Navigating holostic and sustainable learning: Challenges and opportunities in ongoing and creeping emergencies

Kagawa, Fumiyo

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University of Plymouth

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NAVIGATING HOLISTIC AND SUSTAINABLE LEARNING: CHALLENGES AND OPPORTUNITIES IN ONGOING AND CREEPING EMERGENCIES

FUMIYO KAGAWA

PhD  2009
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NAVIGATING HOLISTIC AND SUSTAINABLE LEARNING: CHALLENGES AND OPPORTUNITIES IN ONGOING AND CREEPING EMERGENCIES

by

FUMIYO KAGAWA

A thesis submitted to the University of Plymouth in partial fulfillment for the degree of

DOCTOR OF PHILOSOPHY

Faculty of Education

November 2009
Abstract

Fumiyo Kagawa

Navigating holistic and sustainable learning: Challenges and opportunities in ongoing and creeping emergencies

The overall aim of this thesis is to develop and critically reflect upon learning principles that are fit for purpose in engaging learners within situations of actual and anticipated humanitarian crisis. The study begins with an examination of the broad backdrop to the study, the interlinked causes of humanitarian emergencies - globalization, climate change and underlying worldviews. It is based on the assumption that interconnected social and environmental problems, as currently manifested, will be further exacerbated by the consequences of incremental and especially runaway climate change, or ‘creeping emergencies.’

The study draws upon expertise and insights from two contemporary educational discourses: emergency education and sustainability-related education. It was conducted in two phases. Phase one aimed at examining the current range of renditions and understandings within the two fields and by eliciting perceptions of the interface between the two fields. It was conducted through literature reviews and interactions with ten experts, five from each field. A process of dialogue and reflection allowed for the emergence of holistic and sustainable learning principles that could be applied within emergency contexts. Using a qualitative case study methodology in phase two, the applicability of and practitioner receptivity to the learning principles emerging from phase one were investigated through engagement with the ongoing initiative of the NGO Plan International, Children and Young People at the Centre for Disaster Risk Reduction, and its organically emerging follow-up multi-agency initiative, Children in a Changing Climate. By and large, participating educational practitioners expressed their sense of the relevance of the principles to a considerable degree. In order to examine contextual variables in applying the six principles, further critical appraisal of the principles was undertaken through documentary case studies of Plan International’s Yogyakarta Earthquake Response and Recovery Program in Indonesia and its Rapid Education Pilot Project in Sierra Leone. The examination reveals that the principles and their constituent elements were of varying importance and practicality
depending on context. The exigencies of each situation posed limitations on what could be done practically in the field during the immediate crisis period with the application of some principles and elements, while nonetheless important for building future resilience, better held over until the mid-or long-term.

This study suggests the need for more empirical research into holistic renditions of emergency education implementation, theoretical development with a view to embedding insights from the field of emergency education into seemingly 'non-emergency' contexts, and advancing educational thinking and practice in anticipation of runaway climate change.
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*External*


*Internal*

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Signed

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LIST OF ACRONYMS AND ABBREVIATIONS

CCC  Children in a Changing Climate
CCCD  Child Centred Community Development
CFS/E  Child Friendly Spaces/ Environments
CIDA  Canadian International Development Agency
COP  Conference of the Parties
CRC  The Convention on the Rights of the Child
DFID  Department of International Development
DRR  Disaster Risk Reduction
EFA  Education for All
ESD  Education for Sustainable Development
GTZ  German Federal Ministry for Economic Cooperation and Development
IDPs  Internally Displaced Populations
IDS  Institute for Development Studies
IIEP  International Institute for Educational Planning
IMF  International Monetary Fund
INEE  Interagency Network for Education in Emergencies
IPCC  Intergovernmental Panel on Climate Change
IRC  International Rescue Committee
ISDR  International Strategy for Disaster Reduction
IUCN  International Union for Conservation of Nature and Natural Resources
MDGs  Millennium Development Goals
MOU  Ministry of Education
NCB  National Children's Bureau
NORAD  Norwegian Agency for Development Cooperation
NRC  Norwegian Refugee Committee
SAPs  Structural Adjustment Programmes
SIDA  Swedish International Development Agency
UN  United Nations
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<th>Acronym</th>
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<tr>
<td>UNCED</td>
<td>United Nations Conference on Environment and Development</td>
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<td>UNDESD</td>
<td>United Nations Decade of Education for Sustainable Development</td>
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<td>UNDP</td>
<td>United Nations Development Programme</td>
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<td>UNEP</td>
<td>United Nations Environment Programme</td>
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<tr>
<td>UNESCO</td>
<td>United Nations Educational, Scientific and Cultural Organization</td>
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<td>UNFCCC</td>
<td>United Nations Framework Convention on Climate Change</td>
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<td>UNHCR</td>
<td>United Nations High Commissioner for Refugees</td>
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<td>UNICEF</td>
<td>United Nations Children's Fund</td>
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<td>UNLD</td>
<td>United Nations Literacy Decade</td>
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<td>UNRWA</td>
<td>United Nations Relief and Work Agency for Palestine Refugees</td>
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<td>USAID</td>
<td>United States Agency for International Development</td>
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CHAPTER ONE

INTRODUCTION: SEARCHING FOR HOLISTIC AND SUSTAINABLE LEARNING IN ACTUAL AND ANTICIPATED HUMANITARIAN EMERGENCIES

1.1. Introduction

There is increasing recognition that human beings and planet Earth are facing interlocking global challenges, or emergencies: increasing numbers of localized wars, growing volume of refugees and internally displaced populations (IDPs), serious environmental degradation, loss of biological diversity, deep levels of poverty, and the HIV/AIDS pandemic. Based on her analysis of armed conflicts, Davies (2004) states that "[t]here are no signs that the world is becoming a less conflictual place" (3). Likewise, Renner (2005) states that in the post 9.11 world, there are increasing security challenges, which are more diffuse, less predictable, more multi-dimensional in both developing and developed countries. Problems we face will be further deepened, not least because of the unknown consequences of global warming and impending abrupt climate change. Clearly the world we live in is better characterized by metaphors of change and uncertainty rather than those of stability and certainty.

