonment, exile, disappearances and harassment by dominant state power structures is not an unfamiliar experience for many network affiliates. And several affiliates (mostly of older generations), while they may share the values of anti-structure, mutual dependent co-arising, and self-organizing, still have some habituated responses from years of insecurity, where the old structures of money-seeking and dependency challenge this emerging new model of co-creation and collaboration. It may be tempting to overlook the small stumbles or contradictions within this network. Yet these are precisely the spaces -of friction, and apparent incongruence- that hold up the strongest opportunity for understanding how the ICE Network, without centralized leadership, a mission statement, a board of directors, a fund development officer, job descriptions or any of those aspects found in conventional 'mainstream' networks--how it not only survives, but also continues to catalyse and inspire a rippling of activities across a web of communities. At core, the ICE Network survives, thrives and expands through a broader, rippling network, due

to the energetic influence of ritual, the draw of shared eco-spiritual / eco-cultural values and concerns, and the catalysing nature of engagement and collaboration that spurs ICE Network affiliates to move forward with initiatives, teaching sharing and facilitating decision of those affiliates because of the sense of love, commitment and values of life, of Earth, and all its interconnected interwoven sense of Whole Being. As Venerable Zen Master Thich Nhat Hanh said, "Only love can save us from climate change."

As discussed in Chapter 4 (Gender and Generation), there have been moments where decision making of the whole was overridden by a few individuals who were accustomed to making absolute decisions for others. When a consensus agreement in a voluntary group is undermined, that usually spells disaster for the group. Instead, what emerged was an indication of the deep beliefs and commitments ICE affiliates hold to the foundational principles of self-organizing, 'not-waiting-for-permission,' collaborating with nature--inclusive of humans as part of nature- and the higher ideals, values and beliefs of caring for all beings, for all time, as we navigate an unprecedented global Earth-systems climate crisis. And the rituals that initiate and are interwoven throughout ICE Network gatherings, trainings and activities, serves as that liminal cohesion--this 'energetic governance'-- continues to fuel, guide, connect and support. Instead of collapsing, the network illustrates how it functions. In an ecosystem, when a plant takes too much water, its source cuts off and it dies, and other more adaptable plants grow and take its place. When a tree is unable to take root in one area of rocky terrain, it adapts and its roots grow around the obstacle, finding symbiosis with other plants, soil and species. In the same way, ICE Network affiliates have adapted and grown around those elements which do not align with its shared purpose and values. And as it takes root, it flourishes. Examples for action inspire others, and ritual and education spirals in cycles that are like the hand throwing seeds into fertile soil, watering it and stepping back

so it may grow to its own form and way of being. If the ICE Network had a centralized, top down structure, it likely would not have survived that moment in South Korea., Yet the ecocultural values, liminal energies of interconnection, commitment to the broader connections and collaboration, and the recognition of agency and *responsibility* to continue to engage and co-create climate and biodiversity solutions across Asia, translates to an ever-expanding, difficult to track network of affiliate activities, gatherings, and enthusiasm for this work that cannot be contained within structures, labels, or power bases. It expands like a web of life, an increasingly healthy and thriving bio-diverse ecocultural network.

To return again to what Rapport and Maffi consider 'ecocultural health,'all three elements arise consistently across the ICE Network, and it should be noted that resilience is inclusive of social disturbance, which can manifest in many ways.

- *Organization* The alignment of cultural institutions and practices with the maintenance of biotic composition, interactions and integration;
- *Vitality* The capacity of the system to sustain itself (transmit/reproduce) so that its potential for life in both nature and culture is undiminished; and
- *Resilience* The maintenance of coping mechanisms in nature and culture to enable rebound from ecological and social disturbance, such as drought, floods, epidemics, conflict, etc. (Rapport and Maffi 2010).

If Ecocultural Distress Syndrome marks the dynamic and interconnected loss of the whole when part of the system is harmed or lost (just as in General Systems Theory / web of life notion), this links back in again to relationship with Wallace's revitalization movements cycles, when stressors become so great, a period of cultural distortion develops, until a group determines and articulate a reformulation of that cultural pattern communicates it, and engages in an adaptation to reformulated, implement, and 'routinize' this new system.

Table 7: Below from Wallace, on Revitalization Movements (Wallace, 1956)

I. *Period of generally satisfactory adaptation.*	…to a group's social and natural environment

II. *Period of increased individual stress*	While the group as a whole is able to survive through its accustomed cultural behavior, changes in the social or natural environment frustrate efforts of many people to obtain normal satisfactions of their needs.
III. *Period of cultural distortion*.	Changes in the group's social or natural environment drastically reduce the capacity of accustomed cultural behavior to satisfy most persons' physical and emotional needs.
IV. *Period of revitalization*	(1) Reformulation of the cultural pattern; (2) Its communication; (3) Organization of a reformulated cultural pattern; (4) Adaptation of the reformulated pattern to better meet the needs and preferences of the group; (5) Cultural transformation; (6) 'Routinization' when the adapted reformulated cultural pattern becomes the standard cultural behavior for the group.
V. *New period of generally satisfactory adaptation*	…to the group's ***changed*** social and/or natural environment

Wallace's Revitalization Movements comes very close to capturing the processes of systems change and regenerative collaborative dynamics illustrated across the ICE Network. Yet Wallace's theories do not apply well to the network dimension, linking across ecocultures spanning Asia. The Ecocultural theory (and EDS) however, fills a gap and opens to a broader understanding, once Gaian and General Systems organismic theory blend with the perspectives, functions and spontaneous co-organizing of the ICE Network having a ecosystems linked through ecotones and perhaps, eventually, linking across and through an entire Earth system, or organism.

It is within the relational ecology between humans and all other life of this planet / relationship with this planet, with and as nature that transformational, transcendent healing is possible. This case study of the ICE Network, in its formational processes, self-organizing and self-regulating nature as an interfaith and Indigenous convergent climate and ecology network, provides a map to follow that enables and supports ecological / Earth healing in response to climate change and ecological global crises. It is a map that is not the terrain--it is not prescriptive, standardized, nor detailed to every corner of life and eco-society. Rather, it provides guide points through pivotal shifts in perspective, understanding and relationships to

Self and Nature. It illustrates processes initiating with ritual that provide a liminal energy for governance of the network and affiliate engagement through consciousness and connection. While ritual is present throughout the cycle of process engagement, a shift of emphasis moves into dynamic co-creation of education for social change, for convergent climate science, ecology and technical experiential education, applied learning with open-feedback loops across the web of process and the network web itself.

The ICE Network model comes into harmony with the laws of nature and self-regulating organisms, a mutual dynamic collaboration (vs. competition).The ecocultural diversity of social-ecologies across the network compliment and behave in anthro-symbiosis with the living planet-- including when aspects must die off or rise up again, must shift pathways or find alternative routes. When some dimensions or actors (formations, engagement) are more in harmony with the dynamic whole of the network, they find a path to taking root, while those not in harmony (the Korean appointment for financial gains for instance) dies off and goes silent. Past generations of micro-managing leadership fall away for the feminine-rising of collaborative and facilitative initiatives. Wallace's Mazeways in some forms had a linear perspective, but, as through the Ecocultural Distress Syndrome lens (Maffi & Rapport, 2011), the whole interconnected, integral system, the web of life, must be considered. Yet, Maffi and Rapport emphasized a focus on policy. What this case study proposes, instead, is to emphasis the ecocultural perspectives, the values, the ritual and processes that enable policy engagement, education, and direct climate and biodiversity solutions locally.

In this ICE Network worldview, beginning of a path to ecological and Earth systems healing must begin with the healing of self (inner transformation). And that *self* is interconnected through a web of life that encompasses the world. There is no Anthropocentric center; the healing comes when humanity shifts into harmonious collaboration with ecosystems and

social-sacred-ecologies. The processes of healing involve a recalling of our Indigenous roots as humanity- the Indigenous ecocultures which have survived the structural violence of Scientism, an Agrarian Revolution, an Industrial Revolution, Exponential growth models of extractive industries, an Industrial Growth Society-- these Indigenous Survivors remind us of what remains within us all-- embedded within major World Religions such as Buddhism, Hinduism, Islam, Christianity, and smaller sects of Sikhism, Brahma Kumaris, and many others-- also embedded in our own biological and social sciences, our academic disciplines which are merging into interdisciplinary conversation (seeing ourselves in each other) as ___ predicted 100 years ago--these are these pathways to remembering what is it so to be Nature, what it is for humans to be in harmony with as and the living Earth. So much thought to be forgotten and lost in this experiment of technological 'advancement' can be recalled. We cannot return to where we started, as we have changed in the process of creation, experimentation, discovery and the suffering that has opened for us. To the engaged Buddhists, suffering is a pathway to transformation and transmutation, if we enter into it in order to understand its roots, and envision a path forward that may take that suffering and create new life, new worlds from it.

General Systems Theory, Gaia Theory, Wallace's Revitalization movements, Deep Ecology and Sacred or Spiritual Ecology, and even Rappaport's vision of a Universal Religion-- all capture aspects of a whole worldview which diverse Indigenous ecocultures often refer to as 'Earth Consciousness' or 'Earth Wisdom.' The ICE Network is a vision of what can happen when humans step back from the 'driver's seat;, step down from a dominating / subjugating position on top of a pyramid in which humans are embattled with themselves and fighting against nature (as if nature were something separate from ourselves. By stepping back from a frame of mind of 'battle' and shifting into a recognition of 'World as Self,' the ICE

Network became collaborators with and as nature, responsively engaged in whole social-ecosystems re-balancing, allowing a flux equilibrium to find a point of thriving rather than struggle. The formation, functions and initiatives of the ICE Network then came to resonate in harmony with Earth organism functions (Margulis and Lovelock, 2006)

Yet, as this dissertation and the ICE Network clearly illustrate, nothing can be undertaken in a vacuum. The ICE Network and the broad range of affiliate activities are forging a new path with extremely limited fiscal resources, limited political influence in some countries (stirring up political resentment in others, such as Thailand, Laos and Myanmar), and surrounded (where borders are connectors, and porous) by the still-dominant institutional structures of the 20th Century.. Small *is* beautiful, and the 'scale' of impact can become global if the local-to-local network model is able to catalyse and inspire engagement as a ripple effect across the globe. The fact remains, however, that for the moment, these models and examples are small against the dominant forces of fossil fuel industries, Monsanto and other GMO and petro-chemical corporate-agricultural industries, the fantasies held in the short-lived Singapore mall model where the new temple becomes miles of shopping for clothing, make up, perfume, and high-end goods.

Yes, these dominant 20th Century structures are waning, are unsustainable and must either evolve or collapse. Christiana Figueres, former Executive Secretary of UNFCCC overseeing the Paris Agreement (2015) has herself stated that the global institutional structures as they are will not sustain--they will either collapse, be destroyed, or evolve (2019).
Capacities and resources are stretched to the maximum, and most actors across ICE Network affiliates experience limitations of time, human capacity (skills, numbers), and fiscal resources.

Future work / future research

What is missing for the ICE Network model to inspire, catalyse and facilitate a ripple effect of new organizational and societal formation, regenerative markets and social-ecological healing rooted in Indigenous wisdom, Traditional Ecological Knowledge, and guided by Nature, by 'Earth Consciousness'? While much is made within limitations, minor connections drawn may do a lot to leverage and boost existing initiatives, enabling a broader dissemination of an eco-spiritual, interfaith, Earth-based and Indigenous worldview mainfeste in a network web of action, across broader communities and a wider range of ecocultures. Recommendations for actions and considerations for further research could explore:

- Existing fiscal resources within international climate regime and governments technical resources, power and influence within the global government and global markets institutions;
- Climate finance models and mechanisms (an arena for participatory action research with emerging regenerative market models, including P-2-P funding platforms for small and medium businesses such as with Zafèn and Kiva);
- Facilitative links to close gaps and enable stronger leveraging funding mechanisms to directly fund what already is emerging endogenously, with appropriately distributed amounts that do not bury or crush the sprouting elements, and *absolutely do not* dictate engagement or action exogenously.
- Indigenizing education: further sharing and exploration of the collaborative self-organizing and self-regulating ecocultural models found across the ICE Network affiliates. Utilizing the spiral-web process of Ritual-Education for Social Change / Experiential Learning-Implementation and Collaboration- Modelling action and supporting advocacy / outreach.
- Strategies to close existing resource, knowledge and capacity gaps without undermining the endogenous and Indigenous nature of the initiatives and the network.
- Emerging Regenerative Economics and Sufficiency Economies worldwide-- can they compliment each other, collaborate with each other, and shore up this burgeoning new markets system?

The ICE Network as a case study points the global institution eye back to an Indigenous, nature-culture-guided model for living sustainable, in harmony with and as nature. No complicated and expensive, myopically formulated geoengineering or Artificial Intelligence

silver-bullet algorithm is necessary, a la Mike Mason at the Oxford Martin School (Mason, 2016). These models for shifting back into harmony with the living Earth enable a much more inclusive, comprehensive and Rights-based pathway for a myriad of solutions around climate change mitigation, adaptation, disaster risk management, and overall resilience than any of the silver-bullet solutions proposed. Satish Kumar (also a friend of INEB and the ICE Network) put forth the term *resurgence* many years ago, as an alternative to climate change 'resilience.' (2009) Within the notion of *resurgence* is a recognition that a resurgence of nature--the nature within us / as us, and nature as a Living Earth--offers an encompassing vision of how the Earth organism, hopefully with humans as a part of it, may come back into a healthy flux equilibrium, to transition from the epoch of the Anthropocene to the Ecocene.

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Allen, Myles, and Babiker, Chen, et al. (2018). *IPCC-SR15*. Seoul. Retrieved from www.ipcc.ch/report/sr15/
Aragon, L. (1991). Revised rituals in central Sulawesi: The maintenance of traditional cosmological concepts in the face of allegiance to world religion. Anthropological Forum, 6(3), 371–384. https://doi.org/10.1080/00664677.1991.9967419
Carl Sagan to produce science series for 1980. (1979). *Physics Today*, *32*(10), 108. https://doi.org/10.1063/1.2995229
Carson 1907-1964, author, R. (1963). *Silent spring*. London : Hamish Hamilton.
COP21 Religions. (n.d.). Retrieved October 29, 2015, from http://cop21religions.org/en/
Goldenberg, S. (2015, July). Exxon Knew About Global Warming More Than 30 Years Ago | Mother Jones. *Mother Jones*. Retrieved from http://www.motherjones.com/environment/2015/07/exxon-climate-change-email
Dannaway, F. (2009). Thunder Among the Pines: Defining a Pan-Asian Soma. Journal of Psychoactive Drugs, 41(1), 67–84. https://doi.org/10.1080/02791072.2009.10400676
Gómez, E. J., & Atun, R. (2013). Emergence of multilateral proto-institutions in global health and new approaches to governance: analysis using path dependency and institutional theory. Globalization and Health. https://doi.org/10.1186/1744-8603-9-18
Hackett, Conrad, and Brian J. Grim, Marcin Stonawski, V. S. and M. P. (2012). The Global Religious Landscape: A report on the Size and Distribution of the World's Major Religious Groups as of 2010. Pew Research Center: The Pew Forum on Religion & Public Life. Washington, D.C. Retrieved from http://www.pewforum.org/files/2014/01/global-religion-full.pdf
Haraway, D. J. (2016). *Staying with the trouble : making kin in the Chthulucene*. Durham: Duke University Press.
Hoofd, I. (2017). staying with the trouble: making kin in the Chthulucene : Donna J. Haraway, Duke University Press, Durham, 2016, 312 pp., ISBN: 978-0-8223-6224-1, $26.95 (Pbk). *Fem Rev*, *117*(1), 208–209. https://doi.org/10.1057/s41305-017-0074-7
Huq, S. (2006). Climate change and development links. (H. Reid, L. Murray, & I. I. for E. and D. C. C. Programme, Eds.). London: London : IIED, Sustainable Agriculture and Rural Livelihoods Programme.
Huq, S. (2013). Comment: it's time for the fourth era of climate change. Retrieved August 31, 2014, from http://www.rtcc.org/2013/07/10/comment-its-time-for-the-fourth-era-of-climate-change/
INEB. (2012). Inter-religious Dialogue on Climate Change and Biodiversity. *Annual Conference Report 2012*. Retrieved from http://safcei.org/wp-content/uploads/2012/03/Sri-Lanka-Interfaith-Dialogue-on-Climate-Change-report.pdf
Kirsch, A. (1977). Complexity in the Thai Religious System: An Interpretation. Journal of Asian Studies, 36(2), 241. https://doi.org/10.2307/2053722
Latour, B. (2015). *Face à Gaïa : huit conférences sur le nouveau régime climatique*.
Latour, B., & Porter, C. (2017). *Facing Gaia : eight lectures on the new climatic regime*. Cambridge: Polity Press.
Lovecraft, H. P. (1999). *The Call of Cthulhu and Other Weird Stories*. London, UK; New York, NY: Penguin Books. Retrieved from http://www.mythostomes.com/content/view/30/92/
Lovelock, J. (1979). *Gaia : a new look at life on Earth*. Oxford : Oxford .
Lovelock, J. (2000). *Gaia: A New Look at Life on Earth*. Oxford: Oxford University Press.
Lovelock, J. (2006). *The revenge of Gaia : earth's climate in crisis and the fate of*

humanity. (C. Tickell, Ed.) (U.S. ed.). New York: New York : Basic Books.
Lovelock, J. E., & Margulis, L. (1974). Atmospheric homeostasis by and for the biosphere: the gaia hypothesis. *Tellus*, *26*(1–2), 2–10. https://doi.org/10.1111/j.2153-3490.1974.tb01946.x
Macy, J. (2007). World as Lover, World as Self : Courage for Global Justice and Ecological Renewal (2nd Edition). Berkeley, CA, USA: Parallax Press.
Maffi, L. (2001). On biocultural diversity : linking language, knowledge, and the environment. Washington, [D.C.: Smithsonian Institution Press.
Margulis, L. (1971). Symbiosis and Evolution. *Scientific American*, *225*(2), 48. https://doi.org/10.1038/scientificamerican0871-48
Matthews, T., Lo, A. Y., & Byrne, J. A. (2015). Reconceptualizing green infrastructure for climate change adaptation: Barriers to adoption and drivers for uptake by spatial planners. Landscape and Urban Planning, 138, 155–163. https://doi.org/10.1016/j.landurbplan.2015.02.010
McKibben, B. (2015, November). Exxon, Keystone, and the Turn Against Fossil Fuels - The New Yorker. *The New Yorker Magazine*. Retrieved from http://www.newyorker.com/news/news-desk/exxon-keystone-and-the-turning-tide-on-fossil-fuels?intcid=mod-latest
Meadows, D. H. (1985). System analysis and the world food system. *European Journal of Operational Research*, *20*(2), 158–167. https://doi.org/10.1016/0377-2217(85)90056-6
Meadows, D. H. (1992). *Beyond the limits : global collapse or a sustainable future*. (D. L. Meadows & J. Randers, Eds.). London: London : Earthscan.
Meadows, D. H. (2005). *Limits to growth : the 30-year update.* (J. Randers, D. L. Meadows, & D. H. Meadows, Eds.) ([3rd rev.,). London: London : Earthscan.
Meadows, D. L. (1972). Toward a Science of Social Forecasting. *Proceedings of the National Academy of Sciences of the United States of America*, *69*(12), 3828–3831.
Moore, J. and R. P. (2018, January). Unearthing the Capitalocene: Towards a Reparations Ecology - Resilience. *Resilience.Org*. Retrieved from https://www.resilience.org/stories/2018-01-04/unearthing-the-capitalocene-towards-a-reparations-ecology/
Moore, J. W. (2017). The Capitalocene, Part I: on the nature and origins of our ecological crisis. *The Journal of Peasant Studies*, *44*(3), 594–630. https://doi.org/10.1080/03066150.2016.1235036
Oxford Martin School Public Lecture. (29 Oct 2018). “What now? Next steps on climate change” with Christiana Figueres. Retrieved November 1, 2018, from https://livestream.com/oxuni/figueres
Picard, M. (2011). Balinese religion in search of recognition: From Agama Hindu Bali to Agama Hindu (1945-1965). Bijdragen Tot de Taal-, Land- En Volkenkunde. Leiden. https://doi.org/10.1163/22134379-90003581
Raftery, A. E., Zimmer, A., Frierson, D. M. W., Startz, R., & Liu, P. (2017). Less than 2 °C warming by 2100 unlikely. *Nature Climate Change*, *7*, 637. Retrieved from https://doi.org/10.1038/nclimate3352
Raworth, K. (2018). Doughnut economics : seven ways to think like a 21st century economist. London: Random House Business.
Reid, H., Fenton, A., Kirkby, P., Parry, E., Roberts, E., Stott, C., … Wright, H. (2014). Community Based Adaptation :, (April), 0–65.
Rockstrom, J., Steffen, W., Noone, K., Persson, A., Chapin, F. S., Lambin, E. F., … Foley, J. A. (2009). A safe operating space for humanity. *Nature*, *461*(7263), 472–475. Retrieved from http://dx.doi.org/10.1038/461472a

Sagan, C. (1979). *Broca's brain : reflections on the romance of science* (1st ed.). New York: Random House.
Sagan, C. (1980). *Cosmos* (1st ed.). New York: Random House.
Solnit, R. (2010). *Hope In The Dark*. Canongate Books.
Solnit, R. (2016, July 15). 'Hope is an embrace of the unknown': Rebecca Solnit on living in dark times. *The Guardian*. Retrieved from https://www.theguardian.com/books/2016/jul/15/rebecca-solnit-hope-in-the-dark-new-essay-embrace-unknown
Sponsel, L. E. (2000). Endangered peoples of Southeast and East Asia : struggles to survive and thrive. Westport, Conn. : Greenwood Press.
Supran, G., & Oreskes, N. (2017). Assessing ExxonMobil's climate change communications (1977-2014). *Environ. Res. Lett.*, *12*(8). https://doi.org/10.1088/1748-9326/aa815f
Taylor, B. (2016). Editorial Introduction: Journal for the Study of Religion, Nature and Culture: A Decade of Critical Inquiry. Journal For The Study Of Religion, Nature And Culture, 10(4), pp417-418. https://doi.org/doi:10.1558/jsrnc.v10i4.32178
Turner, N. J., Davidson-Hunt, I. J., & O'Flaherty, M. (2003). Living on the edge: Ecological and cultural edges as sources of diversity for social-ecological resilience. Human Ecology, 31(3), 439–462.
Wagner, R. (2017). Energy of Liminality; American Anthropological Association 2017, 2nd December 2017, Wardman Park Marriott. Washington, DC.
Watts, J. (2018, October 8). We have 12 years to limit climate change catastrophe, warns UN | Environment | The Guardian. *The Guardian*. Retrieved from https://www.theguardian.com/environment/2018/oct/08/global-warming-must-not-exceed-15c-warns-landmark-un-report

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Chapter 1 References

Ariyaratne, A.T. (2015); personal communication with E. Parry, ICE Network & INEB affiliate, Sri Lanka (Sarvodaya).
Chirzin, Habib (2015); personal communication with E. Parry. Islamic Forum, Muhammadiya, Indonesia.
Haraway, D. J. (2016). Staying with the trouble : making kin in the Chthulucene. Durham: Duke University Press.
Hauser-Schäublin, Brigitta, ed. Adat and indigeneity in Indonesia : culture and entitlements between heteronomy and self-ascription. (2013). Göttingen: Universitätsverlag Göttingen.