These interconnected global challenges can be seen as clear symptoms or manifestations of unsustainability. For instance, with a focus of the Earth's ecology as a whole, Hossay (2006) describes our challenges as follows:

We're in trouble. Put simply, we are destroying the natural systems on which our lives depend. The pollutants that we've pumped into the air, water, and soil have fundamentally changed the earth's ecological balance. Much of the damage is irreversible. The destruction of the earth's ozone layer, the acidification of our rain, the poisoning of our rivers, lakes and oceans, the depletion of our soil, the devastation of our forests, and large-scale extinctions intensify one another.

1 Global warming and climate change are frequently used interchangeably by some, but others distinguish them as two different phenomena. Global warming takes place when the "thin layer of atmosphere is being thickened by huge quantities of human-caused carbon dioxide and other greenhouse gases. And as it thickens, it traps a lot of the infrared radiation that would otherwise escape the atmosphere and continue out to the universe. As a result, the temperature of the Earth's atmosphere - and oceans -is getting dangerously warmer" (Gore 2006: 27). On the other hand, climate change means, according to the Intergovernmental Panel on Climate Change (2007a), "any change in climate over time, whether due to natural variability or as a result of human activity" (2). "[T]he nonlinearity of the climate system may lead to abrupt climate change (IPCC 2007a: 941)."

1
creating a multi-pronged and devastating attack on the earth's capacity to support human life. In the short term, our treatment of the earth as a toxic waste dump will lead to mass environmental destruction and tremendous human suffering. In the long term, if unchecked, it will kill us all. We won't be the first to go; many species will proceed us into oblivion. But, make no mistake: if we do nothing, we will go (1).

The overall aim of this thesis is to develop and critically reflect upon learning principles that would be effective in addressing the challenges posed by ongoing and future emergencies. From the outset, it is important to highlight that what is written here is based on the assumption that ongoing and anticipated humanitarian emergencies are not necessarily 'natural,' as Shiva (2001), among others, has pointed out. Rather, human activities (including structures created by human decisions and actions) and narrow human perceptions can to a large extent be deemed to constitute root causes of emergencies. This study also holds a transformative aspiration, meaning that it avoids a deterministic view and embraces a belief in human potential for positive change and action through learning.

The study is going to draw upon expertise from two recent educational discourses: education in emergencies (i.e. emergency education) and education for sustainability (or sustainability-related education) as examples of emerging educational thinking and practice for addressing emergencies. Both are contested fields with diverse and often conflicting assumptions, proposals and justifications. Emergency education takes place in contexts where education systems and provisions are affected, interrupted and/or damaged by 'natural' disasters (e.g. earthquakes, tsunamis, floods) or 'human-made' crises (e.g. armed-conflicts and genocides) during and immediately after the emergencies, and reconstruction periods (Chand et al. 2003; Obura 2003). The field includes diverse educational activities to 'normalize' traumatized children and youth (Sinclair 2002). The field of sustainability-education is a confluence of international

2 In this thesis I am using sustainability and education for sustainability or sustainability-related education as a broad overarching terminology which encompasses sustainable development, and education for sustainable development and its sister schools. When particular organizations or thinkers prefer to use sustainable development or education for sustainable development in their discussions, I have left the term as they prefer it. What I try to explore in this thesis is the assumptions and values under the same and/or different labels.
educational change movements over past 20 years, and it is concerned about the interconnected social, economic and environmental challenges. The proponents commonly refer to the definition of sustainable development suggested in the *Our Common Future*: "development that meets the needs of the present without compromising the ability of future generations to meet their needs" (WCED 1987:43). The field currently enjoys its momentum due to the UN Decade for Education for Sustainable Development (2005-2014) (see page 119).

There are three leitmotifs which pervade the whole study: holism, sustainability and learning. These concepts will be explored in this thesis, but it would be helpful to suggest broad working definitions and clarify the relationships, even tentatively, between these terms in order to set parameters to the discussion.

The term 'holistic' refers to a holistic worldview which emphasizes interconnectedness, synthesis, and integration, and which regards fragmentation and compartmentalized perception as the root cause of global crises. This study is based upon the assumption that for insightful understanding and effective action in a fast changing and crisis driven world, a holistic worldview is indispensable.

Regarding sustainability, it is helpful to take Berkes et al.'s (2008) view that ecological, economic and social sustainability means "a resilient social - ecological system, which can buffer a great deal of change or disturbance" (15). Taking this view, sustainability is concerned about the long-term survival and well-being of society and the environment as a whole. This research considers a holistic worldview as a prerequisite in promoting sustainability.

Learning is considered as a key vehicle in pursuing sustainability and nurturing a holistic understanding of the world. Agreeing with Chambers' (1997) view that developing capacities for "learning how to learn, learning how to change, and learning how to organize and act" becomes vital when 'problem solving' has limited usefulness in a world of flux of change and uncertainty (14). The scope of the thesis is wide, involving learning which takes place within formal, non-formal, and informal educational settings.
In order to give a broad backcloth to the study, this chapter aims at examining the interlinked causes of humanitarian emergencies. First, it critically reviews current globalization processes which have deepened a cycle of violence by exacerbating inequality and increasing vulnerability and marginalization. Second, plausible impacts of climate change are discussed to examine the kind of emergencies we might face. Third, the chapter goes on to investigate worldviews in relation to global crises by reviewing characteristics of the western mechanistic worldview and holistic and ecological worldviews. Worldviews are important to articulate if responses to crises are to be dealt with at a deeper level rather than superficial level. Examining worldviews is also critical from the perspective that educational thinking and practices are predicated on them. Following this review, key characteristics of education based on each worldview will be described. Finally, research questions are outlined, and a brief synopsis of following chapters is offered.

1.2. Globalization of Inequality

We live in a seamless world where local is but one point in the web at which all disturbances in the whole are unavoidably felt. It may seem like a truism then to say that the condition of our lives, indeed our survival, and the state of the global environment are interdependent and yet our lifestyles tend to numb us to this most intimate of connections. Our interrelatedness is often only translated into a reality when some part of the system is at crisis point, and then only when the costs are felt in our pockets or in our state of health (Greig et al. 1987:7).

In the current globalized world, nation states, non-state actors, people and environments are deeply interconnected and interdependent. Movements of goods, money, people, information, and problems across national borders have become more and more frequent and intense than ever (Burbules and Torres 2000; The Real World Coalition 2001; Renner 2005). But this does not necessarily mean we have become more aware of the complex web of connections as Greig et al. (ibid.) point out above. Globalization is commonly understood to include multiple dimensions or factors such as economic, political, technological, and cultural, while also embracing the nested spatial levels of local, national, regional, international, and global (Stromquist 2002; Tikly 2001; Wells et al. 1998). However, globalization is a contested and paradoxical
subject. For instance, according to Morrow and Torres (2000), there are different views regarding the origins of globalization. One stance is that globalization has as long a history as that of general human civilization. A second understanding is that globalization began at the time of expansion of the global economy in the sixteenth century. A third understanding is that it is a rather recent phenomenon starting from the mid-twentieth century, and is influenced by the idea of 'post-Fordist' transformation toward global processes of production in the 1970s and 1980s.

Tikly (2001) regards globalization as a set of processes rather than a single 'condition,' involving interactions and networks within the political, military, economic and cultural domains as well as those of labour and migratory movements and of the environment. These processes are fractured and uneven rather than linear and involve a complex 'deterritorialisation' and 'reterritorialisation' of political and economic relations" (156) [Italics in original].

He goes on to argue that "power is a fundamental attribute of globalisation"(156).

Similarly, regarding the differentiated experiences of globalization, Rizvi (2004) points out that while for some it means progress, prosperity and peace, for the others it means deprivation, disaster and doom.

Different theoretical positions suggest distinct yet sometimes overlapping views of globalization in terms of the role of nation states, the role of the economy, the distribution of material resources, and the role of education. Among the various discourses of globalization, the most dominant is the neo-liberal perspective, and it is considered as fundamental to understanding globalization (Bonal 2002; Stromquist

3 For different analytical lenses applied to globalization in detail, see Wells et al. (1998: 324-337) who suggest five standpoints:

- Neo-liberalism (Promoting free and unregulated capitalist markets with the belief that they maximize economic efficiency and personal freedom equally);
- Liberal progressives (Cautious and conditioned embracing of the global economy introducing more socialist welfare state policies such as protecting rights of employers at the bottom of labour market);
- Realists (Criticizing the overstatement of the extent and novelty of globalization claiming that the current globalization is not necessarily more significant than before, and that it does not necessarily reduce the role of nation states, either);
- Post-Marxism (Being critical about the social inequalities created as a result of globalization, and replacement of human labour with new technologies);
- Neo-Marxism (With an emphasis on the importance of the contextual nature of experience, criticizing social institutions for representing the ideological hegemony of globalization, including the homogenized consumer culture and mass media which create free market demand).
2002; Wells et al. 1998). Simply put, neo-liberalism is "an economic doctrine that sees the market as the most effective way of determining production and satisfying people's needs" (Stromquist 2002:25). For instance, it advocates an expansion of a free and unregulated market with less state intervention, upholds an increasing role for the private sector, and promotes liberalization through weakening domestic protection of most economic sectors. In order to maximize a capitalist market system, economic efficiency, competition, and individualism are important elements in its discourse (Stromquist 2002; Wells et al. 1998). Neo-liberal policies and mechanisms have downgraded the role of nation states and also weakened national authority in determining its own policy priorities (Rizvi 2004; Wells et al. 1998).

A notorious manifestation of neo-liberal ideology are Structural Adjustment Programmes (SAPs), initiated by the International Monetary Fund (IMF) and the World Bank (WB) since the 1980s. SAPs have imposed special lending conditions on debt-laden countries by imposing economic policies promoting the liberalization of domestic economy, and by reducing governmental spending on public expenditures such as social welfare, education and health, so as to promote privatization of public enterprises (Ansell 2005; Stromquist 2002).

According to Chossudovsky (1997), there exist a number of empirical studies which have examined the devastating economic and social consequences of SAPs. Such consequences include: destruction of natural environments, increase of racism and ethnic strife, undermining of the rights of women, increases in the gap between the rich and the poor within and among countries, stagnation of domestic economies, and growth of the debt burden of developing countries. As a result of these devastating

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4 In 1944 the United States gathered the financial elite around the world at Bretton Woods, New Hampshire, and established two financial institutions: the World Bank (WB) and International Monetary Fund (IMF). These two organizations are often referred to as the Bretton Woods Institutions. The WB's original aim was to offer loans for the post-war reconstruction of industrialized countries. The WB's lending is long term and structural. The IMF was created to stabilize and liberalize international trade. The IMF's lending is short-term and macro economic focused. Since the mid 1970s, the convergence of the two institutions instigated lending to developing countries to deal with their international debt crisis. Regarding the policy conditionality of Structural Adjustment, the IMF enjoys the higher status than the WB, since the IMF can decide whether or not developing countries merit aid and loans (Tomasevski 2003; Watkins 2000).
consequences, Chossudovsky (ibid.) regards SAPs as "economic genocide," and sees them as a root cause of the "globalization of poverty," meaning "a process which undermines human livelihood and destroys civil society in the South, the East and the North" (34).

In the name of cost effectiveness, SAPs have also badly affected the educational sector around the world, especially in low income countries. SAPs' negative influences upon educational systems include: curtailing of national education budgets; reductions in teachers' salaries; no increase in the number of teachers and a freezing of the number of graduates from teacher training colleges; privatization and quasi-market reform; increasing the student/teacher ratio; introduction of a 'double shift system,' i.e. two 'shifts' of school students per day (Bonal 2002; Chossudovsky 1997; Stromquist 2002).