Higgins, P. (2015). Eradicating ecocide : laws and governance to prevent the destruction of our planet (2nd ed.). London: Shepheard-Walwyn (Publishers) Ltd.
IPBES, 2018. The regional assessment report on Biodiversity and Ecosystems Services for Asia and the Pacific, UNESCO, Science and Policy for People and Nature.
Kraft, S. E. (2002). "TO MIX OR NOT TO MIX": SYNCRETISM/ANTI-SYNCRETISM IN THE HISTORY OF THEOSOPHY. Numen, 49(2), 142–177. https://doi.org/10.1163/156852702760186754
Krishna, Hari N. P. (2015). Personal communication with E. Parry, ICE Network conference

ICE II, Seoul, South Korea.
Kumar, S. (2009). Earth pilgrim. Totnes: Totnes : Green Books.

Kunaits, Buddhists and Hindoos, Simla. (1868). London: London.

Jacobs, D. T., aka Four Arrows (2006). Unlearning the language of conquest [electronic resource] : scholars expose anti-Indianism in America : deceptions that influence war and peace, civil liberties, public education, religion and spirituality, democratic ideals, the environment, law, literature, film, and happiness (1st ed.). Austin: University of Texas Press.
Lanh, Tran Thi (2015). Personal communication with E. Parry. Director of animist organization S.P.E.R.I., affiliate of ICE Network, ToA; Hanoi, Vietnam.
Macy, J. (1991). Mutual causality in Buddhism and general systems theory : the dharma of natural systems. Albany: Albany : State University of New York Press.
Macy, J. (2007). World as lover, world as self [electronic resource] : courage for global justice and ecological renewal. (I. ebrary, Ed.). Berkeley, Calif.: Berkeley, Calif. : Parallax Press.
Maffi, L. (2001). On biocultural diversity : linking language, knowledge, and the environment. Washington, [D.C.: Smithsonian Institution Press.
Maffi, L., & Woodley, E. (2010). Biocultural diversity conservation : a global sourcebook. London: Earthscan.
Mayer, A. C., & Von Furer-Haimendorf, C. (1967). Caste and Kin in Nepal, India and Ceylon: Anthropological Studies in Hindu-Buddhist Contact Zones. Man. https://doi.org/10.2307/2799396

Mason, Mike (2016). Oxford Martin School, Fifth Annual Oxford Energy Conference 13 June 2016, Mathematical Institute, University of Oxford.
Metzner, R. (1993, January 2). The Split Between Spirit and Nature in European Consciousness. Trumpeter. Retrieved from http://trumpeter.athabascau.ca/index.php/trumpet/article/view/407/658
Mihesuah, D. A., & Wilson, A. C. (2002). Indigenous Scholars versus the Status Quo. American Indian Quarterly, 26(1), 145–148.

Min, Junghee (2015). Personal communication with E. Parry. Seoul, South Korea.

Næss, A., & Drengson, A. R. (2005). The selected works of Arne Naess. Springer.

Nauerth, M. (2016). Verstehen in der Sozialen Arbeit : Handlungstheoretische Beiträge zur Logik sozialer Diagnostik. Wiesbaden: Springer VS.

Rutherford, D. (2002). After syncretism: The anthropology of Islam and Christianity in Southeast Asia. A review article. Comparative Studies in Society and History. Cambridge: Cambridge University Press.
Rutherford, D. (2002). After Syncretism: The Anthropology of Islam and Christianity in Southeast Asia. A Review Article. Comparative Studies in Society and History, 44(1), 196-205. Retrieved from http://www.jstor.org/stable/3879406
Said, E. (1977). Orientalism. Penguin. Retrieved from http://www.odsg.org/Said_Edward(1977)_Orientalism.pdf
Sarvodaya – Sri Lanka's Sarvodaya Shramadana Movement. (n.d.). Retrieved January 1, 2015, from http://www.sarvodaya.org/

Schwartz, S. J., & Unger, J. B. (2010). Biculturalism and Context: What Is Biculturalism, and When Is It Adaptive?: Commentary on Mistry and Wu. Human Development, 53(1), 26–32. https://doi.org/10.1159/000268137

Seed, J., Macy, J., Fleming, P., & Næss, A. (1988). Thinking like a mountain : towards a council of all beings. London: Heretic.

Senanayake, F. R., Soulé, M., & Senner, J. W. (1977). Habitat values and endemicity in the vanishing rain forests of Sri Lanka. *Nature*, *265*(5592), 351. https://doi.org/10.1038/265351a0

Senanayake, R. The Beginning | Belipola. Retrieved August 19, 2015, from http://www.belipola.com/about/the-beginning/

Senanayake, R. (2015). On Creating Our Future | Groundviews. *Ground Views*. Retrieved from http://groundviews.org/2015/08/24/on-creating-our-future/#disqus_thread

Senanayake, R. (2015c). personal communication with E. Parry. ICE NEtwork & Sewalanka Affiliate, Belipola Analog Forestry training, Sri Lanka.

Senarath Gamage, L. (2018). The Dwelling of the War God: the Art and Architecture of Embekke Devāle in Medieval and Early Modern Sri Lanka. (R. L. Brown, S. Mathur, A. Patel, & D. Upton, Eds.). ProQuest Dissertations Publishing.

Sequeiros, L. (2017). Teilhard de Chardin and the Cosmic Life: hundred years after. Pensamiento. Revista de Investigación e Información Filosófica, 73(276), 379–403. https://doi.org/10.14422/pen.v73.i276.y2017.010

Sevalanka Foundation. Retrieved April 3, 2014, from http://www.sevalanka.org/

Sieg, P. (2004). Buddhism and the earth: Environmental thought in early Buddhist philosophy. ProQuest Dissertations Publishing.

Senanayake, R. (1998). Analogue forestry : an introduction. (J. Jack, Ed.). Melbourne: Melbourne : Department of Geography and Environmental Science, Monash University.

Stanley, J., Loy, D., & Dorje, G. (2009). A Buddhist response to the climate emergency. Boston: Wisdom Publications.

Steiner, R. (1918). The threshold of the spiritual world ((Authorized Engl. tr. ed. by H. Colleson [sic]).). Lond. &c: Lond. &c.

Tennakoon, Ajith (2015); personal communication with E. Parry; the Sewa Lanka Foundation, Colombo & the Islander Center, Sri Lanka.

Thida, NanMya (2015); personal communication with E. Parry. ICE Network & INEB affiliate, Spirit in Education Movement; Yangon, Myanmar.

Thilini, Sewwanda Nanayakara (2015). Personal communication with E. Parry. ICE Network affiliate; staff of Sewalanka Foundation at the Islander Center; works with the Good Market. Anuradhapura, Sri Lanka.

Topa, Wahinkpe, aka Don Trent Jacobs (2017). Peacefulness: Being Peace and Making Peace; edited by David Cadman and Scherto Gill. Spirit of Humanity Press, London.

Turner, B. S. (2016). Max Weber and the Sociology of Religion. Revue Internationale de Philosophie, 276(2), 141–150.

UNESCO, IPBES: Local and Indigenous Knowledge Systems. http://www.unesco.org/new/en/natural-sciences/priority-areas/links/science-policy/projects/indigenous-knowledge-within-the-framework-of-ipbes/

Uruwarige Wannila Aththo (2015). Personal communication with E. Parry, Islander Center, Vavuniya, Sri Lanka.

Varma, Prashant (2015). Personal communication with E. Parry. ICE Network and INEB affiliate; director at Deer Park Institute, Himachal Bir, India.

Vaughan-Lee, Llewellyn, ed; Thich Nhat Hanh, Macy, J., Berry, W., Ingerman, S., Rohr, R., Plotkin, B. et al (2013). Spiritual Ecology the Cry of the Earth. Chicago: The Golden Sufi Center. Retrieved from http://public.eblib.com/choice/publicfullrecord.aspx?p=1181529

Wagemans, J., Elder, J. H., Kubovy, M., Palmer, S. E., Peterson, M. A., Singh, M., & von der Heydt, R. (2012). A Century of Gestalt Psychology in Visual Perception: I. Perceptual Grouping and Figure-Ground Organization. Psychological Bulletin, 138(6), 1172-1217. https://doi.org/10.1037/a0029333

Warrior, Robert Allen, 1989. Canaanites, Cowboys, and Indians. Copyright 1989, Christianity and Crisis, Inc.

Young, M. J. L., Latham, J. D., & Serjeant, R. B. (1990). Religion, Learning and Science in the ʿAbbasid Period. Religion, Learning & Science in the ʾAbbasid Period. Cambridge: Cambridge University Press.

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Chapter 2 References

References

Abogado, Jannel, 2006. The Cult of Saints among Filipino Catholics: A Study of Inculturation Philippiniana Sacra, XLI(Sept.-Dec., 2006), 499-541, Manila

Act Alliance, Nearly 1.8 million people demand climate action. (n.d.). Retrieved November 29, 2015, from http://actalliance.org/act-news/nearly-1-8-million-people-demand-climate-action/

Adger, N. (1999). Social Vulnerability to Climate Change and Extremes in Coastal Vietnam. *World Development*, *27*(2), 249–269. http://doi.org/10.1016/S0305-750X(98)00136-3

Adger, N. (2000). Social and ecological resilience: are they related? *Progress in Human Geography*. doi:10.1191/030913200701540465

Ammann, Caspar; Kyoko Ikeda, K. M. (2014). Projecting the Likely Rise of Future Heat Impacts Under Climate Change for Selected Urban Locations in South and Southeast Asia. *i-s-e-t Sheltering Series #9, Temperature Technical Brief.* Retrieved February 10, 2015, from /ISET2014_Sheltering Series_9_ClimateResilientHousing_1404022.pdf

Andelson, J. G. (2005). Reassessing Revitalization Movements: Perspectives from North America and the Pacific Islands (review). *Anthropological Quarterly*. GEN.

Angus, I. (2016, January). EARTH SYSTEM Anthropocene Working Group: Yes, a new epoch has begun. *Climateandcapitalism.com*. Retrieved from http://climateandcapitalism.com/2016/01/09/anthropocene-working-group-yes-a-new-epoch-has-begun /

Aristide, J.-B. (1989). *La verité! En verité! : dossier de défense présenté à la Sacrée congrégation pour les religieux et les instituts séculiers* (2e éd. rev). Port-au-

Prince, Haïti: Groupe d'action et de recherches pour l'education.
Aristide, J.-B. (1992). *Théologie et politique*. Montréal: CIDIHCA.
Aristide, J.-B., & Wargny, C. (1992). *Tout homme est un homme = Tout moun se moun*. Paris: Éditions du Seuil.
Aristide, J.-B., & Wilentz, A. (1991). *In the parish of the poor : writings from Haiti*. Maryknoll, N.Y: Orbis Books.
Assavavirulhakarn, P. (1990). The ascendency of Theravada Buddhism in Southeast Asia. ProQuest Dissertations Publishing.
AtKisson, A. (1989). Introduction To Deep Ecology: Deep ecology is a new way to think about our relationship to the Earth - and thinking is a prelude to action. *Context Institute*. Retrieved from http://www.context.org/iclib/ic22/zimmrman/
Badaracco, C. (2008). Blessed Unrest: How the Largest Movement in the World Came into Being and Why No One Saw it Coming. *Public Relations Review*. doi:10.1016/j.pubrev.2008.03.013
Barnard, A., & Spencer, J. (2010). Routledge encyclopedia of social and cultural anthropology. Encyclopedia of social and cultural anthropology (2nd ed.). London, England: Routledge.
Barnett, J., & Adger, W. N. (2007). Climate change, human security and violent conflict. *Political Geography*, *26*(6), 639–655. doi:10.1016/j.polgeo.2007.03.003
Basehart, H. W., & Hill, W. W. (1965). Leslie Spier, 1893-1961. *American Anthropologist*, *67*(5), 1258–1277.
Benford, R. D., & Snow, D. a. (2000). Framing Processes and Social Movements : An Overview and Assessment. Annual Review Sociologic, 26(1974), 611–639. https://doi.org/10.1146/annurev.soc.26.1.6
Berkes, F. (2012). *Sacred ecology* (Vol. 3rd ed..). New York, N.Y. ; London: New York, N.Y. ; London : Routledge.
Berkes, F. and Folke, C.. 1998. Linking social and ecological systems for resilience and sustainability. In Linking social and ecological systems: Management practices and social mechanisms for building resilience , ed. F. Berkes, C. Folke, and J. Colding. Cambridge , UK : Cambridge University Press, 1– 26. Web of Science®Google ScholarGo here for SFX
Berry, A. (2013). Alfred Russel Wallace — natural selection, socialism, and spiritualism. *Current Biology*, *23*(24), R1066–R1069. http://doi.org/10.1016/j.cub.2013.10.042
Berry, T. (1987). The Dream of the Earth. Cross Currents, 37(2), 200.
Berry, T. (2009). The sacred universe : earth, spirituality, and religion in the twenty-first century. New York: Columbia University Press.
Bertalanffy, L. von. (1968). *Organismic Psychology and Systems Theory*. Worchester: Clark University Press
Bhohi, Amrita, 2018. Spiritual Ecology Presentation, St. Ethelburga's London.
Bicknell, J., Dodman, D., & Satterthwaite, D. (Eds.). (2010). *Adapting cities to climate change - understanding and addressing the development challenges*. London: London : Earthscan.
Biehl, J. with M. B. (1995). *On Social Ecology and Deep Ecology*. *thesis*. http://theanarchistlibrary.org/library/janet-biehl-theses-on-social-ecology-and-deep-ecology .
Boas, F. (1920). The Methods of Ethnology. *American Anthropologist*, *22*(4), 311–321.
Böhm, S., Pervez Bharucha, Z., & Pretty, J. N. (2015). Ecocultures : blueprints for sustainable communities. Abingdon, Oxon: Routledge.
Bookchin, M. (1990). *The philosophy of social ecology : essays on dialectical naturalism*. Montréal: Montréal : Black Rose Books.
Bookchin 1921-2006, M. (1993). What is Social Ecology. *Prentice Hall*. Retrieved

August 30, 2014, from http://dwardmac.pitzer.edu/anarchist_archives/bookchin/socecol.html
Bookchin, M. (2007). Social Ecology and Communalism. *AK Press*. Retrieved August 30, 2014, from http://www.social-ecology.org/wp/wp-content/uploads/2009/12/What-is-Social-Ecology1.pdf
Botstein, D., & Fedoroff, N. V. (1992). *The dynamic genome : Barbara McClintock's ideas in the century of genetics*. Cold Spring Harbor, N.Y: Cold Spring Harbor Laboratory.
Brinkerhoff, J. M. (2009). *Digital diasporas : identity and transnational engagement*. Cambridge : Cambridge University Press.
Brown, L. R. (Lester R. (2012). *World on the Edge [electronic resource] : How to Prevent Environmental and Economic Collapse.* (E. Library, Ed.). Hoboken: Hoboken : Taylor and Francis.
Brown, W. N. A. and K. (2011). Vulnerability and Resilience to Environmental Change: Ecological and Social Perspectives. *A Companion to Environmental Geography*. Retrieved August 24, 2014, from file:// Vulnerability to Environmental change Katrina Brown.pdf
Carrington, D. (2016, August 29). The Anthropocene epoch: scientists declare dawn of human-influenced age. *The Guardian*. Cape Town. Retrieved from https://www.theguardian.com/environment/2016/aug/29/declare-anthropocene-epoch-experts-urge-geological-congress-human-impact-earth
Carson, R. (1963). *Silent spring*. London : Hamish Hamilton.
Castree, N. (2016, August). An official welcome to the Anthropocene epoch – but who gets to decide it's here? *The Conversation*. Retrieved from http://theconversation.com/an-official-welcome-to-the-anthropocene-epoch-but-who-gets-to-decide-its-here-57113
Chapin III, F. S., Hoel, M., Carpenter, S. R., Lubchenco, J., Walker, B., Callaghan, T. V, … Zimov, S. A. (2006). Building Resilience and Adaptation to Manage Arctic Change. *Ambio*, *35*(4, The Royal Colloquium: Arctic under Stress: A Thawing Tundra), 198–202. http://www.jstor.org/stable/4315719
Chan, K. M. A., Balvanera, P., Benessaiah, K., Chapman, M., Díaz, S., Gómez-Baggethun, E., … Turner, N. (2016). Opinion: Why protect nature? Rethinking values and the environment. *Proceedings of the National Academy of Sciences of the United States of America*, *113*(6), 1462. doi:10.1073/pnas.1525002113
Chishakwe author, N. (2012). *Building climate change adaptation on community experiences : lessons from community-based natural resource management in southern Africa*. (L. (Laurel A.).
Colbran, N. (2011). Indigenous peoples in Indonesia: at risk of disappearing as distinct peoples in the rush for biofuel? International Journal on Minority and Group Rights, 18(1), 63–92. https://doi.org/10.1163/157181111X550987
Cohen-Kiener, A., & Bingham, S. (2009). *Claiming Earth as Common Ground: The Ecological Crisis Through the Lens of Faith*. SkyLight Paths Publishing. Retrieved from https://books.google.com/books?id=YsLB7Ri6qC8C&pgis=1
Comfort, N. C. (2003). *The tangled field [electronic resource] : Barbara McClintock's search for the patterns of genetic control*. Cambridge: Harvard University Press.
Cote, M., & Nightingale, A. J. (2012). Resilience thinking meets social theory: Situating social change in socio-ecological systems (SES) research. *Progress in Human Geography*. doi:10.1177/0309132511425708
Chapin, M., Lamb, Z., & Threlkeld, B. (2005). MAPPING INDIGENOUS LANDS, 34(1), 619–638. https://doi.org/10.1146/annurev.anthro.34.081804.120429.
Chute, J. E. (1999). Frank G. Speck's *Contributions to the Understanding of Mi'kmaq Land Use, Leadership, and Land Management*. Ethnohistory, 46(3), 481–540.
Crutzen, P. J. (2002). Geology of mankind. *Nature*, *415*(6867), 23. http://doi.org/10.1038/415023a
Crutzen, P. J., & Stoermer, E. F. (2000). The "Anthropocene." *Global Change*

Newsletter, *41*, 17–18.
Culotta, Elizabeth (6 November 2009). "On the Origin of Religion". Science. 326 (5954): 784–787. doi:10.1126/science.326_784. PMID 19892955.
Dali, Z. (2018). Pancasila: Local Indigenous Islamic Character Education In Indonesia. Jpournal Madania, 22(2), 185–194. https://doi.org/10.29300/madania.v22i2.1400
Dawkins, R. (1989). *The extended phenotype : the long reach of the gene*. Oxford: Oxford : Oxford University Press.
Dawkins, R. (2007). *The God delusion*. London: London : Black Swan.
Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum.
Decker, Stephen, et al (2011). Nature and culture: Rebuilding lost connections.
Decker, S. (2012). Nature and culture: Rebuilding lost connections; edited by Sarah Pilgrim and Jules Pretty. Canadian Geographer / Le Géographe Canadien. Malden, USA. https://doi.org/10.1111/j.1541-0064.2012.00458.x
Defending the Earth: a dialogue between Murray Bookchin and Dave Foreman. (1991).
Devall, B., & George, :Template:Sessions. (1985). *Deep Ecology*. Gibbs M. Smith.
Devlin, W. J., & Bokulich, A. (Eds.). (2015). *Kuhn's Structure of scientific revolutions—50 years on [electronic resource]*. Cham : Springer.
Dryzek, J. S., & Schlosberg, D. (Eds.). (2005). *Debating the earth : the environmental politics reader* (2nd ed.). Oxford: Oxford : Oxford University Press.
Durkheim, É. (1912). Les formes élémentaires de la vie religieuse : le système totémique en Australie. Paris: Félix Alcan.
Eckstein, S. K. & D. (2014). *Global Climate Risk Index 2014: Who Suffers Most from Extreme Weather Events? Weather-Related Loss Events in 2012 and 1993 to 2012*. Retrieved from file:///Users/emilieparry/Desktop/Global Climate Risk Index 2014.pdf
Eisley, L. (1935). Petroglyphs (Rock Carvings) in the Susquehanna River Near Safe Harbor, Pennsylvania (Safe Harbor Report No. I—Pennsylvania Historical Commission, Publications, Vol. III) (Book Review). *Pennsylvania History*. GEN.
Elsdon-Baker, F. (2009a). The Dawkins dogma. *New Scientist*. GEN. http://doi.org/10.1016/S0262-4079(09)61894-7
Elsdon-Baker, F. (2009b). *The selfish genius : how Richard Dawkins rewrote Darwin's legacy*. London: London : Icon.
Enting, I. (2012). Gaia theory: is it science yet? *The Conversation*. Retrieved from http://theconversation.com/gaia-theory-is-it-science-yet-4901
Farmer, P., & Sen, A. (2005). *Pathologies of power : health, human rights, and the new war on the poor*. Berkeley : University of California Press.
Figueres, Christiana (2019). As told to Emilie Parry in one-on-one conversation at the Spirit of Humanity Forum, 31 May, 2018, Reykjavik
Foley, J. (2009). Planetary Boundaries: Exploring the Safe Operating Space for Humanity. *Ecology and Society*, *14*(2), 32.
Frazer, J. G. (1890). *The golden bough : a study in comparative religion*. London: Macmillan.
Frenk, S., Oxley, D., & Houseley, J. (2014). The Nuclear Exosome Is Active and Important during Budding Yeast Meiosis (Characterization of the Meiotic Exosome), *9*(9), e107648. http://doi.org/10.1371/journal.pone.0107648
Friman, M., Linnér, B.-O., & Hjerpe, M. (2006). Historical Responsibility: The Concept's History in Climate Change Negotiations and its Problem-solving Potential. GEN, Tema vatten i natur och samhälle.
Galtung, J. (2011). Arne Naess, Peace and Gandhi. *Inquiry-Interdiscip. J. Philos.*, *54*(1),

31–41. doi:10.1080/0020174X.2011.542948
Garrard, G. (2013). The unbearable lightness of green: air travel, climate change and literature. *Studies in Ecocriticism*, *17*(2), 175–188. http://doi.org/10.1080/14688417.2013.800335
Goldstein, K. (1995). *The organism : a holistic approach to biology derived from pathological data in man*. New York: Zone Books.
Gottlieb, R. (1995). Spiritual deep ecology revisited. *Capitalism Nature Socialism*, *6*(3), 41–45. doi:10.1080/10455759509358640
Gould SJ, L. R. (1979). The spandrels of San Marco and the Panglossin paradigm: a critique of the adaptationist programme.
Hanh, Thich Nhat (2008). The World We Have. Parallax Press, Berkeley
Hansen, J., Sato, M., Hearty, P., Ruedy, R., Kelley, M., Masson-Delmotte, V., … Lo, K.-W. (2016). Ice melt, sea level rise and superstorms: evidence from paleoclimate data, climate modeling, and modern observations that 2 °C global warming could be dangerous. *Atmospheric Chemistry and Physics*, *16*(6), 3761–3812. doi:10.5194/acp-16-3761-2016
Hallowell, A. I. (1976). *Contributions to anthropology : selected papers of A. Irving Hallowell*. Chicago : University of Chicago Press.
Harding, S. (2009). *Animate earth : science, intuition and gaia* (2nd ed.). Totnes: Totnes : Green Books.
Harding, S. (2010). Animate earth : science, intuition and Gaia. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&scope=site&db=nlebk&db=nlabk&AN=1066266
Harkin, M. (Ed.). (2004). *Reassessing Revitalization Movements: Perspectives from North America and the Pacific Islands*. U of Nebraska Press. Retrieved from https://books.google.com/books?id=ygqnKla4-wIC&pgis=1
Harvatt, J., Petts, J., & Chilvers, J. (2011). Understanding householder responses to natural hazards: flooding and sea-level rise comparisons. *Journal of Risk Research*, *14*(1), 63–83. doi:10.1080/13669877.2010.503935
Hawken, P. (1999). *The next industrial revolution*. (A. B. Lovins & L. H. Lovins, Eds.). London: London: Earthscan.
Hawken, P. (2007). *Blessed unrest : how the largest movement in the world came into being, and why no one saw it coming*. New York: New York : Viking.
Hien, N., Lien, T., & Luong, H. (2004). Rice in the life of the Vietnamese Thay and their folk literature. *Anthropos*, *99*(1), 111–141.
Hulme, M. (2010). Problems with making and governing global kinds of knowledge☆. *Global Environmental Change*, *20*(4), 558–564. http://doi.org/10.1016/j.gloenvcha.2010.07.005
IPCC. (2014). IPCC Climate Change 2014 Synthesis Report Longer Report. *UNFCCC IPCC*. Retrieved November 5, 2014, from file:/ IPCC Nov 1 2014 synthesis report.pdf
Jennings, F. (1990). Anthony F. C. Wallace: An Ethnohistorical Pioneer (Book Review). *Ethnohistory*. GEN.
Jennings, F., & Wallace, A. F. C. (n.d.). Anthony F. C. Wallace: An Ethnohistorical Pioneer. *Ethnohistory*, *37*(4), 438–444. http://doi.org/10.2307/482863
Kim, U. (2000). Indigenous, cultural, and cross-cultural psychology: A theoretical, conceptual, and epistemological analysis. *Asian Journal of Social Psychology*, *3*(3), 265–287. http://doi.org/10.1111/1467-839X.00068
Kociolek, P. (2012). Eugene F. Stoermer (1934–2012). *Diatom Research*, *27*(4), 255–267.. http://doi.org/10.1080/0269249X.2012.729702
Koocher, G. P., Mcmann, M. R., Stout, A. O., & Norcross, J. C. (2015). Discredited Assessment and Treatment Methods Used with Children and Adolescents: A

Delphi Poll. *Journal of Clinical Child & Adolescent Psychology*, *44*(5), 722–729. http://doi.org/10.1080/15374416.2014.895941
Kuhn, T. S. (2012). *The structure of scientific revolutions*. (I. Hacking, Ed.) (4th ed.). Chicago : Chicago .
Latour, B. (1993). *We have never been modern*. Cambridge, Mass.: Cambridge, Mass. : Harvard University Press.
Latour, B. (2015). *Face à Gaïa : huit conférences sur le nouveau régime climatique*.
Lauer, D. W. (2002). Arne Naess on Deep Ecology and Ethics. *The Journal of Value Inquiry*, *36*(1), 111–117. doi:10.1023/A:1014961215969
Lewis, S. L., & Maslin, M. A. (2015). Defining the Anthropocene. *Nature*, *519*(7542), 171–180. http://doi.org/10.1038/nature14258
Lévi-Strauss, Claude. (2010). *Médium*, *22*(1), 2. http://doi.org/10.3917/mediu.022.0002
Levine, R. A. (Ed.). (2010). *Psychological Anthropology: A Reader on Self in Culture*. John Wiley & Sons.
Lewis, S. L. (2015). A transparent framework for defining the Anthropocene Epoch. *Anthropocene Review*, *2*(2), 128.
Lorimer, J. (2015). Wildlife in the Anthropocene : conservation after nature.
Lovelock, J. (2009). *The Vanishing Face of Gaia: A Final Warning*. New York, NY: Basic Books.
Lovelock, J. E., & Margulis, L. (1974). Atmospheric homeostasis by and for the biosphere: the gaia hypothesis. *Tellus*, *26*(1–2), 2–10.
Macy, J. (1979). *Interdependence : mutual causality in early Buddhist teachings and general systems theory*.
Macy, J. (1991). *Mutual causality in Buddhism and general systems theory : the dharma of natural systems*. Albany: Albany : State University of New York Press.
Macy, J., Brown, M. Y., & Fox, M. (2014). Coming back to life : the updated guide to the work that reconnects. Retrieved from http://site.ebrary.com/id/10953683
Macy, J. (2007). Joanna Macy on The Great Turning. Retrieved November 12, 2015, from https://www.youtube.com/watch?v=LwlXTAT8rLk
McAdam, J. (2012). *Climate Change, Forced Migration, and International Law*. OUP Oxford. https://books.google.com/books?id=lHcEPGcPlBoC&pgis=1
Mcdowell, N. A. (2005). Reassessing Revitalization Movements: Perspectives from North America and the Pacific Islands. *American Anthropologist*. Oxford, UK. doi:10.1525/aa.2005.107.2.289
Meyer, R. (2016). August 2016 Is the Hottest Month Ever Recorded, Says NASA. *The Atlantic*. Retrieved from http://www.theatlantic.com/notes/2016/09/the-hottest-august-ever/499847/
Montréal., A. des amis et amies du P. A. à. (1988). *Quelque chose a changé en Haïti avec Jean-Bertrand Aristide s.d.b*. Montréal: CIDIHCA.
Mu, F. (1962). *The wilting of the hundred flowers : free thought in China today*. London: Heinemann.
Naess, A. (1993). *Environmental ethics : discourses and cultural traditions : a festschrift to Arne Naess.* Varanasi.
Næss, A. (2008). *Ecology of wisdom [electronic resource] : writings by Arne Naess*. (A. R. Drengson, B. Devall, & I. ebrary, Eds.). Berkeley, CA: Berkeley, CA : Counterpoint.
Newman University. (2016). Science & Religion Exploring the Spectrum. Retrieved May 27, 2016, from http://sciencereligionspectrum.org/about-2/
Nhat Hanh, Macy, J., Berry, W., Ingerman, S., Rohr, R., Plotkin, B., … Vaughan-Lee, L. (2013). Spiritual Ecology the Cry of the Earth. Chicago: The Golden Sufi Center.

Norgaard, K. M. (2011). *Living in denial [electronic resource] : climate change, emotions, and everyday life*. (I. ebrary, Ed.). Cambridge, Mass.: Cambridge, Mass. : MIT Press.
Observer review: The Revenge of Gaia by James Lovelock | Books | The Guardian. (n.d.). Retrieved November 13, 2015, from http://www.theguardian.com/books/2006/feb/12/scienceandnature.features
OxfordReference.com, ecosystem distress syndrome. (n.d.). https://doi.org/10.1093/oi/authority.20110803095741562
Paavola, J., & Adger, W. N. (2005). Institutional ecological economics. *Ecological Economics*, *53*(3), 353–368. doi:10.1016/j.ecolecon.2004.09.017
Pilgrim, S., & Pretty, J. N. (2010). Nature and culture [electronic resource] : rebuilding lost connections. London : Earthscan
Pinthongvijayakul, V. (2015). Ghosts of the New City. Spirits, Urbanity, and the Ruins of Progress in Chiang Mai, written by Andrew Alan Johnson. Bijdragen Tot de Taal-, Land- En Volkenkunde / Journal of the Humanities and Social Sciences of Southeast Asia. https://doi.org/10.1163/22134379-17104013
Prajapati, S. (2018). Traditional, Folk, Fusion, and conFusion: Music and Change in the Newar Communities of Nepal. (S. Dudley, D. Henderson, R. Magarati, & C. Sunardi, Eds.). ProQuest Dissertations Publishing.
Ramp, W. (2008). Transcendence, Liminality and Excess: Durkheim and Bataille on the Margins of `Sociologie Religieuse'. Journal of Classical Sociology, 8(2), 208–232. https://doi.org/10.1177/1468795X08088872
Rappaport, R. A. (1999). *Ritual and religion in the making of humanity*. Cambridge : Cambridge University Press.
Rappaport, R. A., 1948-, E. M., Lambek, M., Rappaport, S., & Lambek, M. J. (2001). *Ecology and the sacred : engaging the anthropology of Roy A. Rappaport*. book, Ann Arbor: Ann Arbor : University of Michigan Press.
Rapport David J., Maffi, Luisa, D. J. A.-R. (2011). Eco-cultural health, global health, and sustainability. Ecological Research, v. 26(6), 1039-1049–2011 v.26 no.6. https://doi.org/10.1007/s11284-010-0703-5
Review Articles and Reviews. (1996). Journal of Beliefs & Values, 17(2), 29–38. Ghosts of the https://doi.org/10.1080/1361767960170207
Ravilious, K. (2008, April 28). Perfect harmony: The Gaia theory | Science | The Guardian. *The Guardian*. London. Retrieved from http://www.theguardian.com/science/2008/apr/28/scienceofclimatechange.biodiversity
Robertson, R. (1992). *Globalization : social theory and global culture*. London: Sage.
Rockstrom, J., Steffen, W., Noone, K., Persson, A., Chapin, F. S., Lambin, E. F., … Foley, J. A. (2009). A safe operating space for humanity. *Nature*, *461*(7263), 472–475. Retrieved from http://dx.doi.org/10.1038/461472a
Said, E. (1977). Orientalism. Retrieved September 3, 2014, from http://www.odsg.org/Said_Edward(1977)_Orientalism.pdf
Satterthwaite, D. (2011). How urban societies can adapt to resource shortage and climate change. *Philosophical Transactions of the Royal Society A*, *369*(1942), 1762–1783. doi:10.1098/rsta.2010.0350
Schwartzman, D. (2002). *Life, Temperature, and the Earth: The Self-Organizing Biosphere*. Columbia University Press.
Segall, M. H., Lonner, W. J., & Berry, J. W. (1998). Cross-Cultural Psychology as a Scholarly Discipline: On the Flowering of Culture in Behavioral Research. *American Psychologist*, *53*(10), 1101–1110.
Senanayake, F. R., Soulé, M., & Senner, J. W. (1977). Habitat values and endemicity in the vanishing rain forests of Sri Lanka. *Nature*, *265*(5592), 351.

http://doi.org/10.1038/265351a0
Shepherd-Barr, K. (2015). *Theatre and evolution from Ibsen to Beckett*. New York: Columbia University Press.
Shiva, V. (2013). *Talking environment : Vandana Shiva in conversation with Ramin Jahanbegloo [electronic resource]*. (R. Jahanbegloo & O. U. Press, Eds.). New Delhi : Oxford University Press.
Skocpol, T. (1979). *States and social revolutions [electronic resource] : a comparative analysis of France, Russia, and China*. Cambridge: Cambridge University Press.
Skocpol, T. (2015). *States and social revolutions : a comparative analysis of France, Russia, and China*. Cambridge: Cambridge University Press.
Slim, H. (1997). Doing the right thing: relief agencies, moral dilemmas and responsibility in political emergencies and war. *Disasters*, *21*(3), 244–257.
Slim, H. (2015). Aid in danger: the perils and promise of humanitarianism. By Larissa Fast. *International Affairs*, *91*(3), 629–631. http://doi.org/10.1111/1468-2346.12295
SPHERE. (2011). *The Sphere project : humanitarian charter and minimum standards in humanitarian response*. *Humanitarian charter and minimum standards in humanitarian response* (Third). Place of publication not identified: Practical Action Publishing [distributor].
Smelser, N. J. (1962). *Theory of collective behavior.* New York : London: Free Press .
Smith, B. D., & Zeder, M. A. (2013). The onset of the Anthropocene. *Anthropocene*, *4*, 8–13. http://doi.org/10.1016/j.ancene.2013.05.001
Speck, F. G. (1928). *Chapters on the ethnology of the Powhatan tribes of Virginia*. New York: Museum of the American Indian, Heye foundation.
Spier, L. (1930). *Klamath ethnography*. Berkeley, Calif.: University of California press.
Spier, L., Riley, C. L., & Taylor, W. W. (1967). *American historical anthropology : essays in honor of Leslie Spier*. Carbondale: Southern Illinois University Press.
Spivak, G. C. (1990). *The post-colonial critic : interviews, strategies, dialogues*. (S. Harasym, Ed.). New York .
Sponsel, L. (2013). Leslie Sponsel on Spiritual Ecology, Connection, and Environmental Change. *News | The Forum on Religion and Ecology at Yale*. Retrieved from http://fore.yale.edu/news/item/leslie-sponsel-on-spiritual-ecology-connection-and-environmental-change/
Stocking, G. W. (1966). Franz Boas and the Culture Concept in Historical Perspective 1. *American Anthropologist*, *68*(4), 867–882. http://doi.org/10.1525/aa.1966.68.4.02a00010
Subcomission on Quaternary Stratigraphy Anthropocene Working Group. (2016). quaternary.stratigraphy.org. Retrieved from http://quaternary.stratigraphy.org/workinggroups/anthropocene/
Tambiah, S. J. (1986). *Sri Lanka : ethnic fratricide and the dismantling of democracy*. London: London : Tauris.
Von Bertalanffy, L. (1972). The History and Status of General Systems Theory. *The Academy of Management Journal*, *15*(4), 407–426.
Vorhies, F. (n.d.). The economics of investing in disaster risk reduction.
Waddington, C. H. (1952). *The epigenetics of birds*, Cambridge: University Press.
Waddington, C. H. (1957). *The strategy of the genes : a discussion of some aspects of theoretical biology*. London: Allen & Unwin.
Waddington, C. H. (1971). *Biology, purpose and ethics*, Worcester, Mass: Clarke University Press with Barre Publishers.
Walker, B., Hansen, J., Corell, R. W., Fabry, V. J., Karlberg, L., Falkenmark, M., …
Wallace, A. F. C. (1949). *King of the Delawares : Teedyuscung, 1700-1763*. Philadelphia: University of Pennsylvania Press.
Wallace, A. F. C. (1952). *The modal personality structure of the Tuscarora Indians : as revealed by the Rorschach Test*. Washington: U.S. Govt. Print. Off.

Wallace, A. F. C. (1956). Revitalization Movements. *American Anthropologist*, *58*(2), 264–281 CR–Copyright © 1956 American Anthr. http://doi.org/10.2307/665488

Wallace, A. F. C., & Grumet, R. S. (2003). *Revitalizations and mazeways: essays on culture change*. Lincoln: University of Nebraska Press.

Wallace, A. R. (1870). *Contributions to the theory of natural selection : a series of essays*. London: London : Macmillan.

Wallace, P. A. W. (1946). *The white roots of peace*. Philadelphia: University of Pennsylvania Press.

Wallace, A. F. C. (2003). *Essays on Culture Change, Volume 1*. U of Nebraska Press. Retrieved from https://books.google.com/books?id=hh1-Q0hvEVsC&pgis=1

Wallace, A. F. C. (2009). Epilogue: On the Organization of Diversity. *Ethos*, *37*(2), 251–255. doi:10.1111/j.1548-1352.2009.01042.x

Waters, C. N., Zalasiewicz, J., Summerhayes, C., Barnosky, A. D., Poirier, C., Gałuszka, A., … Wolfe, A. P. (2016). The Anthropocene is functionally and stratigraphically distinct from the Holocene. *Science (New York, N.Y.)*, *351*(6269), aad2622. http://doi.org/10.1126/science.aad2622

Weichselgartner, J., & Kelman, I. (2014). Geographies of resilience: Challenges and opportunities of a descriptive concept . *Progress in Human Geography* . doi:10.1177/0309132513518834

Wilentz, A. (1994). *The rainy season : Haiti since Duvalier*. London: Vintage.

Williams, M. (2014). *No. 1004 - WMO: Still Time to Act on Climate Change | WMO*. *World Meterological Organization*. http://public.wmo.int/en/media/press-release/no-1004-wmo-still-time-act-climate-change

Wise, R. M., Fazey, I., Stafford Smith, M., Park, S. E., Eakin, H. C., Archer Van Garderen, E. R. M., & Campbell, B. (2014). Reconceptualising adaptation to climate change as part of pathways of change and response. *Global Environmental Change*. http://doi.org/10.1016/j.gloenvcha.2013.12.002

Wright, D., Camden-Pratt, C. E., & Pratt, C. E. C.- (Eds.). (2011). *Social ecology : applying ecological understandings to our lives and our planet*. Stroud: Stroud : Hawthorn.

Zalasiewicz*, J., Williams, M., Steffen, W., & Crutzen, P. (2010). The New World of the Anthropocene [1]. *Environmental Science & Technology*, *44*(7), 2228–2231. http://doi.org/10.1021/es903118j

Zalasiewicz, J., Williams, M., Fortey, R., Smith, A., Barry, T. L., Coe, A. L., … Stone, P. (2011). Stratigraphy of the Anthropocene. *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences*, *369*(1938), 1036–1055. http://doi.org/10.1098/rsta.2010.031

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Chapter 3 References

ACCCE & the ICE Network. (2015). *ICE II: Climate Change, Sustainability and Resilience- Asian Civil Society Conference on Climate Change and Ecology / ICE: Inter-Religious Climate & Ecology Conference II*. Seoul.

Alkire, S. (2003). *Valuing freedoms : Sen's capability approach and poverty reduction* (Vol. Indian ed.). New Delhi: New Delhi : Oxford University Press.

Analog Forestry Training at Belipola in Sri Lanka 2016. (n.d.). Retrieved March 4, 2016, from https://www.youtube.com/watch?v=TTESu9sXM-k

Asia, G. S. (2013). Tree nursery with kids. Retrieved November 9, 2015, from https://www.youtube.com/watch?v=7Rr5iocV_w0

Assavavirulhakarn, P. (1990). The ascendency of Theravada Buddhism in Southeast Asia. ProQuest Dissertations Publishing.

Belipola. Retrieved May 3, 2015, from http://www.belipola.com/

Bell, J. (2002). *Learning from research: getting more from your data*. (C. Opie, Ed.). Buckingham : Open University Press.

Berkes, F. (2012). Sacred ecology (Vol. 3rd ed..). New York, N.Y. ; London: New York, N.Y.; London : Routledge.

Bernard, H. R. (Harvey R., & Gravlee, C. C. (Eds.). (2015). *Handbook of methods in cultural anthropology* (Second edi). Lanham, Maryland : Rowman & Littlefield.

Bleyl, M. (2000). The wise ones: A multi -cultural perspective. (P. Bouerie, Ed.). ProQuest Dissertations Publishing.

Booth, W. C. (2013). *A manual for writers of research papers, theses, and dissertations : Chicago style for students and researchers*. (Vol. Eighth edi). Chicago. : The University of Chicago Press.

Brewer, J. D. (2002). Book Review: Handbook of Ethnography. (Book review). *Qualitative Social Work*. https://doi.org/10.1177/14733250222236189

Burns, A. (2015). *A Walk for Climate Justice* (1st ed.). Tacloban. Retrieved from https://www.createspace.com/5685596

Burawoy, M. (1998). The Extended Case Method. *Sociological Theory*, *16*(1), 4–33.

Burawoy, M. (2009). *The extended case method [electronic resource]: four countries, four decades, four great transformations, and one theoretical tradition*. Berkeley, University of California Press.

Cook, T. D., Scriven, M., Coryn, C. L. S., & Evergreen, S. D. H. (2010). Contemporary Thinking About Causation in Evaluation: A Dialogue With Tom Cook and Michael Scriven. *American Journal of Evaluation*. https://doi.org/10.1177/1098214009354918

Deer Park Institute. (2015). Deer Park Institute Ecology Program Activity Report February 2014-March 2015.

Dedication, S. T. (2015, November 11). Plum Village. What We Can Learn From Buddhist Insights for the Climate Crisis | Sister True Dedication. *Huffington Post*. San Francisco, CA. Retrieved from http://www.huffingtonpost.com/sister-true-dedication/what-we-can-learn-from-bu_1_b_8473678.html

Deneulin, S. (2011). Development and the Limits of Amartya Sen's The Idea of Justice. *Third World Quarterly*, *32*(4), 787–797https://doi.org/10.1080/01436597.2011.567008

Dhammadrops. (2015). Retrieved January 3, 2015, from http://www.dhammadrops.org/eng/ Focused (Semi-structured) Interviews. http://www.sociology.org.uk/methfi.pdf

Environmental Ethics and Anthropocentric. Retrieved November 24, 2015, from http://www2.hawaii.edu/~freeman/courses/phil394/03.Anthropocentrism.pdf

FK Norway. (2011). Retrieved January 3, 2015, from http://www.fredskorpset.no/en/

Gaia Ashram. (2013). Climate Change School Tour Thailand 1. Retrieved November 9, 2015, from https://www.youtube.com/watch?v=oFwXNQ3j4aE

Gaia Ashram | Gaia School Asia. Retrieved May 3, 2015, from https://gaiaschoolasia.com/gaia-school-asia- ashram/

Gaia Education_Sustainability Education. (n.d.). Retrieved July 17, 2015, from http://www.slideshare.net/GaiaEducation/gaia-educationsustainability-education

Gaia Foundation. Retrieved June 7, 2015, from http://www.gaiafoundation.org/

Glaser, B. G., & Strauss, A. L. (1999). *The discovery of grounded theory : strategies for qualitative research*. New York: Aldine de Gruyter.