One of the most immediate impacts of public expenditure cuts has been on children, especially in developing countries. In many developing countries, newly introduced primary school fees, and increased fees for secondary education, combined with rises in schools-related costs such as uniforms and textbooks, have become the reason for the increased number of out of school children. Economically poor families cannot afford the costs of education and when they have to choose which children should go school, girls are usually the first to be withdrawn. Poor school infrastructures such as a lack of sanitary facilities have also become a barrier to girls attending school. Students also drop out because of the pressure to support family households and to satisfy their survival needs (Ansell 2005).

So, in spite of the optimistic scenarios painted by the neo-liberal view of globalization, proposing that a more efficient international market will improve the material condition of everybody around the world, globalization has created stark inequalities between 'central' countries and 'marginal' countries (Stromquist 2002). It is because globalization has been organized in such a way that it produces only a few winners while poor countries remain in a cycle in which deep poverty, instability, and conflict feed upon each other. It is often the poor, women, children, ethnic minorities,
and indigenous people who are marginalized and become most vulnerable (Stromquist 2002), a cycle of marginalization easily feeding into further violence when left to fester. Porter (1999) states:

It is the pervading hopelessness and cynicism of the economically abandoned that may prove to be the most dangerous and ultimately destructive elements — leading, as it is already doing, to irrational, hysterical, and dehumanising actions around the globe. Support for terrorism has its roots in the desperation of the reviled, the poor, the ignored and those that have no opportunity for a decent life or for influence or power in the existing situation... (39).

Shiva (2005a) highlights a devastating effect of economic globalization in terms of culture and identity:

Through the mutation of positive identities to negative identities, globalization is creating and intensifying culture wars. Economic globalization destroys cultures and positive cultural identity by destroying work, livelihood and job security from which most people draw their sense of who they are. Ecological and economic identities are linked to roots in a place and community. When secure occupations and livelihoods are destroyed, the vacuum of the loss of sense of self is filled by negative identity, an identity of 'not the other' (81).

In addition to Porter and Shiva, a lack of social justice concerns within neo-liberal discourse has been criticized by, among others, Chossudovsky (1997) and Stromquist (2002). Hossay (2006) puts the point as follows:

The trouble is, increasingly, the only goals that matter are those defined by the market. Concerns over the health of the global ecosystem, justice, traditions, sacred beliefs, shared community, care and concern for fellow beings, are all left by the wayside (120).

From the neo-liberal perspective of globalization characterized by free markets, competition, deregulation, and individualism, education systems are considered primarily to serve the interests of global economic competitiveness, and are light on the democratic concerns of equity, social justice and welfare (Wells et al. 1998).

As this section has articulated so far, neo-liberal globalization has been the root cause of a cycle of devastation around the world. As a backcloth to this study, it is also important to highlight another link between the neo-liberal ideology and global crises. Naomi Klein, in The Shock Doctrine (2007), examines how a moment of collective trauma — triggered by a flood, a hurricane, a war, a terrorist attack, a debt crisis — has been manipulated by an ideology of 'disaster capitalism' over the past thirty years. By disaster capitalism she means "orchestrated raids on the public sphere in the wake of
catastrophic events, combined with the treatment of disasters as exciting market opportunities" (6). While the whole population is deeply shocked, paralyzed, and disoriented by a great rupture, disaster opportunists take an advantage of 'a blank slate' in order to implement quick and radical social and economic reforms in favour of global free market economy. She points out that "[c]rises are, in a way, democracy-free zones – gaps in politics as usual when the need for consent and consensus do not seem to apply" (140).

When considering characteristics of learning which best address the needs of those who are affected by emergencies, it is vital to be aware of the intensifying force and speed of disaster capitalism. Developing capacities to resist predatory global market forces, individually and collectively, in a shocked society is therefore one of the important issues to be considered in the study.

1.3. Global Consequences of Climate Change

Socioeconomic marginalization and environmental degradation perpetuated by the neo-liberal globalization will inevitably be further widened and deepened because of the plausible consequences of climate change.

The report of the Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2007: The Physical Science Basis*, recognizes human influence in atmospheric and sea temperature rises. The report points out that there has been a 0.74 degrees Celsius rise in global temperatures in the last century and states that global temperature will rise a further 1.1 to 6.4 degrees Celsius by the end of this century, depending on the increase of CO2 emissions. It is considered that even if the rise is much below the estimated higher range, devastating impacts are unavoidable (IPCC 2007a). In its following report, *Climate Change 2007: Impacts, Adaptation and Vulnerability*, IPCC (2007b) projects future impacts of climate change on water, ecosystems, food, coasts and health. The examples of the impacts identified by IPCC are extracted in Table 1 below.
- Water
  - Increase in water availability at high latitudes and in some wet tropical areas
  - Increase in drought and flood risk
  - Reduction in water availability for more than one-sixth of the world population who currently depend on the meltwater from the glaciers and snow cover stored in major mountain ranges

- Ecosystem
  - Increase of risk of extinction for 20-30% of species in 1.5-2.5 C global average temperature rise
  - Major changes in ecosystem structure and function, species' ecological interactions, and species' geographical ranges, in exceeding 1.5-2.5 C global average temperature rise

- Food
  - Decrease in crop production in lower latitude regions even with a small local temperature rise (1-2 C), with consequent increasing risk of hunger
  - Decrease in food production with a 3C global temperature rise

- Coasts
  - Increase in costal damage due to sea-level rise, floods and storms (about 30% of global costal wetland loss)
  - Millions more people affected by coastal floods every year

- Health
  - Increase in malnutrition; death and casualties; diarrhoeal, cardio-respiratory and infectious diseases
  - Changed geographical distributions of some disease vectors (e.g. malaria)

(IPCC 2007b: 11-17)