Glaser, B.G., & Strauss, A. L. (1967). *The discovery of grounded theory : strategies for qualitative research*. Chicago: Aldine Publishers.
Global Ecovillage Network. (2015). Retrieved April 3, 2015, from http://gen.ecovillage.org/
GOOD MARKET - Good Market. Retrieved January 1, 2016, from http://www.goodmarket.lk/
Grounded Theory Institute - The Grounded Theory Methodology of Barney G. Glaser, Ph.D - What is GT? Retrieved May 5, 2016, from http://www.groundedtheory.com/what-is-gt.aspx
Hagey, R. S. (1997). No Title. *Chronic Diseases in Canada*, *18*, 1–4.
Haraway, D. J. (1991). *Situated knowledges: the science question in feminism and the privilege of partial perspective*. New York: Routledge.
Haraway, D. J. (2008). *When species meet electronic resource]*. (I. ebrary, Ed.). Minneapolis: Minneapolis : University of Minnesota Press.
Hicks, D. (Ed.). (2010). *Ritual and Belief: Readings in the Anthropology of Religion*. Rowman Altamira. Retrieved from https://books.google.com/books?id=hdW-AAAAQBAJ&pgis=1
Hurley, R. (1974). Introduction to Lyotard. *Telos*, (19), 124.
INEB. (2012). Inter-religious Dialogue on Climate Change and Biodiversity. *Annual Conference Report 2012*. Retrieved from http://safcei.org/wp-content/uploads/2012/03/Sri-Lanka-Interfaith-Dialogue-on-Climate-Change-report.pdf
INEB Committee. Retrieved November 6, 2015, from http://inebnetwork.org/ineb/committee
Inter-Religious Climate & Ecology Network (ICE). Retrieved November 6, 2015, from http://inebnetwork.org/ice-network
JNEB. (2015). Retrieved January 3, 2017, from http://jneb.jp/english/
Juliet, C., & Anselm, S. (2008). *Basics of qualitative research: Techniques and procedures for developing grounded theory (3rd ed.).* Thousand Oaks, CA, US: Sage Publications, Inc.
Kalyana Mitta Foundation – Let's devote ourselves for the sake of other. (2015). Retrieved January 3, 2015, from http://kmfmyanmar.org/
Kirk, J., & Miller, M. L. (1986). *Reliability and validity in qualitative research*. Beverly Hills, Calif. : SAGE.
Laman Web Rasmi: Institut Kefahaman Islam Malaysia (IKIM) – Memahami Islam Membina Peradaban. Retrieved May 3, 2015, from http://www.ikim.gov.my
Leino, H., & Peltomaa, J. (2012). Situated knowledge–situated legitimacy: Consequences of citizen participation in local environmental governance. *Policy and Society*, *31*(2), 159–168. https://doi.org/10.1016/j.polsoc.2012.04.005
Lévi-Strauss,Claude. (2010). *Médium*, *22*(1), 2. https://doi.org/10.3917/mediu.022.0002
Lévi-Strauss. (1953). *Results of the Conference of Anthropologists and Linguists - Claude Lévi-Strauss* Baltimore: Waverly Press.
Lévi-Strauss, C. (1968). *Structural anthropology*. London: Allen Lane.
Lévi-Strauss, C. (2008). *Structural Anthropology*. New York: Basic Books.
Lévi-Strauss, C., & Charbonnier, G. (1969). *Conversations with Claude Lévi-Strauss*. London: Cape.
Lyotard, J.-F. (1988). *The differend : phrases in dispute*. University of Minnesota Press.
Lyotard, J.-F., & Thébaud, J.-L. (1979). *Au juste : conversations*. Paris: Christian Bourgois.
McLaren, P. (1993). *Paulo Freire : a critical encounter*. London: Routledge.
Miles, M. B. (1994). *Qualitative data analysis : an expanded sourcebook*. (A. M. Huberman, Ed.) (2nd ed.). Thousand Oaks, Calif. : Thousand Oaks, Calif. .
Mindful Markets Forum. Retrieved February 1, 2015, from http://www.schoolforwellbeing.org/content?id=104

Mitchell, J., & Slim, H. (1991). Listening to Rural People in Africa: The Semi-Structured Interview in Rapid Rural Appraisal. *Disasters*, *15*(1), 68–72. https://doi.org/10.1111/j.1467-7717.1991.tb00429.x

Nuberg, I. K., Evans, D. G., & Senanayake, R. (1994). Future of forest gardens in the Uvan uplands of Sri Lanka. *Environmental Management*. https://doi.org/10.1007/BF02393611

Oberholtzer, R. D. (2013). Spivak-Can the Subaltern Speak?-reading selection diversity - LAS Capstone. Retrieved September 3, 2014, from http://www.psu.edu/dept/LAOnline/blogs/LASCapstone/2013/03/spivak-can-the-subaltern-speak-reading-selection-diversity.html

Our Voices. (2015). Retrieved December 21, 2015, from http://ourvoices.net/

Parry, E. (2010). Picking Up The Pieces In Haiti : NPR. Retrieved November 9, 2014, from http://www.npr.org/templates/story/story.php?storyId=124243603

Pimpinan Pusat Muhammadiyah. Retrieved April 3, 2015, from http://www.muhammadiyah.or.id/

Qualitative Research: Grounded Theory Methodology | Mark Bound - Academia.edu. (n.d.). Retrieved February 19, 2015, from https://www.academia.edu/1526814/Qualitative_Research_Grounded_Theory_Methodology

Said, E. (1977). Orientalism. Retrieved September 3, 2014, from http://www.odsg.org/Said_Edward(1977)_Orientalism.pdf

Sano, Y. (2015). The People's Pilgrimage. Retrieved November 9, 2015, from http://www.peoplespilgrimage.org/

Sarvodaya – Sri Lanka's Sarvodaya Shramadana Movement. (n.d.). Retrieved January 1, 2015, from http://www.sarvodaya.org/

School for Wellbeing. Retrieved May 3, 2015, from http://www.schoolforwellbeing.org/

Scriven, M. (1991). *Evaluation thesaurus* (4th ed.). Newbury Park : Sage.

Seed, J. (2014). Did the Subaltern Speak? Mayhew and the coster-girl. *Journal of Victorian Culture*, *19*(4), 536–549. https://doi.org/10.1080/13555502.2014.967546

Seeds of Peace. (2015). Retrieved from http://inebnetwork.org/engagements/seeds-of-peace/

Senanayake, F. R., Soulé, M., & Senner, J. W. (1977). Habitat values and endemicity in the vanishing rain forests of Sri Lanka. *Nature*, *265*(5592), 351.https://doi.org/10.1038/265351a0

Senanayake, R. The Beginning | Belipola. Retrieved August 19, 2015, from http://www.belipola.com/about/the-beginning/

Senanayake, R. (2015). On Creating Our Future | Groundviews. *Ground Views*. Retrieved from http://groundviews.org/2015/08/24/on-creating-our-future/#disqus_thread

Sevalanka Foundation. Retrieved April 3, 2014, from http://www.sevalanka.org/

Slim, H. (1993). *Listening for a change : oral testimony and development*. (O. Bennett, Ed.). London: London : Panos.

Social Policy Ecology Research Institute SPERI. Retrieved November 6, 2015, from http://speri.org/eng/

Solidaritas Perempuan Gelar Aksi Dukung Pergub Cuti Melahirkan. Retrieved May 5, 2015, from http://komunita.id/2016/09/14/solidaritas-perempuan-gelar-aksi-dukung-pergub-cuti-melahirkan/

SNF - Sathirakoses Nagapradeepa Foundation and the Global Economy Marathi ice - it's a lamp. (n.d.). Retrieved from http://www.snf.or.th/tha/

Spirit in Education Movement (SEM). Retrieved April 3, 2015, from http://www.sem-edu.org/

Spivak, G. C. (1990). *The post-colonial critic : interviews, strategies, dialogues*. (S. Harasym, Ed.). New York .

Strauss, A. L. (1998). *Basics of qualitative research electronic resource] : techniques and procedures for developing grounded theory*. (I. NetLibrary, I. Net Library Eds.) (Vol. 2nd ed..). Thousand Oaks: Thousand Oaks : Sage Publications.

Suan Nguen Mee Ma social enterprise. Retrieved March 27, 2015, from https://towardsorganicasiath.wordpress.com/toa-team/
Tagore, R. (1951). *Gītāñjali* (2. saṃskar). Dillī: Rājapāla.
Tedlock, B. (1991). From participant observation to the observation of participation: the emergence of narrative ethnography. *Journal of Anthropological Research*.
The ICE Network. Retrieved August 1, 2016, from http://www.ice-network.net/
The People's Pilgrimage. Retrieved June 1, 2016, from http://peoplespilgrimage.org/
TILCEPA Groups | IUCN. Retrieved June 1, 2015, from https://www.iucn.org/content/opportunity-join-new-tilcepa-groups
Towards Organic Asia | Organic Agriculture as the Heart of Global Transformation. Retrieved April 3, 2015, from https://towardsorganicasiath.wordpress.com/
Wallace, A. F. C. (1956). Revitalization Movements. *American Anthropologist*, *58*(2), 264–281 CR–Copyright © 1956 American Anthr. https://doi.org/10.2307/665488
We Have Faith. Retrieved November 14, 2015, from http://www.wehavefaith.net/
White, Patrick, 2008. *Developing Research Questions: A Guide to Social Scientists;* Palgrave, London.
Wogan, P. (2004). Deep Hanging Out: Reflections on Fieldwork and Multisited Andean Ethnography. *Identities*, *11*(1), 129–139. https://doi.org/10.1080/725289021
Wongsanit Ashram | Global Ecovillage Network. Retrieved June 1, 2015, from http://ecovillage.org/en/wongsanit-ashram
Zangmo, A. U. (2013). A Review of: "Qualitative Research Methods in Human Geography, 2nd edition, Edited by Iain Hay." Retrieved June 23, 2014, from http://www.ophi.org.uk/wp-content/uploads/Ura-et-al-Bhutan-Happiness-Chapter.pdf?79d835
김봉한, Kim, B. H., 김시원, Kim, S. W., 최두열, & Choi, D. Y. (2007). 브레튼우즈 시스템 이후 세계적 경상수지불균형은 지속가능한 경로에 있었는가? (Was the World-Wide Current Account Imbalance in the Post-Bretton Woods Era on a Sustainable Path?). 금융연구, *21*(1), 147.

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Chapter 4 References

350.org – Keystone XL – Victory! Retrieved November 6, 2015, from http://350.org/kxl-victory/
5 Asian countries produce majority of plastic in world's oceans - Asian Correspondent. (n.d.). Retrieved November 12, 2015, from http://asiancorrespondent.com/2015/11/5-asian-countries-produce-majority-of-plastic-in-worlds-oceans/
Abdul, Enizahura (2015). Personal communication to E. Parry. Member of IKIM, Malaysia; Affiliate of the ICE Network; Kuala Lumpur, Malaysia.
Abeyasakera, Laskhi (2015). Personal communication to E. Parry. Member of the Sewa Lanka Foundation; affiliate to ICE Network; Colombo, Sri Lanka.
Agricultural Commodities, Trade and Sustainable Development. (2005). IIED. Retrieved from https://books.google.com/books?id=hNCtsF8YAfMC&pgis=1
Abogado, Jannel, 2006. The Cult of Saints among Filipino Catholics: A Study of

Alkire, S. (2003). *Valuing freedoms : Sen's capability approach and poverty reduction* (Vol. Indian ed.). New Delhi: New Delhi : Oxford University Press.

Alkire, S. (2013). Gross National Happiness methods indicators. Retrieved June 21, 2014, from http://www.grossnationalhappiness.com/wp-content/uploads/2012/04/Short-GNH-Index-edited.pdf

Altieri, M. A. (1987). *Agroecology: the scientific basis of alternative agriculture*. Boulder, Colo: Boulder, Colo: Westview.

Altieri, M. A. (2007). Campesino a Campesino: Voices from Latin America's Farmer to Farmer Movement for Sustainable Agriculture - By Eric Holt-Gimenez. *Natural Resources Forum*. Oxford, UK. doi:10.1111/j.1477-8947.2007.151_1.x

Altieri, M. A., & Nicholls, C. I. (2013). The adaptation and mitigation potential of traditional agriculture in a changing climate. *Climatic Change*, 1–13. doi:10.1007/s10584-013-0909-y

Anonymous (2013), personal communication with E. Parry by representative of the Mexican government at the COP19 in Warsaw, Poland.

Araghi, F. (1997). 50 Years Is Enough: The Case against the World Bank and the International Monetary Fund / Faith and Credit: The World Bank's Secular Empire / Mortgaging the Earth: The World Bank, Environmental Impoverishment, and the Crisis of Development. *Contemporary Sociology*. Washington: American Sociological Association. https://doi.org/10.2307/2076771

Armour, Jessica (2015); personal communication with E. Parry. ICE Network affiliate community, Spirit in Education Movement (SEM); Bangkok, Thailand.

Assavavirulhakarn, P. (1990). The ascendency of Theravada Buddhism in Southeast Asia. ProQuest Dissertations Publishing.

Baharuddhu, Aziza (2015). Personal communication to E. Parry. Director of IKIM, Malaysia; Affiliate of the ICE Network; Kuala Lumpur, Malaysia.

Balangoda, Venerable Ananda Manjusri (2012); personal communication with E. Parry. INEB and Sewalanka affiliate, Sri Lankan Buddhist monk; Anuradhapura, Sri Lanka

Balangoda, Venerable Ananda Manjusri (2015); personal communication with E. Parry. ICE Network affiliate, INEB and Sewalanka affiliate, Sri Lankan Buddhist monk; Anuradhapura and Colombo, Sri Lanka.

Bakewell, S. (2016, January 28). The $29 Trillion Corporate Debt Hangover That Could Spark a Recession - Bloomberg. *Bloomberg*. Retrieved from http://www.bloomberg.com/news/articles/2016-01-28/some-29-trillion-later-the-corporate-debt-boom-looks-exhausted

Bales, K. (2012). *Disposable people [electronic resource] : new slavery in the global economy*. (I. ebrary, Ed.) (Rev. ed. w.). Berkeley: Berkeley: University of California Press.

Barnard, A., & Spencer, J. (2010). Routledge encyclopaedia of social and cultural anthropology. Encyclopedia of social and cultural anthropology (2nd ed.). London, England: Routledge.

BCorporations.net. (n.d.). What are B Corps? | B Corporation. Retrieved May 16, 2016, from https://www.bcorporation.net/what-are-b-corps

Berkes, F. (2008). *Sacred Ecology*. Taylor & Francis. Retrieved from http://books.google.co.uk/books?id=7zt2C5klIhoC

Berkes, F. (2012). *Sacred ecology* (Vol. 3rd ed..). New York, N.Y. ; London: New York, N.Y. ; London : Routledge.

Berkes, F., Colding, J., & Folke, C. (2000). Rediscovery of Traditional Ecological Knowledge as Adaptive Management. *Ecological Applications*, *10*(5), 1251–1262. Retrieved from http://www.jstor.org/stable/2641280

Berkes, F., Folke, C., & Colding, J. (2000). *Linking social and ecological systems: management practices and social mechanisms for building resilience*. Cambridge University Press.

Berkes, F., & Ross, H. (2013). Community Resilience: Toward an Integrated Approach. *Society & Natural Resources*, *26*(1), 5–20.https://doi.org/10.1080/08941920.2012.736605

Belipola. (n.d.). Retrieved May 3, 2015, from http://www.belipola.com/

Benford, R. D., & Snow, D. a. (2000). FRAMING PROCESSES AND SOCIAL MOVEMENTS : An Overview and Assessment. Annual Review Sociologic, 26(1974), 611–639. https://doi.org/10.1146/annurev.soc.26.1.611

Berkes, F. and Folke, C.. 1998. Linking social and ecological systems for resilience and sustainability. In *Linking social and ecological systems: Management practices and social mechanisms for building resilience* , ed. F. Berkes, C. Folke, and J. Colding. Cambridge , UK : Cambridge University Press, 1– 26. Web of Science®Google ScholarGo here for SFX

Berry, T. (1987). The Dream of the Earth. Cross Currents, 37(2), 200.

Berry, T. (2009). The sacred universe : earth, spirituality, and religion in the twenty-first century. New York: Columbia University Press.

Bhohi, Amrita, 2018. Spiritual Ecology Presentation, St. Ethelburga's London.

Bingeman, K., Berkes, F., & Gardner, J. (2004). Institutional responses to development pressures: Resilience of social-ecological systems in Himachal Pradesh, India. *International Journal of Sustainable Development & World Ecology*, *11*(1), 99–115. https://doi.org/10.1080/1350450040946981

Blake, D. (2015). King Bhumibol: The Symbolic "Father of Water Resources Management" and Hydraulic Development Discourse in Thailand. *Asian Studies Review*, *39*(4), 649–IV. https://doi.org/10.1080/10357823.2015.1086972

Bodikotuwa, Thusitha (2015). Personal communication with E. Parry; the Sewalanka Foundation, Colombo, Sri Lanka.

Böhm, S., Pervez Bharucha, Z., & Pretty, J. N. (2015). Ecocultures : blueprints for sustainable communities. Abingdon, Oxon: Routledge

Bond, G. D. (2004). *Buddhism at work : community development, social empowerment and the Sarvodaya Movement*. Bloomfield, CT: Bloomfield, CT : Kumarian Press.

Bostanian, N. J., Vincent, C., Isaacs, R., & service), S. (Online (Eds.). (2012). *Arthropod Management in Vineyards: Pests, Approaches, and Future Directions [electronic resource]*. Dordrecht: Springer Netherlands: Imprint: Springer.
Buddhist faces jail for questioning accuracy of elephant duel. (2017). Retrieved from http://www.abc.net.au/news/2017-10-12/buddhist-sulak-sivaraksa--faces-lese-majeste-charge/9040540

Bretton Woods Project - Critical voices on the World Bank and IMF. (n.d.). Retrieved December 15, 2015, from http://www.brettonwoodsproject.org/

Chakravarti, A. (2005). *Aid, institutions and development : new approaches to growth, governance and poverty*. Cheltenham: Cheltenham : Edward Elgar.

Chapin, M., Lamb, Z., & Threlkeld, B. (2005). MAPPING INDIGENOUS LANDS, 34(1), 619–638. https://doi.org/10.1146/annurev.anthro.34.081804.120429.

Chan, K. M. A., Balvanera, P., Benessaiah, K., Chapman, M., Díaz, S., Gómez-Baggethun, E., … Turner, N. (2016). Opinion: Why protect nature? Rethinking values and the environment. *Proceedings of the National Academy of Sciences of the United States of America*, *113*(6), 1462. doi:10.1073/pnas.1525002113

Chokevivat, V., & Chuthaputti, A. (n.d.). The Role of Thai Traditional Medicine in Health Promotion. Retrieved from http://www.thaihealingalliance.com/pdf/The_Role_ofThai_Traditional_Medicine_in_Health__Promotion by_Vichai_Chokevivat_and_Anchalee_Chuthaputti.pdf

Chomsky, N. (2003). *Understanding power : the indispensable Chomsky*. (P. R. Mitchell & J. Schoeffel, Eds.). London: London : Vintage.

Chungprampree, Somboon (2015). Personal communication with E. Parry. INEB offices, Bangkok, Thailand.

CIC. (n.d.). What is a CIC? | CIC Association CIC. Retrieved May 16, 2016, from http://www.cicassociation.org.uk/about/what-is-a-cic

CIDSE. (2012). Agriculture: From Problem to Solution, Achieving the Right to Food in a Climate-Constrained World; moving away from a market-based approach to food, agriculture and climate change; Redirecting agriculture to serve its social, economic and ecological func. *CIDSE Guiding Principles and Recommendations*. Retrieved April 8, 2015, from file:///Users/emilieparry/Downloads/Agriculture_from_Problem_to_Solution_CIDSE_Dec2012.pdf

Clarke, N., Cloke, P., Barnett, C., & Malpass, A. (2008). spaces and ethics of organic food. *Spaces and Ethics of Organic Food*, *24*, 219–230.

Colbran, N. (2011). Indigenous peoples in Indonesia: at risk of disappearing as distinct peoples in the rush for biofuel? International Journal on Minority and Group Rights, 18(1), 63–92. https://doi.org/10.1163/157181111X550987

Colchester, M. (1997). Salvaging nature: Indigenous peoples and protected areas. In M. P. Ghimire, K. B. and Pimbert (Ed.), *Social Change and Conservation* (pp. 97–130). London: Earthscan.

Colchester, M. (1989) 'Indian Development in Amazonia: Risks and Strategies,' *The Ecologist*, 19 (6) 249-254.

Colchester, M. (1994) S*alvaging Nature: Indigenous Peoples, Protected Areas and Biodiversity Conservation,* UNRISD- WRM-WWF, UNRISD Discussion Paper No.55, Geneva.

Comberti, C., Thornton, T. F., Wylliede Echeverria, V., & Patterson, T. (2015). Ecosystem services or services to ecosystems? Valuing cultivation and reciprocal relationships between humans and ecosystems. *Global Environmental Change*, *34*, 247–262. https://doi.org/10.1016/j.gloenvcha.2015.07.007

Confino, J. (2013, January 21). Zen master Thich Nhat Hanh: only love can save us from climate change. *The Guardian*. London.

Conradie, E. M. (2016). Why cannot the term development just be dropped altogether? Some reflections on the concept of maturation as alternative to development discourse. *HTS Teologiese Studies / Theological Studies*, *72*(4), <xocs:firstpage xmlns:xocs=/>. https://doi.org/10.4102/hts.v72i4.3415

COP21 Religions. (n.d.). Retrieved October 29, 2015, from http://cop21religions.org/en/

Crawhall, Nigel (2011). L'organisation des peuples autochtones en Afrique: Entretien avec Nigel Crawhall. *Ecologie & politique*, *42*(2), 171. https://doi.org/10.3917/ecopo.042.0171

Crawhall, Nigel (2012), South Africa | People For Our Planet. Retrieved January 13, 2015, from http://peopleofourplanet.org/nigel-crawhall/

Crawhall, Nigel (2014); personal communication with E. Parry, ICE Network affiliate, at ICE Network planning meeting in Bangkok, Thailand.

Crawhall, Nigel (2015); personal communication with E. Parry, ICE Network affiliate; at the ICE II Conference in Seoul, South Korea.

Crawhall, Nigel (2016); personal communication with E. Parry, ICE Network affiliate

and chair of the IPACC (Indigenous Peoples Africa Coordinating Committee), at the IUCN World Conservation Congress, Honolulu, Hawaii.
Cresswell, Jamie (2015); personal communication with E. Parry, ICE Network affiliate, board member of INEB; Seoul, South Korea.
Cross, J. (2014). Book Review: The approaching great transformation: toward a liveable post-carbon economy by Joel Magnuson. Blog post from London School of Economics & Political Science.
Culotta, Elizabeth (6 November 2009). "On the Origin of Religion". Science. 326 (5954): 784–787. doi:10.1126/science.326_784. PMID 19892955.
Dali, Z. (2018). Pancasila: Local Indigenous Islamic Character Education In Indonesia. Jurnal Madania, 22(2), 185–194. https://doi.org/10.29300/madania.v22i2.1400
Decker, Stephen, et al (2011). Nature and culture: Rebuilding lost connections.
Decker, S. (2012). Nature and culture: Rebuilding lost connections; edited by Sarah Pilgrim and Jules Pretty. Canadian Geographer / Le Géographe Canadien. Malden, USA. https://doi.org/10.1111/j.1541-0064.2012.00458.x
Dhondrub, Karma Jigme (2015). Personal communication to E. Parry. Dhammadrops, Bhutanese School for GNH, FK Norway, Sufficiency Economy; Thimpu, Bhutan and Chiang Mai, Thailand.
Donaldson, J. (2010). David Korten: Declaring our Independence from Wall Street - See more at: http://peakmoment.tv/journal/david-korten-declaring-our-independence-from-wall-street/#sthash.az6G1MXs.dpuf. *Peakmoment*
Duplat, P., & Parry, E. (2010). *Haiti: from the Ground Up*. Refugees International Policy Paper, Washington, DC.
Durkheim, É. (1912). Les formes élémentaires de la vie religieuse : le système totémique en Australie. Paris: Félix Alcan.
East, May (2015). Personal communication with E. Parry. Panelist for ICE Network program at COP21; Paris, France.
Editors, E. (2013). Leslie Sponsel on Spiritual Ecology, Connection, and Environmental Change. *News | The Forum on Religion and Ecology at Yale*. Retrieved from http://fore.yale.edu/news/item/leslie-sponsel-on-spiritual-ecology-connection-and-environmental-change/
Eichengreen, B. (1996). The Bretton-Woods-GATT System: Retrospect and Prospect After Fifty Years. *J. Eco. History*. https://doi.org/10.1017/S0022050700017848
e institute brazil (instituto e). (n.d.). Retrieved May 13, 2016, from http://institutoe.org.br/parceiros/
Enhancing Resilience to Food Security Shocks. (n.d.). Retrieved May 11, 2014, from http://www.fsnnetwork.org/sites/default/files/revised_resilience_paper_may_28.pdf
Episcopal church votes to divest from fossil fuels: "This is a moral issue" | World news | The Guardian. (n.d.). Retrieved July 5, 2015, from http://www.theguardian.com/world/2015/jul/03/episcopal-church-fossil-fuel-divestment
Farmer, P. (1994). *The uses of Haiti*. Monroe, Me.: Common Courage Press.
Farmer, P. E., Nizeye, B., Stulac, S., & Keshavjee, S. (2006). Structural violence and clinical medicine. *PLoS Medicine*, *3*(10), e449. https://doi.org/10.1371/journal.pmed.0030449
Farmer, P., & Sen, A. (2005). *Pathologies of power : health, human rights, and the new war on the poor*. Berkeley : University of California Press.
Fazal, Anwar (2015); personal communication with E. Parry. Right Livelihood laureate, speaker / instructor at the CURLS Chulalonghongkorn Right Livelihoods summer school, Bangkok, Thailand.
Figueres, Christiana (2019). As told to Emilie Parry in one-on-one conversation at the Spirit of Humanity Forum, 31 May, 2018, Reykjavik..
Food Security and Climate Change Challenge Badge. (n.d.). Retrieved April 8, 2015,

from http://www.wagggs.org/en/grab/3833/1/Climatechangechallengecurriculum.pdf
G20 failed to bring the world closer to a strong deal in Paris. (2015, November 16). *Caneurope.org*. Brussels. Retrieved from http://www.caneurope.org/can-and-press/912-g20-failed-to-bring-the-world-closer-to-a-strong-deal-in-paris
Galtung, J. (2011). Arne Naess, Peace and Gandhi. *Inquiry-Interdiscip. J. Philos.*, *54*(1), 31–41. https://doi.org/10.1080/0020174X.2011.542948
Galtung, J. (2016); keynote speaker at the University of Winchester's conference on Buddhist Approaches to Conflict Transformation (E. Parry participated; personal communication with E. Parry); Taplow Court, UK.
Galtung, J., & Hoivik, T. (1971). Structural and Direct Violence: A Note on Operationalization. *Journal of Peace Research*, *8*(1), 73–76.
Ghosts of the New City: Spirits, Urbanity, and the Ruins of Progress in Chiang Mai Andrew Alan Johnson:
Giang, Lê Hōng (2015). Personal communication to E.Parry. Member of Vietnamese animist S.P.E.R.I., organic farmer, TOA, Right Livelihoods, ICE Network affiliate; Vietnam.
Gómez, E. J., & Atun, R. (2013). Emergence of multilateral proto-institutions in global health and new approaches to governance: analysis using path dependency and institutional theory. *Globalization and Health*. https://doi.org/10.1186/1744-8603-9-18
Goodman, M. K. (2010). The mirror of consumption: Celebritization, developmental consumption and the shifting cultural politics of fair trade. *Geoforum*, *41*(1), 104–116. doi:10.1016/j.geoforum.2009.08.003
Green Growth. (n.d.). Inclusive Green Growth: The Pathway to Sustainable Development | Green Growth Knowledge Platform. Retrieved May 16, 2016, from http://www.greengrowthknowledge.org/resource/inclusive-green-growth-pathway-sustainable-development
Hackett, Conrad, and Brian J. Grim, Marcin Stonawski, V. S. and M. P. (2012). *The Global Religious Landscape: A report on the Size and Distribution of the World's Major Religious Groups as of 2010. Pew Research Center: The Pew Forum on Religion & Public Life*. Washington, D.C. Retrieved from http://www.pewforum.org/files/2014/01/global-religion-full.pdf
Hamilton, N. (2011). FARMING AN UNCERTAIN CLIMATE FUTURE: WHAT COP 15 MEANS FOR AGRICULTURE. *Univ. Ill. Law Rev.*, (2), 341–359.
Hanh, T. N. (2008). *The World We Have: A Buddhist Approach to Peace and Ecology*. Parallax Press.
Hannah Reid, Adrian Fenton, Patrick Kirkby, Emilie Parry, Erin Roberts, B., & Smith, Clare Stott, Alexander Stubbings, James Totton, K. W. and H. W. (2014). Community Based Adaptation: Financing Local Adaptation Conference Proceedings. Bangladesh Centre for Advanced Studies, International Institute for Environment and Development, and Clean Energy Nepal. Retrieved November 24, 2014, from file:///Users/emilieparry/Desktop/Community Based Adaptation-Financing Local Adaptation Conference Proceedings. Bangladesh Centre for Advanced Studies, International Institute for Environment and Development, and Clean Energy Nepal.pdf
HardTalk, B. (2013). A Billion Go Hungry Because of GMO Farming: Vandana Shiva. *BBC News HardTalk*. Youtube Rebroadcase of BBC New Hard Talk. Retrieved from https://www.youtube.com/watch?v=vbIQF72IDuw
Harnetty, P. (1966). ASIA: A HANDBOOK, edited by Guy Wint (Book Review). *Pacific Affairs*. Honolulu, etc.: Institute of Pacific Relations.
Hauser-Schäublin, Brigitta, ed. Adat and indigeneity in Indonesia : culture and

entitlements between heteronomy and self-ascription. (2013). Göttingen: Universitätsverlag Göttingen.
Hawken, P. (1999). *Natural capitalism: the next industrial revolution*. (A. B. Lovins & L. H. Lovins, Eds.). London: London: Earthscan.
Hawken, P. (2007). *Blessed unrest: how the largest movement in the world came into being, and why no one saw it coming*. New York: New York: Viking.
Hecht, S. B., & Cockburn, A. (2010). *The fate of the forest [electronic resource] : developers, destroyers, and defenders of the Amazon* (Updated). Chicago : University of Chicago Press.
Helm, D. (2014). Taking natural capital seriously. *Oxford Review Of Economic Policy*, *30*(1), 109–125. https://doi.org/10.1093/oxrep/gru005
Hellinger, Steve (2002). SID gathering at SAPRIN, Washington, DC.
Hepburn, C., & Müller, B. (2010). International Air Travel and Greenhouse Gas Emissions: A Proposal for an Adaptation Levy 1. *World Economy*, *33*(6), 830–849. doi:10.1111/j.1467-9701.2010.01287.x
Higgins, P. (2015). Eradicating ecocide : laws and governance to prevent the destruction of our planet (2nd ed.). London: Shepheard-Walwyn (Publishers) Ltd.
Holcombe, S. H. (2014). Donors and exogenous versus endogenous development. *Development in Practice*, *24*(5–6), 750–763. https://doi.org/10.1080/09614524.2014.937398
Hōng Giang, Lê (2015). Personal communication with E. Parry. Vietnamese farmer, animist, member of S.P.E.R.I., affiliate to ICE NEtwork, Right Livelihoods CURLS. Hanoi.
Horton, M., Freire, P., Bell, B., Gaventa, J., & Peters, J. M. (1990). *We make the road by walking : conversations on education and social change*. Philadelphia: Temple University Press.
How to Reshape Market Society and Redefine Democracy: Naomi Klein & Raj Patel on Economics. (n.d.). Retrieved November 13, 2015, from https://www.youtube.com/watch?v=wmHOj0FT5l0
Hudson, J. (2014, January). Book Review: Vandana Shiva's Making Peace With the Earth | Halifax Media Co-op. *Halifax Media Coop*. Retrieved from http://halifax.mediacoop.ca/blog/editor/21072
Human Development Index (HDI) | Human Development Reports. (n.d.). Retrieved September 8, 2017, from http://hdr.undp.org/en/content/human-development-index-hdi
Human Rights Watch. (2016). Laos: Come Clean on Activist's "Disappearance" |
Human Rights Watch. Retrieved November 30, 2016.
Huq, S. (2006). *Climate change and development links*. (H. Reid, L. Murray, & I. I. for E. and D. C. C. Programme, Eds.). London: London : IIED, Sustainable Agriculture and Rural Livelihoods Programme.
Hutanuwatra, P. (n.d.). Ecovillage Transitions ETA Pracha Hutanuawtra. Retrieved October 21, 2015, from http://www.ecovillagetransition.org/images/doc/EDE&TOT 2010 Report.pdf
Hutanuwatr, Pracha (2015). Personal communications with E. Parry. Wongsanit Ashram and ETA offices in Bangkok, Thailand.
Illing, S. (2015). Bill Nye demolishes climate deniers: "The single most important thing we can do now is talk about climate change." *Salon.com*. Retrieved November 8, 2015, www.salon.com/2015/11/06/bill_nye_demolishes_climate_deniers_im_not_a_scientist_therefore_im_not_going_to_use_my_brain/
IMF -- International Monetary Fund Home Page. (n.d.). Retrieved September 8, 2017, f from http://www.imf.org/external/index.htm
INEB. (2012). Inter-religious Dialogue on Climate Change and Biodiversity. *Annual Conference Report 2012*.

Institute, T. D. M. (n.d.). Systems Thinking Resources - The Donella Meadows Institute. Retrieved November 12, 2015, from http://www.donellameadows.org/systems-thinking-resources/
Inter-Religious Climate & Ecology Network (ICE). (n.d.). Retrieved November 6, 2015, from http://inebnetwork.org/ice-network
International Network of Engaged Buddhists (INEB). (n.d.). Retrieved November 6, 2015, from http://inebnetwork.org/
International Union for the Conservation of Nature (IUCN): Motion 145. World Conservation Congress, 6--15th September 2012; Jeju, Korea; 2012. Accessed online June 2015. (https://portals.iucn.org/docs/2012congress/motions/en/M-145-2012-EN.pdf). (n.d.). Retrieved https://portals.iucn.org/docs/2012congress/motions/en/M-145-2012-EN.pdf
IPBES, 2018. The regional assessment report on Biodiversity and Ecosystems Services for Asia and the Pacific, UNESCO, Science and Policy for People and Nature.
Jacobs, D. T., aka Four Arrows (2006). Unlearning the language of conquest [electronic resource] : scholars expose anti-Indianism in America : deceptions that influence war and peace, civil liberties, public education, religion and spirituality, democratic ideals, the environment, law, literature, film, and happiness (1st ed.). Austin: University of Texas Press.
Juriantz, Trudy (2015). Personal communication with E. Parry. Belipola analog forestry and community training center, Sri Lanka.
Kallis, G. (2011). In defence of degrowth. *Ecological Economics*, *70*(5), 873–880. https://doi.org/10.1016/j.ecolecon.2010.12.007
Kasetsiri, Charnvit (2007). *King Chulalongkorn's Grand Europe Tours With Special Reference to Germany*. Paper delivered at the International Symposium, Bad Homburg.
Kelsang Gyatso, 1931-. (2008). *Introduction to Buddhism : an explanation of the Buddhist way of life*. Tharpa Publications.
Kheolamai, Thanapol (2015). Personal communication with E. Parry; Towards Organic Asia and School for Wellbeing; Right Livelihoods school, Bankgok, Thailand.
Khisbyah, Y. (2015a); personal communication with E. Parry; Muhammadiya community, Jakarta, Indonesia.
Khisbyah, Y. (2015b); personal communication with E. Parry, The ICE Network ICE II conference on Climate Change, Sustainability and Resilience, Seoul, South Korea.
Khisbyah, Y. (2016); personal communication with E. Parry, at the IUCN World Conservation Congress, ICE Network panel, Honolulu, Hawaii.
Kiessel, A. (2007). Social change and complex systems: The art of participatory development in rural Sri Lanka. (D. Goodman, Ed.). ProQuest Dissertations Publishing.
Kiessel, Amanda (2015). Personal communication with E. Parry. The Good Market, Sri Lanka.
Kiessel, Amanda (2017). Personal communication with E. Parry; London.
Kirshner, O. (1996). *The Bretton Woods-GATT System: Retrospect and Prospect After 50 years*. Retrieved https://books.google.co.uk/books?id=QfUvCgAAQBAJ&pg=PA153&lpg=PA153&dq=The+original+Bretton+Woods+Charter+Agreement&source=bl&ots=mFHgfV5iC8&sig=a6WvdhsF4byY24vueld5CbHG5P4&hl=en&sa=X&ved=0ahUKEwjNssT5wITVAhXDAsAKHQGuDyUQ6AEIXjAH#v=onepage&q=The original
Klein, N. (2014). Naomi Klein - This Changes Everything | Bioneers. Retrieved from https://www.youtube.com/watch?v=Jdaxehd0cF0
Klein 1970-, N. (2007). *The shock doctrine : rise of disaster capitalism*. London: London : Allen Lane.
Korten, D. (n.d.). A New Story for a New Economy by David Korten — YES!

Magazine. Retrieved from http://www.yesmagazine.org/happiness/a-new-story-for-a-new-economy
Korten, D. (2002). From Empire to Community: Living the future into being. *Development*, *45*(2), 28. doi:10.1057/palgrave.development.1110345
Korten, D. (2009). Life in a Real-Wealth Economy1. *Development*, *52*(3), 394. doi:10.1057/dev.2009.40
Korten, D. C. (2015). *When corporations rule the world* (Third edit.). Oakland, California: Berrett-Koehler Publications, Inc.
Kraft, S. E. (2002). "TO MIX OR NOT TO MIX": SYNCRETISM/ANTI-SYNCRETISM IN THE HISTORY OF THEOSOPHY. Numen, 49(2), 142–177. https://doi.org/10.1163/156852702760186754
Krishna, Hari N. P. (2014). Personal communication with E. Parry, ICIMOD, Katmandu, Nepal.
Krishna, Hari N. P. (2015). Personal communication with E. Parry, ICE Network affiliate, Hyderabad, India.
Krishna, Hari N. P. (2015). Personal communication with E. Parry, ICE Network conference ICE II, Seoul, South Korea.
Kumar, S. (2009). Earth pilgrim. Totnes: Totnes : Green Books.
Kumar, Trilock (2015). Personal communication with E. Parry. ICE Network and INEB affiliate; education programs coordinator at Deer Park Institute, Himachal Bir, India.
Kunaits, Buddhists and Hindoos, Simla. (1868). London: London.
Lanh, Tran Thi (2015). Personal communication with E. Parry. Director of animist organization S.P.E.R.I., affiliate of ICE Network, ToA; Hanoi, Vietnam.
Lederach, J. P. (1997). *Building peace : sustainable reconciliation in divided societies*. Washington, D.C.: United States Institute of Peace Press.
Lord, Steven (2016): Environmental Change Institute talk on Food Futures and Sustainability, University of Oxford School of Geography & the Environment.
Macy, J. (1979). *Interdependence : mutual causality in early Buddhist teachings and general systems theory*.
Macy, J. (1991). *Mutual causality in Buddhism and general systems theory : the dharma of natural systems*. Albany: Albany : State University of New York Press.
Macy, J. R. (1979). Dependent Co-arising: The Distinctiveness of Buddhist Ethics. *The Journal of Religious Ethics*, *7*(1), 38–52.
Macy, J. R. (1976). Systems Philosophy as a Hermeneutic for Buddhist Teachings. *Philosophy East and West*, *26*(1), 21–32. doi:10.2307/1397904
Macy, J. (1993). Sarvodaya means everybody wakes up. *Paradigms*, *7*(1), 77–81. https://doi.org/10.1080/13600829308443042
Macy, J (2017). Personal communication with E. Parry, Berkeley, CA.
Macy, J. (2007). World as lover, world as self [electronic resource] : courage for global justice and ecological renewal. (I. ebrary, Ed.). Berkeley, Calif.: Berkeley, Calif. : Parallax Press.
Maffi, L. (2001). On biocultural diversity : linking language, knowledge, and the environment. Washington, [D.C.: Smithsonian Institution Press.
Maffi, L., & Woodley, E. (2010). Biocultural diversity conservation : a global sourcebook. London: Earthscan
Magnuson, J. (2016). *From greed to wellbeing : A Buddhist approach to resolving our economic and financial crises*. Policy Press.
Magnuson, J. (2013). *The approaching great transformation: toward a livable post carbon economy*. (H. Norberg-Hodge, Ed.). Bristol : The Policy Press.

Malunga, C., & Holcombe, S. H. (2014a). Endogenous development: naïve romanticism or practical route to sustainable African development? *Development in Practice*, *24*(5–6), 615–622. https://doi.org/10.1080/09614524.2014.938616
Malunga, C., & Holcombe, S. H. (2014b). Endogenous development going forward: learning and action. *Development in Practice*, *24*(5–6), 777–781. https://doi.org/10.1080/09614524.2014.938617
Map of UK Fracking Sites | Frack Off. (n.d.). Retrieved August 26, 2015, from http://frack-off.org.uk/locations/
Market and society: The great transformation today. (2010). *Choice Reviews Online*, *47*(08), 47–4526. doi:10.5860/CHOICE.47-4526
Mason, Apos, Croz, D., Vervoort, J., Palazzo, A., Islam, S., … Lipper, L. (2016). Multi-factor, multi-state, multi-model scenarios: Exploring food and climate futures for Southeast Asia. *Environmental Modelling and Software*. doi:10.1016/j.envsoft.2016.05.008
Mason, Mike (2016). Oxford Martin School, Fifth Annual Oxford Energy Conference 13 June 2016, Mathematical Institute, University of Oxford.
Matthews, T., Lo, A. Y., & Byrne, J. A. (2015). Reconceptualizing green infrastructure for climate change adaptation: Barriers to adoption and drivers for uptake by spatial planners. *Landscape and Urban Planning*, *138*, 155–163. https://doi.org/10.1016/j.landurbplan.2015.02.010
Maxwell, S. (2012). *Inclusive green growth - a review of the World Bank policy paper – Blog - Simon Maxwell*. Washington USA. Retrieved from http://www.simonmaxwell.eu/blog /inclusive-green-growth-a-review-of-the-world-bank-policy-paper.html
Mayer, A. C., & Von Furer-Haimendorf, C. (1967). Caste and Kin in Nepal, India and Ceylon: Anthropological Studies in Hindu-Buddhist Contact Zones. Man. https://doi.org/10.2307/2799396
McKibben, B. (2015a). Imagine if Exxon had told the truth on climate change | Bill
McKibben | Environment | The Guardian. *The Guardian*. Retrieved from http://www.theguardian.com/environment/2015/oct/28/imagine-if-exxon-had-told-the-truth-on-climate-change
McKibben, B. (2015b, October 14). Exxon's climate lie: "No corporation has ever done anything this big or bad" | Bill McKibben | Environment | The Guardian. *The Guardian*. Retrieved from http://www.theguardian.com/environment/2015/oct/14/exxons-climate-lie-change-global-warming?CMP=share_btn_fb
McKibben, B. (2015c, November). Exxon, Keystone, and the Turn Against Fossil Fuels - The New Yorker. *The New Yorker Magazine*. Retrieved from http://www.newyorker.com/news/news-desk/exxon-keystone-and-the-turning-tide-on-fossil-fuels?intcid=mod-latest
Meadows, D. H. (1985). System analysis and the world food system. *European Journal of Operational Research*, *20*(2), 158–167. doi:10.1016/0377-2217(85)90056-6
Meadows, D. H. (2005). *Limits to growth: the 30-year update.* (J. Randers, D. L.
Meadows, & D. H. Meadows, Eds.) (3rd rev.). London: Earthscan.
Meadows, D. L. (1972). Toward a Science of Social Forecasting. *Proceedings of the National Academy of Sciences of the United States of America*, *69*(12), 3828–3831.
Meyer, N. (2013). UN Report Says Small-Scale Organic Farming Only... *Technology and Water*. Retrieved March 1, 2015, from http://www.technologywater.com/post/69995394390/un-report-says-small-scale-organic-farming-only
MiaoHai, Venerable Sun Haiyan (2017). Personal communication to E. Parry. Affiliate of ICE Network community & INEB; Zhengjue temple monk, Shandong Province, China.
Mihesuah, D. A., & Wilson, A. C. (2002). Indigenous Scholars versus the Status Quo. American Indian Quarterly, 26(1), 145–148.
Ministry of Foreign Affairs, Kingdom of Thailand (2017). Sufficiency Economy