<table>
<thead>
<tr>
<th>Table 1. Examples of impacts of global average temperature change</th>
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<tbody>
<tr>
<td>Further to these IPCC reports, link between climate change and international development goals, notably UN Millennium Development Goals (MDGs)⁵, is eliciting increasing attention among the UN, governmental and non-governmental organizations. For instance, UNICEF UK (2008) and UNICEF (2008) have examined the seven MDGs with particular reference to children's survival, health, and education around the world. Climate change's adverse impacts on agricultural productivity, which contributes a large part of GDP in most developing countries, would lead to further poverty and hunger in such countries. When malnutrition is already a significant cause of infant and child mortality, declining food productivity and water stress will also impact on the survival</td>
</tr>
</tbody>
</table>

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⁵ Millennium Development Goals (MDGs) are the outcomes of the 2000 UN Millennium Summit Declaration, with 189 governments as signatories. The eight MDGs which have a set of numbered and time-bound targets to be met by 2015 are: eradicating extreme poverty and hunger; achieving universal primary education; promoting gender equality and empowering women; reducing child mortality; improving maternal health; combating HIV/AIDS, malaria and other major diseases; ensuring environmental sustainability; developing a global partnership for development (UN 2006).
and health of children. Malaria, a cause of death for 800,000 children every year, will expand to the previously less affected or non-affected areas and would cause epidemics. Not only children, but also pregnant women are particularly at high risk malaria infection. UNICEF UK (ibid.) further points out that climate change will make it more difficult for children to attend schools, especially for girls, who will be under pressure to support their family's survival needs. Subsequently, achieving universal primary education and promoting gender equality become more difficult as the climate change scenario unfolds. It is also important to highlight that the impacts of climate change will not be evenly experienced. The economically poorer countries, children in the world, places and population sectors which have done relatively little to trigger climate change, would be hit by the climate change “first and worst” (ibid.:35).

A number of commentators point out that we must stop atmospheric temperature rise at two degree Celsius. Beyond that, major ecosystems begin to collapse and “climate change is out of our hands: it will accelerate without our help” (Monbiot 2007, xxi). The world of a five degree Celsius atmospheric temperature rise, which Lynas (2007) thinks might arrive in a few decades if urgent actions to radically reduce greenhouse emissions had not been taken, faces “a pace of warming much too rapid for substantial adaptation either by natural ecosystems or human civilization” (208). Such an onset of runaway climate change, or ‘global heating’ is not likely to take place “at a metronome pace but oftentimes with bouts of breathtaking suddenness and fickleness” (Selby, 2010: 49). It is a world characterized by catastrophic mass extinctions, large scale human displacements and starvation, and violent conflicts over land and food beyond our imagination. “Needless to say, the era of food aid and international assistance would be long gone” (Lynas 2007: 210).

Overall, climate change would cause greater stress on both the environment and society, and it, in turn, would intensify survival struggles. For instance, there are already 30 million environmental refugees who have left their homelands to seek productive land and resources elsewhere, and one estimate is that the number of environmental refugees will increase to 150 million by 2050 because of climate change (Worldwatch
Institute 2005). These migrated populations frequently come into conflict with peoples in the territory they enter. In the face of diminishing resources and increasing human populations, it is anticipated that more environmental refugees and conflicts (many of which will be resource wars) would take place this century (Hossay 2006; Mische 2004; Worldwatch Institute 2005). Similarly, by examining the links between climate change, peace and war in detail, Smith and Vivekananda (2007) point out the additional pressure on societies that are already economically, socially and politically fragile and which would have "a low capacity to adapt to climate change and face a high risk of violent conflict" (3). They go on to state that:

To understand how the effects of climate change will interact with socio-economic and political problems in poorer countries means tracing the consequences of consequences. This process highlights four key elements of risk – political instability, economic weakness, food insecurity and large-scale migration. Political instability and bad governance make it hard to adapt to the physical effects of climate change and hard to handle any conflicts that arise without violence. Economic weakness narrows the range of income possibilities for the population and deprives the state of resources with which to meet people's needs. Food insecurity challenges the very basis of being able to continue living in a particular locality and, as a response to that and other kinds of insecurity, large scale migration carries high risk of conflict because of the fearful reactions it often receives and the inflammatory politics that often greet it ... Many of the world's poorest countries and communities thus face a double-headed problem: that of climate change and violent conflicts... There are 46 countries – home to 2.7 billion people – in which the effects of climate change interacting with economic, social and political problems will create a high risk of violent conflict (3) [Italics in original].

Although no one can predict exact future scenarios in particular time and space, what is certain is that no one can escape from the serious consequences of climate change and "the world will experience significant and potentially highly dangerous changes in climate over the next few decades no matter what we do now" (Walker and King 2008, 53). In this sense, climate change is a "planetary emergency" (Gore 2006). In the words of David Orr6 it is "the first global emergency" and "it is too late to avoid trauma but not too late to prevent the worst." Such a view is in line with UNDP (2007):

At the start of the 21st Century, we too are confronted with the "fierce urgency" of

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6 From his keynote speech titled "The Climate of Education: Learning in a Hotter Time" at the All Our Futures International Conference, at the University of Plymouth, on 10 September 2008.
a crisis that links today and tomorrow. The crisis is climate change. It is still a preventable crisis but only just (1).

We are at a critical crossroad to 'prevent the worst.' Shiva (2005b) urges us to take “immediate action for future justice for the future victims of climate change" (7).

In tackling the challenges of climate change through both mitigation and adaptation efforts, it is vital to address the root cause of climate change. That is, the dominant development discourse and practices upon which the economically and materially privileged minority of the populations and societies of the world have predicated and projected their worldview for more than two centuries. According to Gardiner (2008):

The source of climate change is located deep in the infrastructure of current human civilizations; hence, attempts to combat it may have substantial ramifications for human social life (29).

He goes on to say that:

...given that halting climate change will require deep cuts in projected global emissions over time, we can expect that such action will have profound effects on the basic economic organization of the developed countries and on the aspirations of the developing countries (29-30).