Philosophy: Thailand's Path towards Sustainable Development Goals Second Edition, *Second Edi*. Retrieved from http://www.mfa.go.th/dvifa/contents/files/articles-20170626-142701-203959.pdf
Mistry, Aspi (2015). Personal communication with E. Parry. ICE Network and INEB affiliate; coordinator Deer Park Institute, Himachal Bir, India.
Morse, S. (2003). For better or for worse, till the human development index do us part? *Ecological Economics*, *45*(2), 281–296. https://doi.org/10.1016/S0921-8009(03)00085-5
Mowe, S. (2014). Living for the Future with Joanna Macy | Spirituality & Health Magazine. *Spirituality & Health*. Retrieved from http://spiritualityhealth.com/articles/living-future-joanna-macy
Muir, J. (1894). *The mountains of California*. London.
Næss, A., & Drengson, A. R. (2005). The selected works of Arne Naess. Springer.
Natsution, Marhaini. (2015); personal communication with E. Parry; Muhammadiya community, Jakarta, Indonesia.
Nauerth, M. (2016). Verstehen in der Sozialen Arbeit : Handlungstheoretische Beiträge zur Logik sozialer Diagnostik. Wiesbaden: Springer VS.
Navaratne, Harsha Kumara (2015). Personal communication with E. Parry. The SewaLanka Foundation; International Network of Engaged Buddhists; Islander Center; Sri Lanka.
Negotiation Updates COP 21 / CMP 11. (2015). *UNFCCC*. Retrieved December 20, 2015, from http://unfccc.int/meetings/paris_nov_2015/in-session/items/9320.php
Newsham, A. J., & Thomas, D. S. G. (2011). Knowing, farming and climate change adaptation in North-Central Namibia.
Nhat Hanh, Macy, J., Berry, W., Ingerman, S., Rohr, R., Plotkin, B., … Vaughan-Lee, L. (2013). Spiritual Ecology the Cry of the Earth. Chicago: The Golden Sufi Center. Retrieved from http://public.eblib.com/choice/publicfullrecord.aspx?p=1181529
Nussbaum, M. C. (2011). *CREATING CAPABILITIES*. Harvard University Press. Retrieved from http://books.google.co.uk/books?id=Gg7Q2V8fi8gC
Oaas, T. (2013). Application of Consciousness-Based Education in Thailand to Create Sufficiency Economy: Theory, Documentation, and Future Directions. (S. M. Brown, C. Gorini, P. Oates, & S. Watana, Eds.). ProQuest Dissertations Publishing.
OECD, et al. (2012). *A Toolkit of Policy Options to Support Inclusive Green Growth: Submission to the G20 Development Working Group by the AfDB, the OECD, the UN and the World Bank*. Retrieved from http://www.oecd.org/greengrowth/toolkit.pdf
OECD. (2017). OECD Environmental Performance Reviews: Korea 2017. *OECD Environmental Performance Reviews*, 1–5,14–17,19–51,53–59,61–93,95–97,99–111,113–133,1.
Organic Standards | Agricultural Marketing Service. (n.d.). Retrieved May 16, 2016, from https://www.ams.usda.gov/grades-standards/organic-standards
Okochi, Rev. Hidehito (2015). Personal communication with E. Parry. ICE Network affiliate; Japanese Network of Engaged Buddhists, affiliate of INEB, ecotemples; Tokyo, Japan.
Ostrom, E. (2010). Beyond Markets and States: Polycentric Governance of Complex Economic Systems. *The American Economic Review*, *100*(3), 641–672. Retrieved from http://www.jstor.org/stable/27871226
OxfordReference.com, ecosystem distress syndrome. (n.d.). https://doi.org/10.1093/oi/authority.20110803095741562

Parker, T. (2014); personal communication with E. Parry. Yosemite National Park, CA.
Parry, E. (2006); personal observations in 2006, while deputy director of Oxfam America's global humanitarian response department, managing Oxfam America's tsunami response recovery initiatives in Sri Lanka.
Parry, E. Personal Observation, 2012; INEB *Inter-religious Dialogue on the Human Drivers of Climate Change and Biodiversity Loss*, Anuradhapura, Sri Lanka.
Parry, E. Personal Observation, 2014.
Parry, E. Personal Observation, 2015.
Parry, E. Personal Observation, 2016.
Parry, E (2003). *From Conflict to Cease Fire: A NGO's Role in A Transitioning Society-- Sri Lanka and the Sewa Lanka Foundation*; Masters Thesis, Sustainable International Development, the Heller School, Brandeis University.
Parry, E. C. (2016). Societal and Development Implications of the Paris Agreement 1.5ºC in a global social and development context? Retrieved from http://docs.wixstatic.com/ugd/6d11e7_a0b6b7ca942947219c42819722f58458.pdf
Paiboonsittikun, Narumon (2015). Personal communication with E. Parry. INEB / ICE Network offices, Bangkok, Thailand.
Palihawadana, Ajantha, Udaya Liyanage, and Sajeewa Chamrikara (2012). *Islander biodiversity report: Fauna and Flora of the Islander Centre, Rajanganaya.*
Palihawadana, Ajantha (2012); the Islander Center, Sewalanka Foundation; pers. comm. with E. Parry, interview following the 2012 Anuradhapura Inter-Religious Dialogue on the Human Drivers of Climate Change and Biodiversity Loss, Sri Lanka.
Palihawadana, Ajantha (2015); the Islander Center, Sewalanka Foundation; pers. comms with E. Parry, interview on Analog Forestry and the Islander Center, Anuradhapura, Sri Lanka.
Permaculture on a Regional Scale - The Permaculture Research Institute. (n.d.). Retrieved August 18, 2015, from http://permaculturenews.org/2015/08/12/permaculture-on-a-regional-scale/
Pich, T. (2009). Julia F. Parker: Picture Perfect: Portraits of NEA National Heritage Fellows. *NEA Arts Magazine*, (Vol 3). Retrieved from http://arts.endow.gov/about/NEARTS/storyNew.php?id=p12-pich&issue=2009_v3
Pilgrim, S., & Pretty, J. N. (2010). Nature and culture [electronic resource] : rebuilding lost connections. London : Earthscan.
Pilgrims of climate justice plan to impact COP 21 in Paris — World Council of Churches . (n.d.). Retrieved from https://www.oikoumene.org/en/press-centre/news/pilgrims-for-climate-justice-plan-to-impact-cop-21-in-paris
Pinthongvijayakul, V. (2015). Ghosts of the New City. Spirits, Urbanity, and the Ruins of Progress in Chiang Mai, written by Andrew Alan Johnson. Bijdragen Tot de Taal-, Land- En Volkenkunde / Journal of the Humanities and Social Sciences of Southeast Asia. https://doi.org/10.1163/22134379-17104013
Pistono, M. (2013). The Engaged Buddhism of Sulak Sivaraksa | Kyoto Journal. Retrieved July 14, 2014, http://www.kyotojournal.org/the-journal/heart-work/the-engaged-buddhism-of-sulak-sivaraksa/
Prahbu, Gauthama, 2015; personal communication with E. Parry; ICE NEtwork affiliate; eco-temples group; Director Foundation of His Sacred Majesty, Tamil Nadu, India.
Prajapati, S. (2018). Traditional, Folk, Fusion, and conFusion: Music and Change in the Newar Communities of Nepal. (S. Dudley, D. Henderson, R. Magarati, & C. Sunardi, Eds.). ProQuest Dissertations Publishing.
Priyankara, K.L. (2015). Personal communication with E. Parry. ICE Network affiliate;

staff of Sewalanka Foundation at the Islander Center; Sewa Societies; market stall & supplier for the Good Market. Anurahdhapura, Sri Lanka.
Raju, K. V. (1995). *Humanistic economics and basic ideas of Hindu thought*. Anand: Institute of Rural Management.
Raworth, Kate (2016); speaking at a seminar "The Myth of Sustainability," with Erik Gómez-Baggethun at the University of Oxford School of Geography & the Environment.
Raworth, K. (n.d.). Doughnut | Kate Raworth. Retrieved May 17, 2016, from http://www.kateraworth.com/doughnut/
Reid, H., Fenton, A., Kirkby, P., Parry, E., Roberts, E., Stott, C., … Wright, H. (2014). Community Based Adaptation :, (April), 0–65.
RenDa, Venerable Master (2017). Personal communication to E. Parry. Affiliate of ICE Network community & INEB; Zhengjue temple head, Shandong Province, China.
Rockstrom, J., Steffen, W., Noone, K., Persson, A., Chapin, F. S., Lambin, E. F., … Foley, J. A. (2009). A safe operating space for humanity. *Nature*, *461*(7263), 472–475. Retrieved from http://dx.doi.org/10.1038/461472a
Queblatin, Sarah (2015). Personal communication with E. Parry. Global Ecovillage Network Oceania Asia, Cebu, the Philippines.
Queblatin, Sarah (2015), Personal communication with E. Parry. ICE Network affiliate / GEN, at COP21, Paris, France.
Ramp, W. (2008). Transcendence, Liminality and Excess: Durkheim and Bataille on the Margins of `Sociologie Religieuse'. Journal of Classical Sociology, 8(2), 208–232. https://doi.org/10.1177/1468795X08088872
Rapport David J. A4 - Maffi, Luisa, D. J. A.-R. (2011). Eco-cultural health, global health, and sustainability. Ecological Research, v. 26(6), 1039-1049–2011 v.26 no.6. https://doi.org/10.1007/s11284-010-0703-5
Review Articles and Reviews. (1996). Journal of Beliefs & Values, 17(2), 29–38. Ghosts of the https://doi.org/10.1080/1361767960170207
RSBTBS-News-Sombath. (2016). Four years since Laos activist Sombath Somphone's "disappearance" | Sombath Somphone | ສົມບັດ ສົມພອນ. Retrieved November 30, 2017 https://www.sombath.org/en/2016/12/four-years-since-laos-activist-sombath-somphones-disappearance/
Rockstrom, J., Steffen, W., Noone, K., Persson, A., Chapin, F. S., Lambin, E. F., … Foley, J. A. (2009). A safe operating space for humanity. *Nature*, *461*(7263), 472–475. Retrieved from http://dx.doi.org/10.1038/461472a
Roy, O. (1994). *The Failure of Political Islam*. Harvard University Press. Retrieved https://books.google.com/books?id=YEGw8S3ovaoC&printsec=frontcover&dq=The+Failure+of+Political+Islam+by+Olivier+Roy&hl=en&sa=X&ei=m1PBVOHuEMqwyASlz4HoAg&ved=0CCYQ6AEwAA#v=onepage&q=The Failure of Political Islam by Olivier Roy&f=false
Royce, Annet (2015). Personal Communications with E. Parry. The Sewalanka Foundation, Vavuniya, Sri Lanka.
Rutherford, D. (2002). After syncretism: The anthropology of Islam and Christianity in Southeast Asia. A review article. Comparative Studies in Society and History. Cambridge: Cambridge University Press.
Rutherford, D. (2002). After Syncretism: The Anthropology of Islam and Christianity in Southeast Asia. A Review Article. *Comparative Studies in Society and History, 44*(1), 196-205. Retrieved from http://www.jstor.org/stable/3879406
Sadler, D., & Lloyd, S. (2009). Neo-liberalising corporate social responsibility: A political economy of corporate citizenship. *Geoforum*, *40*(4), 613–622. doi:10.1016/j.geoforum.2009.03.008
Said, E. (1977). Orientalism. Retrieved September 3, 2014, from http://www.odsg.org/Said_Edward(1977)_Orientalism.pdf
Salguero, C. P., & Jacobsen, N. (2013). *Thai herbal medicine : traditional recipes for*

health & harmony (Second). Forres: Findhorn Press.
Samaradivakara, Achala (2015). Personal communication with E. Parry. ICE Network community, The Good Market, Mind Markets forum; Colombo, Sri Lanka.
Sangkom, Ven. Phra (2016; 2017). Personal communication with E. Parry. ICE Network community, Sufficiency Economy Temple, Maa-Euang Meditation Center, Chiang Mai.
Sarvodaya – Sri Lanka's Sarvodaya Shramadana Movement. (n.d.). Retrieved January 1, 2015, from http://www.sarvodaya.org/
Scholten, B. A. (2014). *US organic dairy politics [electronic resource]* . (P. C. (Online service), Ed.). Basingstoke: Basingstoke: Palgrave Macmillan
Schumacher, E.F. (2015).
Schumacher, E. F. (1966). *BUDDHIST ECONOMICS*. Retrieved from http://neweconomicsinstitute.org/buddhist-economics
Schumacher, E. F. (1973). *Small is beautiful : a study of economics as if people mattered*. New York: Harper & Row.
Schumacher, E. F. (1974). *Small is beautiful : a study of economics as if people mattered*. London: London : Sphere.
Schumacher, E. F. (1999). *Small is beautiful : economics as if people mattered : 25 years later ... with commentaries*. Hartley & Marks Publishers.
Schwartz, S. J., & Unger, J. B. (2010). Biculturalism and Context: What Is Biculturalism, and When Is It Adaptive?: Commentary on Mistry and Wu. Human Development, 53(1), 26–32. https://doi.org/10.1159/000268137
Seed, J., Macy, J., Fleming, P., & Næss, A. (1988). Thinking like a mountain : towards a council of all beings. London: Heretic.
Semi-anonymous (2012); personal communication to E. Parry by Burundi government official at an IRC / NGO and government representatives meeting, Bujumbura.
Sen, Amartya (1999). *Development as freedom*. Oxford: Oxford : Oxford University Press.
Senanayake, R. (2000). *Analog forestry: An alternative to 'clear and simplify.'* ILEIA newsletter, September, 2000, Colombo, Sri Lanka.
Senanayake, R. (n.d.). The Beginning | Belipola. Retrieved August 19, 2015, from http://www.belipola.com/about/the-beginning/
Senanayake, R. (2015). A New Growth Paradigm ? | Colombo Telegraph. *Colombo Telegraph*. Retrieved from https://www.colombotelegraph.com/index.php/a-new-growth-paradigm/
Senanayake, R. (2015b). On Creating Our Future | Groundviews. *Ground Views*. Retrieved from http://groundviews.org/2015/08/24/on-creating-our-future/#disqus_
Senanayake, R. (2015c). personal communication with E. Parry. ICE NEtwork & Sewalanka Affiliate, Belipola Analog Forestry training, Sri Lanka.
Senarath Gamage, L. (2018). The Dwelling of the War God: the Art and Architecture of Embekke Devāle in Medieval and Early Modern Sri Lanka. (R. L. Brown, S. Mathur, A. Patel, & D. Upton, Eds.). ProQuest Dissertations Publishing.
Sequeiros, L. (2017). Teilhard de Chardin and the Cosmic Life: hundred years after. Pensamiento. Revista de Investigación e Información Filosófica, 73(276), 379–403. https://doi.org/10.14422/pen.v73.i276.y2017.010
Sha, Gum (2015); personal communication with E. Parry. ICE Network & INEB affiliate, Spirit in Education Movement; Yangon, Myanmar.
Shiva, V. (2013). *Talking environment : Vandana Shiva in conversation with Ramin Jahanbegloo [electronic resource]*. (R. Jahanbegloo & O. U. Press, Eds.). New Delhi : Oxford University Press.
Sieg, P. (2004). Buddhism and the earth: Environmental thought in early Buddhist

philosophy. ProQuest Dissertations Publishing.
Sitthirath, V. (2012). *Happy Laos (ຄວາມສຸກຂອງປະເທດລາວ)*. Laos: Youtube. Retrieved from https://www.youtube.com/watch?v=DWQ113aTyDg
Sivaraksa, S. (1988). *A socially engaged Buddhism*. Bangkok: Bangkok : Thai Inter-Religious Commission for Development.
Sivaraksa, S., & Sathāban Santi Prachātham (Bangkok, T. (Eds.). (1993). *When loyalty demands dissent: Sulak Sivaraksa and the charge of lese majeste in Siam, 1991-1993.* Bangkok: Bangkok: Santi Pracha Dhamma Institute : Distributed by Suksit Siam.
Sivaraksa, S. (2005). *Socially Engaged Buddhism*. Delhi: B.R. Publishing Corporation [A Division of BRPC (India) Ltd.]. https://doi.org/Delhi-110052
Sivaraksa, S. (2011). *The wisdom of sustainability : Buddhist economics for the 21st century*. (A. Kotler & N. Bennett, Eds.), *Buddhist economics for the 21st century*. London: London : Souvenir Press.
Sivaraksa, Sulak; Interview | Institute for Studies in Happiness, Economy and Society. (n.d.). Retrieved February 9, 2015, from http://ishes.org/en/interview/itv03_02.html
Sivaraksa (2015a); personal communication with E. Parry, Bangkok.
Sivaraksa (2015b); public talk at the Chulalongkorn University Right Livelihoods summer school program, Bangkok.
Skoll Centre for Social Entrepreneurship. (n.d.). Skoll Centre for Social Entrepreneurship Saïd Business School. Retrieved May 16, 2016, from http://www.sbs.ox.ac.uk/faculty-research/skoll/about-skoll-centre-social-entrepreneurship
Slim, H. (1997). Doing the Right Thing: Relief Agencies, Moral Dilemmas and Moral Responsibility in Political Emergencies and War. *Disasters*, *21*(3), 244–257. https://doi.org/10.1111/1467-7717.00059
Slim, H. (2007). The Use of Force in Humanitarian Intervention: Morality and Practicalities. *Development in Practice*. https://doi.org/10.1080/09614520701723286
Slim, H. (2002). By What Authority ? The Legitimacy and Accountability of Non-governmental Organisations. In *International Council on Human Rights Policy* (pp. 1–11). International Council of Human Rights Policy.
Slim, H. (2007). The Use of Force in Humanitarian Intervention: Morality and Practicalities. *Development in Practice*. https://doi.org/10.1080/09614520701723286
Slim, H. (2015). Aid in danger: the perils and promise of humanitarianism. By Larissa Fast. *International Affairs*, *91*(3), 629–631. https://doi.org/10.1111/1468-2346.12295
Slim, H., & Mitchell, J. (1990). Towards Community Managed Relief: A Case Study from Southern Sudan. *Disasters*, *14*(3), 265–269.
Sombath Somphone. (2012). Happy Laos (ຄວາມສຸກຂອງປະເທດລາວ). Retrieved May 5, 2015, from https://www.youtube.com/watch?v=DWQ113aTyDg
Sponsel, Leslie E. (1995). Relationships Among the World System, Indigenous Peoples, and Ecological Anthropology in the Endangered Amazon. In L. E. Sponsel (Ed.), *Indigenous Peoples and the Future of Amazonia* (pp. 263–293). Tuscon: University of Arizona Press.
Sponsel, Leslie E. (1996). *Tropical Deforestation: The Human Dimension*. (R. C.
Sponsel, Leslie E., Headland, T.N., and Bailey, Ed.). New York: Columbia University Press.
Sponsel, Leslie E. (2012). *Spiritual ecology : a quiet revolution*. Santa Barbara : Santa

Barbara .
Sponsel, Leslie E. (2016). Personal communication with E. Parry; IUCN World Conservation Congress, ICE Network panel, Honolulu, Hawaii.
Staff, L. R. (2015, October 30). 15 Buddhist leaders pen climate change statement to world leaders - Lion's Roar. *Lion's Roar*. Retrieved from http://www.lionsroar.com/15-buddhist-leaders-pen-climate-change-statement-to-world-leaders/
Stanley, J., Loy, D., & Dorje, G. (2009). A Buddhist response to the climate emergency. Boston: Wisdom Publications.
Steffensen, S. V. (2012). Care and conversing in dialogical systems. *Language Sciences*, *34*(5), 513–531. https://doi.org/10.1016/j.langsci.2012.03.008
Steiner, R. (1918). The threshold of the spiritual world ((Authorized Engl. tr. ed. by H. Colleson [sic]).). Lond. &c: Lond. &c.
Sunisa, Jamwiset. (2015). Personal communication with E. Parry; ICE Network affiliate, head of climate change yatras and education; catalyst for Gaia Ashram & Gaia School on Lao-Thai border.
Tacoli, C. (2013). Urban poverty, food security and climate change Policy pointers, (March). Retrieved from http://pubs.iied.org/pdfs/17149IIED.pdf
Tambiah, S. J. (1986). *Sri Lanka : ethnic fratricide and the dismantling of democracy*. London: London : Tauris.
Tennakoon, Ajith (2015); personal communication with E. Parry; the Sewa Lanka Foundation, Colombo & the Islander Center, Sri Lanka.
Thathong, K. (2012). A Spiritual Dimension and Environmental Education: Buddhism and Environmental Crisis. *Procedia - Social and Behavioral Sciences*, *46*, 5063–5068. https://doi.org/10.1016/j.sbspro.2012.06.386
Thailand: "Sufficiency Economics" King Bhumibol's Best Legacy – Analysis – Eurasia Review. (n.d.). Retrieved November 14, 2017, from http://www.eurasiareview.com/27102016-thailand-sufficiency-economics-king-bhumibols-best-legacy-analysis/
The Eleventh National Economic and Social Development Plan (2012-2016). (n.d.). *National Economic and Social Development Board*. Retrieved from http://eng.nesdb.go.th/Portals/0/news/plan/eng/THE ELEVENTH NATIONAL ECONOMIC AND SOCIAL DEVELOPMENT PLAN%282012-2016%29.pdf
The Whirled Bank Group. (n.d.). Retrieved October 23, 2017, from http://www.whirledbank.org/
Thich Nhat Hanh and Martin Luther King | Charter for Compassion. (n.d.). Retrieved September 5, 2014, from http://charterforcompassion.org/node/6728
Thida, NanMya (2015); personal communication with E. Parry. ICE Network & INEB affiliate, Spirit in Education Movement; Yangon, Myanmar.
Thilini, Sewwanda Nanayakara (2015). Personal communication with E. Parry. ICE Network affiliate; staff of Sewalanka Foundation at the Islander Center; works with the Good Market. Anuradhapura, Sri Lanka.
TIME staff. (2015). Thai Academics Demand An End To Political Intimidation. *TIME*. Retrieved from http://time.com/4125406/thailand-junta-academics-students/
Topa, Wahinkpe, aka Don Trent Jacobs (2017). Peacefulness: Being Peace and Making Peace; edited by David Cadman and Scherto Gill. Spirit of Humanity Press, London.
Turner, B. S. (2016). Max Weber and the Sociology of Religion. Revue Internationale de Philosophie, 276(2), 141–150.
Turner, N. J., Davidson-Hunt, I. J., & O'Flaherty, M. (2003). Living on the edge: Ecological and cultural edges as sources of diversity for social-ecological resilience. *Human Ecology*, *31*(3), 439–462.
UNESCO, IPBES: Local and Indigenous Knowledge Systems. http://www.unesco.org/new/en/natural-sciences/priority-areas/links/science-policy/projects/indigenous-knowledge-within-the-framework-of-ipbes/

United Nations. (2015). Sustainable development goals - United Nations. Retrieved July 4, 2017, from http://www.un.org/sustainabledevelopment/sustainable-development-goals/
University of Oxford Environmental Change Institute. (2016). 1p5degrees | CONCLUSIONS. Retrieved July 3, 2017, from http://www.1point5degrees.org.uk/conclusions
Usher, A. D. (2009). *Thai forestry : a critical history*. Chiang Mai, Thailand: Silkworm Books.
Varma, Prashant (2015). Personal communication with E. Parry. ICE Network and INEB affiliate; director at Deer Park Institute, Himachail Bir, India.
van Willenswaard, Hans (2016). *The Wellbeing Society: A Radical Middle Path to Global Transformation* (1st editio). Bangkok: Garden of Fruition.
van Willenswaard, Wallapa (2015). Personal communication with E. Parry. Affiliate of the ICE Network and INEB; head of Suan Na Mee Maa Lo, Towards Organic Asia, Mindful Markets Forum, CURLS; Bangkok and Wongsanit Ashram, Thailand.
Vaughan-Lee, Llewellyn, ed; Thich Nhat Hanh, Macy, J., Berry, W., Ingerman, S., Rohr, R., Plotkin, B. et al (2013). Spiritual Ecology the Cry of the Earth. Chicago: The Golden Sufi Center. Retrieved from http://public.eblib.com/choice/publicfullrecord.aspx?p=1181529
Vayda, A. P. (2014). Against Spiritual Ecology: Reply to Sponsel's Comments (vol 42, pg 803, 2014). *Hum. Ecol.*, *42*(6), 1007. doi:10.1007/s10745-014-9714-0
Visser, W. (2005). *Business Frontiers: Social Responsibility, Sustainable Development and Economic Justice*. ICFAI Books. Retrieved from https://books.google.com/books?id=vTkxb9b5RVEC&pgis=1
Wagemans, J., Elder, J. H., Kubovy, M., Palmer, S. E., Peterson, M. A., Singh, M., & von der Heydt, R. (2012). A Century of Gestalt Psychology in Visual Perception: I. Perceptual Grouping and Figure-Ground Organization. Psychological Bulletin, 138(6), 1172–1217. https://doi.org/10.1037/a0029333
Walker, B., Holling, C. S., Carpenter, S. R., & Kinzig, A. (2004). Resilience, Adaptability and Transformability in Social-ecological Systems. *Ecology and Society*, *9*, 5. doi:5
Wall, D. (2014). *The sustainable economics of Elinor Ostrom : commons, contestation and craft*. London : Routledge.
Wangdi, U. A. Z. (2013). An Extensive Analysis of GNH Index. Retrieved June 23, 2014, from http://www.grossnationalhappiness.com/wp-content/uploads/2012/10/An Extensive Analysis of GNH Index.pdf
Warrior, Robert Allen, 1989. Canaanites, Cowboys, and Indians. Copyright 1989, Christianity and Crisis, Inc.
Water, T. and. (2013). UN Report Says Small-Scale Organic Farming Only Way To Feed The World. *Huffington Post*. Retrieved March 1, 2015, from http://www.huffingtonpost.com/2013/12/17/un-report-organic-farming_n_4461577.html?utm_hp_ref=fb&src=sp&comm_ref=false
Watts, Jonathan (2015). Personal communication with E. Parry. ICE Network affiliate; staff of Japanese Network of Engaged Buddhists, affiliate of INEB, Tokyo, Japan.
Weerakoon, Kanchana (2015). Personal communication with E. Parry. ECO-V Director, affiliate of the ICE Network and the Good Market. Colombo, Sri Lanka.
Welch, Carol, and A. D. (2005). *Greening the Bretton Woods Institutions - FPIF*. *Foreign Policy in Focus*. Retrieved from http://fpif.org/greening_the_bretton_woods_institutions/

Whole Foods Market. (2015). *Whole Foods 2015 Annual Report*. Retrieved from https://assets.wholefoodsmarket.com/www/company-info/investor-relations/annual-reports/2015-WFM-Annual-Report.pdf

Why the University of Edinburgh will not divest from all fossil fuels | Environment | The Guardian. (n.d.). Retrieved May 26, 2015, from http://www.theguardian.com/environment/2015/may/12/why-the-university-of-edinburgh-will-not-divest-from-all-fossil-fuels

Wilson, H., Miles, A. F., Daane, K. M., & Altieri, M. A. (2015). Landscape Diversity and Crop Vigor Influence Biological Control of the Western Grape Leafhopper (E. elegantula Osborn) in Vineyards. *PloS One*, *10*(11), e0141752. doi:10.1371/journal.pone.0141752

Wint, G. (1966). *Asia handbook* (Rev.). Harmondsworth: Penguin.

World Bank Group - International Development, Poverty, & Sustainability. (n.d.). Retrieved September 8, 2017, from http://www.worldbank.org/

Young, O. R., Berkhout, F., Gallopin, G. C., Janssen, M. A., Ostrom, E., & van der Leeuw, S. (2006). The globalization of socio-ecological systems: An agenda for scientific research. *Global Environmental Change*, *16*(3), 304–316. doi:10.1016/j.gloenvcha.2006.03.004

Youk, Senglong (2015); personal communication with E. Parry. ICE Network, INEB affiliate, Cambodia.

Young, M. J. L., Latham, J. D., & Serjeant, R. B. (1990). Religion, Learning and Science in the ʿAbbasid Period. Religion, Learning & Science in the 'Abbasid Period. Cambridge: Cambridge University Press.

Yu, WahWah (2015); personal communication with E. Parry. ICE Network & INEB affiliate, Spirit in Education Movement; Yangon, Myanmar.

Zinn 1922-2010, author, H. (2005). *A people's history of the United States*. New York : HarperPerennial.

Zogib, Liza (n.d.). DiversEarth for nature, Culture and Spirit; Retrieved February 18, 2015, from https://www.youtube.com/watch?v=XoE3CSC5RBw

1.5ºC Agreement	The 2015 Climate talks in Paris (COP21) saw a commitment to hold: "the increase in the global average temperature to well below 2 °C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5 °C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change;" "Emphasizing with serious concern the urgent need to address the significant gap between the aggregate effect of Parties' mitigation pledges in terms of global annual emissions of greenhouse gases by 2020 and aggregate emission pathways consistent with holding the increase in the global average temperature to well below 2 °C above pre- industrial levels and pursuing efforts to limit the temperature increase to 1.5 °C" http://www.ipcc.ch/report/sr15/
350.org	http://350.org "350.org was founded in 2008 by a group of university friends in the United States along with author Bill McKibben, who wrote one of the first books on global warming for the general public, with the goal of building a global climate movement. 350 was named after 350 parts per million -- the safe concentration of carbon dioxide in the atmosphere. Our first actions were global days of action that linked activists and organizations around the world, including the International Day of Climate Action in 2009, the Global Work Party in 2010, Moving Planet in 2011. 350 quickly became a planet-wide collaboration of organizers, community groups and regular people fighting for the future."
ACSCCCE	Asian Civil Society Conference on Climate Change & Ecology https://www.ice-network.net/publication https://www.facebook.com/accekorea2015/
AFSC Cambodia	American Friends Service Committee, Quaker https://www.afsc.org/office/cambodia
ADS	Atish Deipankar Society (ADS) https://m.facebook.com/Atish-Dipankar-SocietyADS-222360744441509/ http://jneb.jp/english/activities/buddhistenergy/international-project-energy/energytourapril2015/networking-event
ALNAP	The Active Learning Network for Accountability and Performance in Humanitarian Action http://www.alnap.org
Analog Forestry	"Analog Forestry is an approach to ecological restoration which uses natural forests as guides to create ecologically stable and socio-economically productive landscapes.' http://www.analogforestry.org/about-us/analog-forestry/

B-Corp	"B Corp is to business what Fair Trade certification is to coffee or USDA Organic certification is to milk. B Corps are for-profit companies certified by the nonprofit B Lab to meet rigorous standards of social and environmental performance, accountability, and transparency." https://www.bcorporation.net/what-are-b-corps
BASD	Bangladesh Association for Sustainable Development http://www.basdbd.org ; part of the ICE Network
Belipola	https://www.analogforestry.org/gallery/belipola-training-centre/ Analog forestry training and community resource center; part of the Good Market; support to Islander Center (esp. Analog forestry)
bioculture / biocultural	Biocultural theory, related to the anthropological value of holism, is an integration of both biological anthropology and social/cultural anthropology. https://en.wikipedia.org/wiki/Biocultural_anthropology According to Schwartz and Unger (2010), "Biculturalism has been defined in a number of ways [e.g., Benet-Martínez & Haritatos, 2005; Berry, 1997; Schwartz & Zamboanga, 2008]. Most generally, biculturalism represents comfort and proficiency with both one's heritage culture and the culture of the country or region in which one has settled. It is applicable not only to immigrants who have come from other countries, but also to children of immigrants who – although they are born and raised in the receiving society – are likely deeply embedded in the heritage culture at home with their families [Portes & Rumbaut, 2001, 2006]. It may also apply to individuals living in ethnic enclaves, where the heritage culture is likely to be maintained across generations, as well as to individuals from visible minority groups, who may be identified as different from the majority ethnic group even if their families have been in the receiving society for multiple generations [Huynh, Nguyen, & Benet-Martínez, in press; Umaña-Taylor, in press]. The ethnic component of biculturalism is not only a reactive response to discrimination, as Mistry and Wu appear to suggest. It also represents a sense of pride in one's heritage, and a desire to hold on to that heritage [Umaña-Taylor, Yazedjian, & Bámaca-Gómez, 2004]."
Brahma Kumaris	India / France affiliates to the ICE Network http://environment.brahmakumaris.org/10th-day-climate-change-conference-–-wednesday-8th-december-merida
Bretton Woods institutions	"The Bretton Woods Institutions are the World Bank, and the International Monetary Fund (IMF). They were set up at a meeting of 43 countries in Bretton Woods, New Hampshire, USA in July 1944. Their aims were to help rebuild the shattered post-war economy and to promote international economic cooperation. The original Bretton Woods agreement also included plans for an International Trade Organisation (ITO) but these lay dormant until the World Trade Organisation (WTO) was created in the early 1990s." http://www.brettonwoodsproject.org/2005/08/art-320747/

CBA	Community Based Adaptation (to Climate Change) https://www.iied.org/introduction-community-based-adaptation-climate-change
CCA	Climate Change Adaptation
C.I.C.	Community Interest Company http://www.oecd.org/cfe/leed/37508747.pdf
Circular Economies	"A circular economy is an alternative to a traditional linear economy (make, use, dispose) in which we keep resources in use for as long as possible, extract the maximum value from them whilst in use, then recover and regenerate products and materials at the end of each service life." http://www.wrap.org.uk/about-us/about/wrap-and-circular-economy "A circular economy is restorative and regenerative by design, and aims to keep products, components, and materials at their highest utility and value at all times. A concept that distinguishes between technical and biological cycles, the circular economy is a continuous, positive development cycle. It preserves and enhances natural capital, optimises resource yields, and minimises system risks by managing finite stocks and renewable flows. A circular economy works effectively at every scale." https://www.ellenmacarthurfoundation.org/circular-economy/overview/concept
Climate Change Resilience	"The ability of a system and its component parts to anticipate, absorb, accommodate, or recover from the effects of a hazardous event in a timely and efficient manner, including through ensuring the preservation, restoration, or improvement of its essential basic structures and functions." https://www.ipcc.ch/pdf/special-reports/srex/SREX-Annex_Glossary.pdf
Climate-smart farming / agriculture	Farming and agriculture strategies to adapt to changing conditions due to climate change, to make decisions about planting and harvesting cycles in adaptive and risk mitigation considerations, and to plant to support mitigation against impacts (for example, coastal erosion, hillside erosion and landslides, etc.)
Climate-Sustainable	Choices for markets, food production, biodiversity, housing and waste cycles that incorportae mitigation, adaptation and resilience to climate change concerns.
Collaborative Economy	"The collaborative economy is defined as initiatives based on horizontal networks and participation of a community. It is built on "distributed power and trust within communities as opposed to centralized institutions" (R. Botsman), blurring the lines between producer and consumer http://ouishare.net/en/about/collaborative economy

conventional farming	http://www.appropedia.org/Conventional_farming "Conventional farming, also known as industrial agriculture, refers to farming systems which include the use of synthetic chemical fertilizers, pesticides, herbicides and other continual inputs, genetically modified organisms, Concentrated Animal Feeding Operations, heavy irrigation, intensive tillage, or concentrated monoculture production. Thus conventional agriculture is typically highly resource and energy intensive, but also highly productive. Despite its name, conventional agricultural methods have only been in development since the late Nineteenth Century, and did not become widespread until after World War 2 (see: Green Revolution). Conventional farming is usually contrasted to organic farming (or sometimes sustainable agriculture or permaculture), as these respond to site-specific conditions by integrating cultural, biological, and mechanical practices that foster cycling of resources, promote ecological balance, and conserve biodiversity.[1] Rather than using synthetic fertilizers, pesticides, growth regulators and livestock feed additives, organic farming systems rely on crop rotation, animal and plant manures as fertilizers, some hand weeding and biological pest control [2]. Some conventional agriculture operations may include limited polyculture, or some form of Integrated Pest Management. (See: Industrial organic agriculture).|
COP	Conference of Parties; UNFCCC climate talks "The COP is the supreme decision-making body of the Convention. All States that are Parties to the Convention are represented at the COP, at which they review the implementation of the Convention and any other legal instruments that the COP adopts and take decisions necessary to promote the effective implementation of the Convention, including institutional and administrative arrangements." http://unfccc.int/bodies/body/6383.php
Deer Park Institute	https://www.deerpark.in "Deer Park Institute is a centre for study of classical Indian wisdom traditions. Established in March 2006 on the campus of a former Buddhist monastic institute, it is a project under Siddhartha's Intent Society. The core vision of the Institute is to re-create the spirit of Nalanda, a great university of ancient India in which all traditions of Buddhism were studied and practiced, alongside other schools of classical Indian philosophy, arts and sciences. With the aspiration of applying compassion and wisdom traditions in the activities of the Institute, we have organised workshops and conferences on environmental issues, preserving local culture and sustainable livelihood in the Institute and local schools. In order to disseminate awareness on these issues, informative documentaries and printed materials have also been produced. Since 2009, Deer Park Institute has also been invited by Himachal Government a few times as resource people on the concept of Zero Waste and has received an Appreciation Award."

Deep Ecology	"An environmental movement and philosophy which regards human life as just one of many equal components of a global ecosystem." - google dictionary
DRR	Disaster Risk Reduction http://www.preventionweb.net/risk/drr-drm The policy objective of anticipating and reducing risk is called disaster risk reduction (DRR). Although often used interchangeably with DRR, disaster risk management (DRM) can be thought of as the implementation of DRR, since it describes the actions that aim to achieve the objective of reducing risk.
DRM	Disaster Risk Management: implementation of DRR
ECI	Environmental Change Institute
ECO-V	http://www.eco-v.org (Eco-volunteers): Sri Lankan no-profit voluntary environmental conservation organization, based upon Buddhist Ecological Philosophy.
Eco-culture / eco-cultural	Developed within the field of biocultural theory, eco-cultural theory characterizes the role of cultural ecology in psychosocial development and has evolved in anthropology as a powerful tool for understanding and investigating the sources of human diversity. It has a strong focus on the relational ecology of culture and ecosystems, more deeply than does the term bioculture.
Eco-cultural health	According to Rapport and Maffi (2010), eco-cultural health is a dynamic, co-evolutionary interaction between humans and the environment, that does not compromise either critical ecosystem processes or the vitality of cultures. (Pilgrim and Pretty, 2012)
Eco-cultural Distress Syndrome	Coined by Luisa Maffi and David Rapport, this is a concept that follows on 'Ecosystems Distress Syndrome,' that the relational ecocultures involving humans also undergo physiological and mental health distress as part of ecosystems experiencing Anthropogenic stressors and shocks.
Ecosystems Distress Syndrome (EDS)	According to OxfordReference.com, EDS is: "The situation that arises when the balanced equilibrium of an ecosystem is disrupted by a failure or disruption of an essential link or links in its chain of being. This can happen as a consequence of human-induced pollution of a water source, introduction of alien species, a change in prevailing temperature range or other environmental conditions, or many possible combinations of these variables. Although there may be no adverse effects on human health, there are sometimes indirect health consequences. An example with beneficial effects on human health is draining swamps, which destroys an aquatic ecosystem but, by eliminating mosquito breeding sites, reduces the risk of mosquito-borne diseases such as malaria. An example with adverse health effects is the ecosystem distress in an industrial zone, such as that in which a mining and smelting operation or a petrochemical plant has polluted the environment, killed the vegetation, destroyed wildlife habitat, and exposed human residents to toxic substances such as lead, mercury, and organic compounds such as dioxins and PCBs."
ESP	Ecosystems Services Partnerships

EST	Earth Systems Theory
G6, G7, G8	Group of Six / Seven/ Eight: Initially the Group of Six, an ad hoc group of Nation States gathered for the first G6 Summit in 1975: the United States, the United Kingdom, France, (West) Germany, Italy, and Japan joined together; Canada joined for the G7; G8 included Russia, but in 2014 Russia was suspended and it became G7 again. This ad hoc, informal forum of Nation-State Governments to 'discuss issues of the world' was stabled to facilitate cooperation on macroeconomic initiatives, refining economic policies so as to benefit these wealthiest nations with the highest Gross Domestic Products (GDPs) and Human Development Indexes (HDIs). These informal gatherings enabled strategic negotiating power within formal intergovernmental conventions.
GST	General Systems Theory
ETA	Ecovillage Transition Asia
FHSM	Foundation of His Sacred Majesty
Food Forests	"Forest gardening is a low-maintenance sustainable plant-based food production and agroforestry system based on woodland ecosystems, incorporating fruit and nut trees, shrubs, herbs, vines and perennial vegetables which have yields directly useful to humans." https://permaculture.org/demonstration-site/food-forest/
Gaia Ashram / Gaia School Asia	Gaia Ashram is a community based education centre on Permaculture, Deep Ecology and Ecovillage Design Education and other sustainable living practices. Gaia Ashram is the base for Gaia School Asia and one of the operational centres of NextGEN Oceania & Asia and we provide trainings/workshops/courses for children, international and Asian youth. Gaia Ashram also provides long-term volunteer and internship opportunities for Asian and international youth. Gaia Ashram is an eco project physically based on two hectare of land located in the North-East of Thailand near Nong Khai and the Laos border of Vientiane. Gaia Ashram is currently being developed using Ecovillage, Deep Ecology or Spiritual Ecology and Permaculture design principles for more info go to Gaia Ashram Design. Gaia Ashram is a place where we allow young teachers of Permaculture, Deep Ecology or Ecovillage Design Education a chance to facilitate and organize courses and we also provide Training of Trainers where we teach about facilitation skills and how to teach in a participatory way. https://gaiaschoolasia.com/gaia-school-asia-ashram/
Gaia Education	https://gaiaeducation.org/index.php/en/
The Gaia Foundation	http://www.gaiafoundation.org

GATT	General Agreement on Tariffs & Trade, signed on October 30, 1947; first discussed at the UN Conference on Trade and Employment, in response to failed negotiations meant to form the International Trade Organisation (ITO).
The Good Market	event & shop: http://www.goodmarket.lk
GEN	Global Ecovillage Network https://ecovillage.org
GENOA	Global Ecovillage Network Oceania Asia https://ecovillage.org/region/genoa/
GDP	Gross Domestic Product:
GNH	Gross National Happiness: a concept and term coined by the King of Bhutan; a GNH metric was also developed by Foster & Alkire
Green Faith	http://www.greenfaith.org/about/history-1 The N. American interfaith network (overlaps and converges with ICE Network; attending ICE II in Seoul, collaborated for statements to governments at UNFCCC COP21);
HAP-I	Humanitarian Accountability Partnership- International http://www.chsalliance.org/files/files/Resources/Standards/2010-hap-standard-in-accountability.pdf
HDI	The Human Development Index: "The HDI was created to emphasize that people and their capabilities should be the ultimate criteria for assessing the development of a country, not economic growth alone. The HDI can also be used to question national policy choices, asking how two countries with the same level of GNI per capita can end up with different human development outcomes. These contrasts can stimulate debate about government policy priorities. The Human Development Index (HDI) is a summary measure of average achievement in key dimensions of human development: a long and healthy life, being knowledgeable and have a decent standard of living. The HDI is the geometric mean of normalized indices for each of the three dimensions." http://hdr.undp.org/en/content/human-development-index-hdi
Highlander Center / Highlander Folkschool	http://highlandercenter.org "Highlander serves as a catalyst for grassroots organizing and movement building in Appalachia and the U.S. South. Through popular education, participatory research, and cultural work, we help to create spaces — at Highlander and in local communities — where people gain knowledge, hope and courage, expanding their ideas of what is possible."