However challenging, unless it is recognized that climate crisis fundamentally stems from dependence on a fossil fuel-based economy and unless dominant assumptions and practices predicated on limitless economic and material growth in a finite Earth (at enormous cost to human and ecological well-being) are addressed, what is suggested amounts to pseudo solutions or market solutions which only make the situation worse by applying disease as cure and induce yet further rounds of crisis. We need to go beyond business as usual mentality and solutions (Shiva 2008). This issue of underlying dominant worldview is going to be further discussed in the section that follows.

1.4. A Crisis of Worldviews

In contrast but nonetheless linked to the critique of globalization and the crises it spawns, there are thinkers who see global challenges at the level of human perception, or of paradigm or worldview (e.g. Capra 1982; Hossay 2006; O'Sullivan 2002; Selby 2002, 2007b; Sterling 2001, 2007). A common argument among these commentators is
that problems 'out there' are the manifestation of human beings' inner problems. For instance, Capra (1982) argues that everyday crises we encounter in media such as environmental disasters and various forms of violence are "all different facets of one and the same crisis; and that this crisis is essentially a crisis of perception" (15). He makes a strong case for "a new 'paradigm' — a new vision of reality; a fundamental change in our thoughts, perceptions, and values" (16).

The notion of paradigm was popularized by the philosopher of science, Thomas Kuhn, in his The Structure of Scientific Revolution (1970) in which he defines paradigm as "the entire constellation of beliefs, values, techniques, and so on shared by the members of a given community" (175). Capra defines a paradigm as "the totality of thoughts, perceptions, and values that forms a particular vision of reality, a vision that is the basis of the way a society organizes itself" (Capra 1988: 20). Capra (1996) distinguishes between a paradigm (i.e. held collectively) and a worldview (i.e. held by a single person) (129), but there are those who think such a distinction is not particularly useful. From the latter point of view, Sterling (2007) states that a worldview is "both a projection and reflection of how the world is seen" (66). He suggests that it is important to analyze a worldview in terms of three domains: the cognitive or intellectual (the eidos), the affective, or valuational and normative (the ethos) and behavioural (the praxis) (ibid.: 66).

A fundamental challenge in addressing worldviews includes their invisibility and our unconsciousness of our own worldviews, as Durning (1997) points out:

"Worldviews are rarely brought out into the light of day. So people are not usually aware of them. They sit down deep in human consciousness somewhere, quietly shaping reactions to new ideas and information, guiding decisions, and ordering expectations for the future (29)."

According to Capra (1996) and Sterling (2007), more specifically, it is the affective and value aspect of worldview which is most hidden. Yet, it is important to deal with it, because it plays a critical role in any shift of paradigm.

In discussions on worldviews, a tension or gulf is postulated between two types of worldview: the dominant Western mechanistic (or reductionist, or atomistic) worldview...
and alternative, holistic, ecological or systemic worldviews. The proponents of the latter commonly think that the Western mechanistic worldview is the root cause of the contemporary global crisis and that current mainstream preferred solutions themselves predicated upon a mechanistic worldview, are thereby distorted and incomplete. For instance, in the words of Selby (2007b):

The mechanistic worldview lies behind the global mega-crisis while efforts to realize a sustainable world are themselves hampered by our inability to remove residues of mechanisms from our sustainability proposals in which project we are straitjacketed by our failure to see, let alone address, mechanism within our processes of thought (177).

Miller (2000) also attributes the mechanistic worldview’s assumption of separation between human consciousness and the natural world as the root cause of the interconnected ecological and social devastations we face:

Modern culture is a potent brew of capitalism and hedonistic consumerism, reductionistic science, anthropocentrism, nationalism, militarism, rationalism, and hierarchical and patriarchal perspectives. The fundamental problem is that this modern worldview has disenchanted the world ... [which] refers to the epistemological alienation between human consciousness and the natural world. We are no longer at home in the universe, no longer participants in an unfolding cosmic drama; we are merely detached observers, determined to manipulate nature to serve our own egotistic needs for security and power (54) [Italics in original].

Regarding the mechanistic solution, Chambers (1997; 2008) argues that professionals of development who are supposed to solve the problems are often the sources of problems, because:

[m]uch development and humanitarian thinking and practice is still trapped in a paradigm of predictable, linear causality and maintained by mindsets that seek accountability through top-down command and control (2008: vii).

The section below further details the characteristics of the dominant Western mechanistic worldview before describing those of alternative worldviews.

1.4.1. Domination of the Western Mechanistic Worldview

Regarding the origin of the Western mechanistic worldview, Capra (1982), Selby (2002), Suzuki and McConnell (1997), among others, point out that it stems from sixteenth to eighteenth century Western culture, and from the Scientific Revolution in particular. Founders of modern science, such as Francis Bacon (1561-1626), Galileo
Galilei (1564-1642), René Descartes (1596-1650) and Issac Newton (1642-1727) established a science aimed at predicting and controlling natural phenomena, rejecting ambiguity, instability, and paradox. Their views laid the foundation for the superiority of the scientific method, separation between the intellectual on the one hand and the emotional, intuitive, and spiritual on the other, rejection of ethics and faith, as well as the alienation of human beings from their surroundings.

A most influential architect for the mechanistic paradigm was Descartes, a mathematician, who applied a machine image to the physical and natural world. He regarded the world as consisting of ‘building blocks’ and promoted a theory that analyzed complex phenomena by dissecting and understanding their parts, a disposition known as reductionism. His machine view went hand in hand with a deterministic outlook on the world. The assumption was that human beings could predict things would happen in a linear manner and in order with precision and certainty. Instability and chance thus became shortcomings arising from a lack of ability to understand and control. By applying a machine metaphor to the natural environment, nature became an object of analysis and control via its parts and movements (Capra 1982, 1996; Greig et al. 1989; Selby 2002).

Descartes’ other method of analysis was based on the fundamental division between two separate entities that is called dualism. His famous statement, ‘Cogito, ergo sum,’ (‘I think, therefore I exist’) highlights a separation between mind and body, hence, the separation between individuals’ rational mind and their whole organism. Plumwood (1993) gives examples of dualized values in western thought. In each pair, the former is considered to be superior to the latter:

- culture/nature; reason/nature; male/female; mind/body (nature); master/slave;
- reason/matter (physicality); rationality/animality (nature); reason/emotion (nature);
- mind, spirit/nature; freedom/necessity; universal/particular; human/nature (non-human);
- civilized/primitive; production/reproduction (nature); public/private;
- subject/object; self/other (43).

Examining the Cartesian mechanistic paradigm, Plumwood (ibid.) argues how the logical structures of dualism have created domination and exclusion. She states that a dualism is “more than a relation of dichotomy, difference, or non-identity, and more than
a simple hierarchical relationship" (ibid.: 47) and that the problem is how dualisms are
treated. She goes on to say that:

In dualistic construction, as in hierarchy, the qualities (actual and supposed), the
culture, the values and the areas of life associated with the dualised other are
systematically and pervasively constructed and depicted as inferior.... Dualism is
a relation of separation and domination inscribed and naturalized in culture and
characterized by radical exclusion, distancing and opposition between orders
constructed as systematically higher and lower, as inferior and superior, as ruler
and ruled, which treats the division as part of the natures of beings construed not
merely as different but as belonging to radically different orders or kinds, and
hence as not open to change (47-48).

Hence, reductionism has created a hierarchy within ourselves, by locating mind above
body, spirituality, emotion, and intuition. This led to a further hierarchy of locating
human beings outside and above nature, which is considered to be a mindless or dead
machine. This has, in turn, underpinned the moral justification for human control and
domination over nature (Capra 1982, 1996; Greig et al. 1989; Selby 2002; Plumwood
1993). Shiva (1989) points out that such a justification has been convenient for the
expansion of the capitalism.

Plumwood (ibid.) argues that it is important to reclaim what has been systemically
marginalized and subjugated through the mechanistic and dualistic narrative. As key
resolutions for this issue of duality, she emphasizes the importance of replacing
dualism with "a non-hierarchical concept of difference" (ibid.:59) and of enhancing
"concepts of autonomy, agency, creativity to those who have been denied them under
the Cartesian division of the world" (124). The ensuing section will further elaborate the
ways in which Cartesian dualisms are overcome from within a holistic and ecological
perspective.

Rational thinking, another central feature within the mechanistic paradigm, is
predominantly linear and all problems are considered to have clear causal relations.
Analysis is a preferred mode of thinking over synthesis. The world is considered to be
observable and understandable by human beings who are isolated from the observing
phenomena and who have the ability to investigate using reason and analytical thinking.
By emphasizing rational thinking, all other ways of knowing - such as intuitive,
emotional, embodied and spiritual ways of knowing - are marginalized (Capra 1982;
Rifkin 1980, Selby 2002). Experimental methods in a controlled environment to test hypothesis is what Bacon advanced. Due to Galileo's strong influence on the investigation of science through measurement and quantification, what is measurable, quantifiable, therefore, what is absolute and certain, is of value. Objectivity and neutrality are cornerstone of investigation. Shiva (1989) captures the interrelated epistemological and ontological assumptions of modern science as follows:

uniformity allows the knowledge of parts of a system to be taken as knowledge of the whole. Separability allows context-free abstraction of knowledge and creates criteria of validity based on alienation and non-participation, then projected as 'objectivity.' 'Experts' and 'specialists' are thus projected as the only legitimate knowledge seeker and justifiers (22-23).

It is also important to point out that a mechanistic worldview "has served to reinforce, validate and inflate qualities and behaviours that we have been conditioned to regard as masculine (such as analysis, reason, assertiveness, aggression, competitiveness, exploitation, a proclivity for hierarchies, hunger for domination)" (Greig et al. 1989: 12-13). The following section on a holistic worldview will further discuss the issues of masculinity from a feminist perspective.

Following the footsteps of the above-mentioned architects of the Western mechanistic worldview, eighteenth century philosophers and social scientists, such as John Locke (1632 -1704) and Adam Smith (1723 -1790), applied the universal mechanical model to human beings and social institutions, in particular, government and economic systems respectively. Strongly inspired by the mechanistic worldview, Locke developed an atomistic view of society consisting of individuals who are motivated by the self-interest of creating personal wealth. He regarded nature only as a resource to satisfy human desire for amassing material wealth. Believing in the existence of natural laws which govern human society similar to those governing the physical world, he argued that any government should not impose its laws but allow individuals to pursue unlimited material wealth. For Locke, natural laws encompassed individual freedom and equality as well as the right to property (Capra 1982; Rifkin 1980). Similarly, strongly inhering the traits of the mechanistic worldview, Smith developed an influential economic theory by articulating the ways in which the wealth of
nations is increased and distributed. His famous concept of the Invisible Hand of the market is based on the notion of *laissez faire*, and therefore government control of the market was considered inefficient and, hence, inappropriate. Smith believed that increasing production of material wealth driven by human self-interest should be achieved through free and unregulated trade and competition among nations and individuals. The arguments of both Locke and Smith are pertinent to those concerning present capitalism, materialism, and individualism (Capra 1982; Rifkin 1980). Hence, they underpin the logic of neo-liberal globalization described in the previous section. Rifkin’s (1980) statement below captures the key characteristics of the mechanistic worldview discussed so far:

*The more material well-being we amass, the more ordered the world must be getting.* Progress, then, is the amassing of greater and greater material abundance, which is assumed to result in an ever more ordered world. Science and technology are the tools for getting the job done (38-39) [Italics in original].

*Table 2* below highlights key ingredients of the mechanistic worldview.