IBRD	International Bank for Reconstruction and Development, more commonly known as the World Bank (WB) http://www.worldbank.org/en/who-we-are/ibrd
ICE Network	Inter-Religious Climate & Ecology Network "a pan-Asia, local-to-local, collaborative network of diverse spiritual communities seeking to share experiences, learning, and wisdom that will build resilience and empowerment in the face of climate change." https://www.ice-network.net/vision-action
ICS	International Commission on Stratigraphy "The International Commission on Stratigraphy is the largest and oldest constituent scientific body in the International Union of Geological Sciences (IUGS). Its primary objective is to precisely define global units (systems, series, and stages) of the International Chronostratigraphic Chart that, in turn, are the basis for the units (periods, epochs, and age) of the International Geologic Time Scale; thus setting global standards for the fundamental scale for expressing the history of the Earth." http://www.stratigraphy.org
IFIs	International Finance Institutions: The World Bank and The International Monetary Fund, formed in the Bretton Woods Agreement in 1944. http://www.bankinformationcenter.org/resources/institutions/ "The International Financial Institutions (IFIs) include the World Bank, the regional development banks, and the International Monetary Fund (IMF). They are the largest source of development finance in the world, typically lending between US$30-$40 billion to low and middle-income countries each year. The IFIs, and in particular the World Bank, are a primary source of development knowledge, publishing research that frames the debate on development issues. Other donor institutions often take their lead from the World Bank and the IMF, thus amplifying the impact of those institutions' lending approaches and decisions."
IGS	Industrial Growth Society
IMF	International Monetary Fund
IPCC	Intergovernmental Panel on Climate Change
ICT	Information and Communications Technology

INEB	International Network of Engaged Buddhists http://inebnetwork.org "In 1989, the International Network of Engaged Buddhists (INEB) was established in Siam (Thailand) by Sulak Sivaraksa and a group of Buddhist and non-Buddhist thinkers and social activists. INEB operates as an autonomous organization under the Bangkok-based Sathirakoses-Nagapradeepa Foundation. Over the years the network has expanded to include members, both individuals and organizations, from more than 25 countries across Asia, Europe, North America and Australia. From this diversity, an understanding of socially engaged Buddhism has emerged which integrates the practice of Buddhism with social action for a healthy, just, and peaceful world."
INEB Institute	http://inebinstitute.org/the-origin/
Inle Lake	A Burmese lake that has become polluted due to the introduction of pesticides to the local aquaculture practise; SEM (Spirit in Education Movement), affiliate of the ICE Network and INEB / SNF, has worked with local community and youth to support eco-clean up and regeneration of the lake, organic aquaculture, and small and medium businesses (shops, restaurants run by youth cooperatives) linked to the organic aquaculture. http://www.rainforestinfo.org.au/projects/DGT/InleLake.pdf
IUCN	International Union of Concerned Scientists
Islander Center	Restored biodiversity, analog forestry, organic farming, natural build, zero waste, part of the Good Market network, a Sewalanka Foundation initiative; birthplace of the ICE Network in 2012. http://www.sevalanka.org/islander.html https://www.youtube.com/watch?v=oeCWugFYn24
ITO	International Trade Organisation
IUGS	International Union of Geological Sciences
Lotus World	Environmental Social and Climate justice non-profit in Seoul, South Korea- part of the ICE Network
JNEB	Japanese Network of Engaged Buddhists
HDI	Human Development Index:
Kalyanamitra	Spiritual Friends (Buddhist term)

Loss & Damage	http://unfccc.int/adaptation/workstreams/loss_and_damage/items/6056.php "Loss and damage At COP 16 in Cancun in 2010, Governments established a work programme in order to consider approaches to address loss and damage associated with climate change impacts in developing countries that are particularly vulnerable to the adverse effects of climate change as part of the Cancun Adaptation Framework."
Mindful Markets Forum	(http://www.greeneconomics.net/ValueRevolution.htm) Affiliates of the ICE Network
MNC	Multi-National Corporation
Mohammadiya or Muhammadiyah	In Indonesia, affiliate of the ICE Network; engaged in environment, climate change, and peacebuilding (also through INEB coordination). "Established in 1912 by Kyai Haji Ahmad Dahlan, Muhammadiyah is Indonesia's oldest Islamic organization and promotes a modern Islam free of superstition and syncretism. Muhammadiyah and its affiliated women's organization, Aisyiyah, have an estimated 29 million members. Muhammadiyah and Aisyiyah (M/A), though technically autonomous, work closely together on social programs throughout Indonesia. The two organizations have collaborated to build schools and universities, as well as hospitals and clinics" https://berkleycenter.georgetown.edu/organizations/muhammadiyah
mvc's	most vulnerable communities (note lower case distinguishes from Most Vulnerable Countries).
MVC's	Most Vulnerable Countries
NASA	The US National Aeronautics and Space Administration https://www.nasa.gov
NOAA	National Oceanic and Atmospheric Administration
NextGEN	Next Generation Eco-village Network https://ecovillage.org/project/nextgen-oceania-asia/

organic farming	http://www.omafra.gov.on.ca/english/crops/facts/09-077.htm "Organic farming is a method of crop and livestock production that involves much more than choosing not to use pesticides, fertilizers, genetically modified organisms, antibiotics and growth hormones. Organic production is a holistic system designed to optimize the productivity and fitness of diverse communities within the agro-ecosystem, including soil organisms, plants, livestock and people. The principal goal of organic production is to develop enterprises that are sustainable and harmonious with the environment. The general principles of organic production, from the Canadian Organic Standards (2006), include the following: protect the environment, minimize soil degradation and erosion, decrease pollution, optimize biological productivity and promote a sound state of health maintain long-term soil fertility by optimizing conditions for biological activity within the soil maintain biological diversity within the system recycle materials and resources to the greatest extent possible within the enterprise provide attentive care that promotes the health and meets the behavioural needs of livestock prepare organic products, emphasizing careful processing, and handling methods in order to maintain the organic integrity and vital qualities of the products at all stages of production rely on renewable resources in locally organized agricultural systems"
Our Voices	ICE Network Affiliate; http://www.greenfaith.org/resource-center/coming-events/1-good-thing-religions-for-a-strong-climate-treaty
Paris Agreement	"The Paris Agreement builds upon the Convention and – for the first time – brings all nations into a common cause to undertake ambitious efforts to combat climate change and adapt to its effects, with enhanced support to assist developing countries to do so. As such, it charts a new course in the global climate effort. The Paris Agreement's central aim is to strengthen the global response to the threat of climate change by keeping a global temperature rise this century well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius. Additionally, the agreement aims to strengthen the ability of countries to deal with the impacts of climate change. To reach these ambitious goals, appropriate financial flows, a new technology framework and an enhanced capacity building framework will be put in place, thus supporting action by developing countries and the most vulnerable countries, in line with their own national objectives. The Agreement also provides for enhanced transparency of action and support through a more robust transparency framework. Further information on key aspects of the Agreement can be found here." http://unfccc.int/paris_agreement/items/9485.php

PECS	The Program on Ecosystem Change and Society (PECS), an initiative jointly sponsored by ICSU and UNESCO.
Permaculture	https://www.permaculture.org.uk/knowledge-base/basics "Permaculture combines three key aspects: 1. An ethical framework 2. Understandings of how nature works 3. A design approach This unique combination provides an ethical framework that is used to design regenerative systems at all scales - from home and garden to community, farm and bioregions. The word 'permaculture' comes originally from 'permanent agriculture' and 'permanent culture' - it is about living lightly on the planet and making sure that we can sustain human activities for many generations to come, in harmony with nature."
PGS	Participatory Guarantee System "In a Participatory Guarantee System (PGS), producers and consumers volunteer their time to develop standards and systems, inspect farms, and ensure that products are organic. The goal is to keep costs down and make organic food more accessible and affordable. PGS can also serve as a stepping-stone for small-scale farmers and make it easier for them to get export-level certification in the future." http://www.goodmarket.lk/organic-pgs.html
Plum Village	Plum Village is a Buddhist meditation centre of the Order of Interbeing in the Dordogne, southern France. It was founded by two Vietnamese monastics, Thích Nhất Hạnh and Chân Không, in 1982.
Right Ecology	Buddhist view of ecology, "A statement by Bhikkhu Bodhi (1987, p. vii) reflects several of the core principles, values, and practices that are most relevant to Buddhist environmentalism: "With its philosophical insight into the interconnectedness and thoroughgoing interdependence of all conditioned things, with its thesis that happiness is to be found through the restraint of desire in a life of contentment rather than through the proliferation of desire, with its goal of enlightenment through renunciation and contemplation and its ethic of non-injury and boundless loving-kindness for all beings, Buddhism provides all the essential elements for a relationship to the natural world characterized by respect, care, and compassion." Here these attributes will be explained and illustrated with examples, several of them drawn from our field research in Thailand (Sponsel 2012)"
Right Livelihood	"The idea of 'right livelihood' is an ancient one. It embodies the principle that each person should follow an honest occupation, which fully respects other people and the natural world. It means being responsible for the consequences of our actions and taking only a fair share of the earth's resources." http://www.rightlivelihoodaward.org/honour/about-the-right-livelihood-award/what-is-right-livelihood/ https://thebuddhistcentre.com/text/right-livelihood

Right Livelihood Laureate	The Right Livelihood Award was established in 1980 to "honour and support courageous people and organisations offering visionary and exemplary solutions to the root causes of global problems". It has become widely known as the 'Alternative Nobel Prize' and there are now 166 Laureates from 68 countries." http://www.rightlivelihoodaward.org/laureates/
Sarvodaya	The Sri Lankan movement founded by AT Ariyaratne; connected to INEB and Sewalanka, an elder generation influence on the foundations that formed the ICE Network. www.sarvodaya.org; http://www.sarvodaya.org/history
SDGs	Sustainable Development Goals with convergence to the Paris Climate Agreement: "The Sustainable Development Goals (SDGs), otherwise known as the Global Goals, are a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity. ... They tackle the root causes of poverty and unite us together to make a positive change for both people and planet." http://www.undp.org/content/undp/en/home/sustainable-development-goals.html
SEM	Spirit Education Movement (HQ Wongsanit Ashram/Bangkok, Thailand) http://www.sem-edu.org
SES	Social Ecological System
Sewa Societies	www.sewalanka.org "Community Based Organization (CBO) or Sewa Society at every Grama Niladari Division level. The evolving of a democratic village institution begins with this society. This is process of small group formation and CBO formation."
SfW	School for Wellbeing (HQ Bangkok, Thailand)
Sharing Economy	An economic system of sharing existing resources or material across a community, in order to reduce waste and over-consumption.
SIDs	Small Island Developing States
SLF	Sewa Lanka Foundation (HQ Colombo, Sri Lanka)
SNF	Sathirakoses Nagapradeepa Foundation (HQ Bangkok, Thailand)
Social-entrepreneurship	Business and market initiatives undertaken with the values of the society and societal wellbeing as integrated standards.
Social-eco-entrepreneurship	Business and market initiatives undertaken with the values of the society and whole ecological wellbeing as integrated standards.

Socially Engaged Buddhism	Buddhists who actively engage with the problems of the world—social, political, economic, and ecological—on the basis of Buddhist ideas, values, and spirituality. Key principles such as karma, the Four Noble Truths, interdependence, non-harmfulness, and non-judgmentalism relate to social engagement (Loy)
SPERI	Social Policy Ecology Research Institute, Animist organisation in Vietnam; collaborates with ICE Network, TOA, INEB, GENOA http://speri.org/eng/
S.P.H.E.R.E.	http://www.sphereproject.org/handbook/ "The Sphere Handbook is one of the most widely known and internationally recognized sets of common principles and universal minimum standards for the delivery of quality humanitarian response. Because it is not owned by any one organization, the Sphere Handbook enjoys broad acceptance by the humanitarian sector as a whole."
Suan Nguyen Mee Ma	Thai for the 'Garden of Fruition,' Suan NMM is a publishing house, a bookshop, a cafe and restaurant, and a shop for organic, sustainably and locally produced products from the Towards Organic Asia and Mindful Market Forums, affiliates of the ICE Network; Bookshop, café, restaurants, printers/publishers (SNF, etc.)
TEK	Traditional Ecological Knowledge (Berkes 2008)
TNC	Trans National Corporation
TOA	Towards Organic Asia
TILCEPA	IUCN Theme on Indigenous & Local Communities, Equity & Protected Areas (TILCEPA)
UNFCCC	United Nations Framework Convention on Climate Change
We Have Faith	The We Have Faith – Act Now for Climate Justice Pan Africa Cycling Caravan — affiliates of IPACC and ICE Network
WGA	Anthropocene Working Group for the International Commission on Stratigraphy
WB	The World Bank
Wongsanit Ashram	https://wongsanit-ashram.org/tha/ Ashram formed by SNF, and connected to INEB, SEM, ToA, School for Wellbeing, and ICE Network

Appendix B.

INFORMATION SHEET FOR PARTICIPANTS

Ethics Board Reference Number:

YOU WILL BE GIVEN A COPY OF THIS INFORMATION SHEET

Title of study

Emerging configurations for climate action and resilience within an Asian Interfaith Alliance

Invitation Paragraph

You are invited to take part in a study about cooperation, information sharing, project learning exchanges, and solution building between local groups across Asia, focused on climate change resilience, adaptation, environmental restoration and sustainability.

What is the purpose of the study? This study is interested in learning about the ways in which local relationships form to build potentially new and creative solutions to the challenges of climate change, and to explore ways in which applied learning and networked capacity building may develop around climate change efforts. The eco-spiritual, traditional/local knowledge sharing and inter-faith approach is of particular interest to this study. This participatory research may help point the way towards modelling better methods of approaching or supporting local efforts to build comprehensive climate change resilience.

Why have I been invited to take part? You are engaged with or associated to those engaged with local-to-local cooperation to address the challenges of climate change, environmental vulnerability, and biodiversity conservation; you may be a representative of a spiritual or religious group involved in climate resilience networks and activities.

Do I have to take part? No, this is completely voluntary! However, it is hoped that by engaging in this research, the experience will be valuable to all participants, and the research findings will contribute to learning for all involved.

What are the possible risks of taking part? There are no “out of the ordinary” risks in taking part in this research. If, however, you are concerned about any potential risk or vulnerability that may be incurred by taking part in this research, please approach me and we can discuss your concerns in a safe setting. Above all things, this research should not bring harm to others, and I will do my best to ensure this.

What are the possible benefits of taking part? Your voice, experience and perspective can inform this research, teach others, and you can contribute to greater learning for climate change and resilience concerns. You may also learn a bit from the process, particularly in group discussions or workshop settings, and this research may provide a space for creative, different discussions around your work and the work of your colleagues. Who knows? Maybe new ideas will be sparked in the process!

Will my taking part be kept confidential? You will have the option to remain anonymous if you wish; this option will be provided with your informed consent form.

How is the project being funded? The DPhil research student (Emilie Parry) has taken out student loans in order to undertake this research and her degree. Her university college has awarded her small sums to support the cost of the plane ticket to Southeast Asia.

What will happen to the results of the study? The results of the study will be shared with all participants, at minimum in written form, although there will be at least 3 planned group sessions for debriefing, clarification and feedback to which an open invitation will be extended. Any publications from this research will be shared with participants. The research findings are intended to be shared among climate change action communities as well as within academic and policy circles.

Who should I contact for further information?

If you have any questions or require more information about this study, please contact me using the following contact details:

Emilie Parry, emilie.parry@ouce.ox.ac.uk; local phone number (Thai or Sri Lankan #s)
School of Geography and the Environment
Oxford University Centre for the Environment
University of Oxford
South Parks Road
Oxford, OX1 3QY
United Kingdom
Tel: +44 (0)1865 285070
Fax: +44 (0)1865 275885

What if I have further questions, or if something goes wrong?

If this study has harmed you in any way or if you wish to make a complaint about the conduct of the study you can contact the University of Oxford, School of Geography & the Environment using the details below for further advice and information:
Oxford University Centre for the Environment, University of Oxford
South Parks Road, Oxford, OX1 3QYUnited Kingdom **Thank you for reading this information sheet and for considering taking part in this research.**

CONSENT FORM FOR PARTICIPANTS IN RESEARCH STUDIES

Please complete this form after you have read the Information Sheet and/or listened to an explanation about the research.

Title of Study: _*Emerging Configurations for Climate Action and Resilience within Asian Interfaith Alliances*_____
University of Oxford School of Geography & the Environment

Name of Researcher: Emilie C. Parry

Thank you for considering taking part in this research. The person organising the research must explain the project to you before you agree to take part. If you have any questions arising from the Information Sheet or explanation already given to you, please ask the researcher before you decide whether to join in. You will be given a copy of this Consent Form to keep and refer to at any time.

Please tick or initial

I confirm that I understand that by checking/initialling each box I am consenting to this element of the study. I understand that it will be assumed that unchecked/initialled boxes mean that I DO NOT consent to that part of the study. I understand that by not giving consent for any one element I may be deemed ineligible for the study. ☐

Please tick or initial

1. ***I confirm that I have read and understood the information sheet dated [_____]for the above study. I have had the opportunity to consider the information and asked questions which have been answered satisfactorily.** ☐

2. ***I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason. Furthermore, I understand that I will be able to withdraw my data up to [*insert date if stated on Information Sheet*] OR the point of publication.** ☐

3. ***I consent to the processing of my personal information for the purposes explained to me. I understand that such information will be handled in accordance with the terms of the UK Data Protection Act 1998.** ☐

4. ***I understand that my information may be subject to review by responsible individuals from the University for monitoring and audit purposes.** ☐

5. Anonymity is optional for this research. Please select from the following 3 options:

a. **I agree to be fully identified** ☐

b. **I agree to be partially identified** ☐

c. **I wish to remain anonymous** ☐

6. I agree that the research team may use my data for future research and understand that any such use of identifiable data would be reviewed and approved by a research ethics committee. (In such cases, as with this project, data would/would not be identifiable in any report). ☐

7. I understand that the information I have submitted will be published as a report and I wish to receive a copy of it. ☐

8. I consent to my interview being audio/video recorded. ☐

9. I consent to my being photographed individually/in a group (circle one or both). ☐

10. I agree to maintain the confidentiality of focus group discussions ☐

11. I understand that confidentiality cannot be guaranteed during the [focus group/project team work/ conference workshops/…] ☐

_____	_____	_____
Name of Participant	**Date**	**Signature**

__Emilie C. Parry____	_____	_____
Name of Researcher	**Date**	**Signature**

Appendix D: Photographs, Figures and Tables:

Figures Tables and Photographs

I. Photographs

Page 13: Photos clockwise from top left. Top left: i. Gaia Ashram food forest on Lao-Thai border with recovered ecosystems on what was previously a conventionally-farmed (with chemical pesticides and fertilizers) monocropped farm; ii. top right: eco-building utilizing mud-brick technique with earth and straw from land and build collaboratively with local community and a wider range of volunteers interested to learn traditional eco-build techniques; iii. left bottom: another natural eco-build at Gaia Ashram; iv. bottom right: restored ecosystems with some food forestry, Gaia Ashram Lao-Thai border. (E.Parry, 2015)

Page 19: Photo v: Buddhist monk, Interviewee #63, affiliate of INEB and the ICE Network, standing high up on a tree limb the Bellipola training centre for Analog Forestry

Page 26: Photo vi: Peacock climate change dance, at the inter-religious dialogue on human drivers of climate change and biodiversity loss, ICE Network at the Islander Center, Sri Lanka.

Page 27: Photo vii.: transitional organics combined with TEK (traditional ecological knowledge) community agroecology project, ICE affiliate projects, Sri Lanka.

Page 28:
Photo viii.: one of the many multi-faith shrines at the Islander Center, Sri Lanka, during the first ICE Network conference.

Photo ix.: a special ceremony at ICE I conference between a Sri Lankan Tamil Hindu priest and a Sinhala Buddhist at a forest shrine for Ganesha, recognizing interconnection and vowing to care for Mother Earth together (2012, E. Parry)

Page 29:
Photo x: LTTE militarized border near Vavuniya, 2001 (Parry)

Page 30:

Photo xi: slash and burn by war IDPs passing through, in area of the Islander Center (Parry, 2012)

Photo xii above: a building has partially fallen off into the sea, an example of coastal erosion in Sri Lanka was visited as part of the climate change study visits in the ICE Network conference. Mannar, Sri Lanka, 2015.

Page 31:
Photo xiii. to left: The Wewe and lake at Islander Center are teeming with life: hundred of reptiles, thousands of insects and birds, two crocodiles, and many water monitors. This is in contrast to the above slash and burn photo, which this area resembled 3 years prior to the start of an Analog Forestry project at the Islander Center (2012).

Page 32:
Photo xiv, left: a water monitor enjoys an early swim at the Islander Center; photo ix right, this land just 3 years prior was brown and cracked dry, scarred black in spaced, inhospitable to life.

Page 34:
Photo xvi: Modeling spiral-webbing process across ICE Network affiliates.

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Photo xvii. Above left: early stages of an village / temple organic and permaculture transition in Burma; Photo xviii. Above right, Buddhist monks from Sri Lanka and Thailand study the plants in a cooperative plant nursery intended for transitional organic and permaculture design; Below left photo xix, a Lao village continues stages for Analog forestry; photo xx. below right, Thai students study Buddhist 'nature collaboration farming' techniques with farmers. (Parry, 2015)

Ritual commences and permeates ICE Network affiliate activities. Above right photo xxi, Buddhist monks and a Muslim Imam join Thai and Cambodian and Burmese farmers and students in planting sacred peace trees to support regenerative biodiversity whild building relationships of peace and mutalitity. Bottom right photo xxii., South Korean, Indian, Thai, Nepalese, Sri Lankan and many other faith actors and community members undertake an interfaith 'Climate Yathra' or spiritual pilgrimage for climate education and outreach. Below left photo xxiii, a permaculture and natural building training at Wongsanit Ashram includes meditation, ritual and experiential learning. Below center xxiv and above right xxv, an interfaith spiritual 'Smudging' or 'Smoke' commences a day of experiential learning and discussion at a Thai ecotemple and eco-Ashram. (Parry, 2015, 2016.

Page 145:
Photo xvi (E. Parry): The Dharma Wheel of the Noble Eightfold Path atop the Tibetan temple at Deer Park Institute of Himachal Bir, Norther India. Deer Park is an affiliate of ICE Network and INEB, part of ICE Network eco-temple groups, Zero Waste and Conscious Consumerism campaigns, organic and natural building, eco-education for children, natural soap making and other natural healing organic products, and climate and social-ecological education activities, among others.

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Photos: Above xvii, monks working on nature-build temple as part of sufficiency economy & ICE Network ecotemples initiatives; Photo xviii, sign (below) at the entrance to Maab-Euang Meditation & Training Center for Sufficiency Economy; monks and local villagers work on their eco-build temple and the Bauddha, outside of Chiang Mai, Thailand.

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Photos clockwise from upper left: xxix. Trat Towards Organic Asia Consumer-Sustainable Fisheries workshop; xxx. Smart Consumer Workshop TOA worm composting; xxxi. sustainable fisheries TOA consumer-producers program; xxxii. Community Mangrove restoration.

Page 184:
Photo xxxiii. Contrasts--biodiversity restoration on Islander Center lands and the environs.

Page 186:
Photo xxxiv. This photo xxxiv was taken at a training of monks, priests and community climate and resilience actors (all affiliates of the ICE Network) in Belipola, Sri Lanka. The training was on analog forestry, an approach developed by Sri Lankan ecologist-biologist-entomologist Ranil Senanayake. It is a type of silviculture that offers strategies for rapidly restoring ecosystems, while meeting diverse needs for food (food forests), traditional healing plants, and income generation for local communities. In Senanayake's own words, "Analog foretry is an approach to ecosystem restoration that considers the process of forest formation and the functioning of forest services to be critical in establishing a sustainable ecosystem characterised by a high biodiversity to biomass ratio. Design is produced through a synthesis of traditional and scientific knowledge. It seeks to optimise the productive potenital of the design rather than maximise the production of one crop and to maximise Ecosystem Services by increasing the volumetric mass of the photosynthetic component." (Senanayake, 2015, 2015 b). In this photo, Buddhist monk Venerable Manjusri Balangoda spontaneously climbed up a tree to 'connect differently' with the tree itself. While the photo does not show it, he is approximately 12 metres off the ground. (Photo credit: Emilie Parry, 2015)

II. Figures & Tables

Page 75:

Figure 1: NOAA State of the Climate Report, February 2016.
(NOAA National Centers for Environmental Information; State of the Climate: Global Analysis for February 2016, 2016)

Page 108:
Figure 2: ICE Network logo

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Figure 3: ICE Network self-description

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Figure / Image 4: The Noble Eightfold Path as illustrated on the Dharma Wheel. Source: Krisse - Own work, CC BY-SA 3.0, https://commons.wikimedia.org/w/index.php?curid=22705627

Page 147:

Figure / Table 5: Unsustainability of an Exponential Growth Model.Source: 30 Year Update on “Limits to Growth” (Meadows, 2005) sourcing Wackernagel et al.

Page 199:
Figure / Table 6: some examples of expanding and catalysing collaboration across ICE affiliates

Page 209:
Table 7: from Wallace, overview of stages of Revitalization Movements (Wallace, 1956)