<table>
<thead>
<tr>
<th>Fragmentation, disconnectedness, separation</th>
</tr>
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<tbody>
<tr>
<td>The world as a machine composed of elementary building blocks</td>
</tr>
<tr>
<td>Reductionism</td>
</tr>
<tr>
<td>Dualism (e.g. mind and matter; mind and body)</td>
</tr>
<tr>
<td>Analytical, rational and linear thinking</td>
</tr>
<tr>
<td>Marginalization of intuitive, emotional, embodied, spiritual ways of knowing</td>
</tr>
<tr>
<td>Objectivity, neutrality, measurement, certainty, predictability, quantification</td>
</tr>
<tr>
<td>Universal and abstract knowledge</td>
</tr>
<tr>
<td>The observer/observed separation</td>
</tr>
<tr>
<td>Unlimited material progress</td>
</tr>
<tr>
<td>Human isolation from nature</td>
</tr>
<tr>
<td>Human control and domination of nature; nature as resource</td>
</tr>
<tr>
<td>Human-centered (anthropocentric) thinking</td>
</tr>
<tr>
<td>Domination, exclusion, competition, hierarchy</td>
</tr>
</tbody>
</table>

*Table 2. Key characteristics of the western mechanistic worldview*
1.4.2. A Shift towards Holistic and Ecological Worldviews

Even three hundred years after the birth of the Western mechanistic worldview, it still strongly underpins the current dominant Western mindset. As a result of Western cultural hegemony over the rest of the world, the mechanistic worldview has become globally manifest (Greig et al. 1989; Selby 2007b). Since the 1980s, there are many writers, including Capra (1982, 1996), Ferguson (1982), and Roszak (1981), who argue that there has been an ongoing shift from mechanistic to alternative worldviews, or holistic, ecological and systemic worldviews. Brown (1999) also notes increasing signs of a paradigm shift in environmental consciousness in a wide range of initiatives around the world. There are also increasing calls for a paradigm shift towards holistic and ecological worldviews, because of the limitations of the mechanistic worldview as a frame of reference in today's world. A "narrow [mechanistic] worldview," Pike and Selby (1988) state, "no longer provides an adequate framework in which to interpret, in a meaningful and creative sense, a world which is characterized by increasing interdependence and rapid change" (52). Likewise, in the words of Sterling (2001), "there is a poor fit between this dominant paradigm and our experience of increasing complexity, interdependence, and system breakdown in our lives and the world" (10).

From a similar perspective, Caine and Caine (1997) ask, "Why do we prepare people for a predictable, controllable world when in fact they will face a life filled with uncertainty and ambiguity?" (16)

According to Capra (1996), a key tension between old and emerging paradigms lies in the understanding of the relationship between parts and the whole. An emphasis on

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7 There are different views regarding the relationship between holistic and ecological worldviews. Capra (1996) thinks that holistic and ecological worldviews are slightly different in that the former sees "the world as an integral whole rather than a dissociated collection of parts" (6), and does not sufficiently articulate human embeddedness in the natural and social environment, although the latter emphasizes human embeddedness in nature as well as the fundamental interdependence of all phenomena. In contrast, holistic educators such as Miller (2000) see human embeddedness in nature as central to the holistic worldview. For Miller (ibid.), spirituality is another important element of a holistic worldview, and he points out that the convergence of ecological and holistic worldviews becomes salient since both worldviews embrace awe, reverence, wonder and mystery of life. In this thesis, I take Miller's position and use these terms interchangeably.
parts is a characteristic of the mechanistic worldview, while an emphasis on the whole as well as on interconnectedness, relationships, and context informs non-mechanistic and alternative paradigms.

Alternative holistic and ecological worldviews are considered to have their origins in various areas of enquiry including new scientific thought, ecological thinking, spiritual traditions such as Eastern religions/philosophy and indigenous philosophy (Capra 1982; Hicks, 1988; Macy and Brown 1998; Miller 2000; Nakagawa 2000; Pike and Selby 1988; Sterling 2001). According to Miller (2000), in the west the concept of ‘holism’ emerged in the mid 1970s, and he explains that the following concepts are often used to characterize the idea: ‘everything in the universe is connected, in some way, to everything else’; ‘the whole is greater than sum of its parts’, and ‘the whole is comprised of a pattern of relationships’ (21).

In terms of the influence of new scientific thought in the systemic or ecological paradigm, modern biology plays an important role. Since the early twentieth century, the field began to look at wholes rather than parts, and at processes rather than substances, and to see an organism as a living system. The wholes - such as cells, bodies, ecosystems, and the planet - are considered to be dynamically organized, intricately balanced and interrelated ‘systems’ (Capra 1996; Macy and Brown 1998). From this perspective, the nature of the whole is “always different from the mere sum of its parts” (Capra 1996: 29).

Systems thinking, which was pioneered by biologists, is one of the key elements in understanding ecological and systemic paradigms. Capra (1996: 36-40) explains the key characteristics of systems thinking as follows:

- Seeing each system as a whole and not reducible to smaller parts
- Thinking in different systems levels: Systems are nested within other systems and different systems levels embrace complexity
- ‘Contextual’ thinking: Systems can be understood only in context or in their environment, not by compartmentalization of the whole and/or analysis of the parts
• Relational thinking: Objects/parts are embedded in the web of relationships.
  Relationships are of primary importance
• Network thinking: Reality is seen as a network of relationships and no parts of
  the network of relationships are more fundamental than others
• Awareness of epistemology: There is recognition of ways of knowing as an
  important part of understanding phenomena. Scientific objectivity is questioned
  because of the perspective that what we observe depends on our ‘methods of
  questioning’
• Approximate knowledge: Scientific concepts and theories are limited and
  approximate, and they cannot give complete and definitive descriptions of
  reality.

Systems thinking was "a profound revolution" in the Western mechanistic scientific
thought. As elaborated in the previous section, the latter paradigm means "taking
something apart", while the former means "putting it into the context of a larger whole"
(Capra 1996: 29-30).

In the field of quantum physics, a prominent quantum physicist, David Bohm,
following the work of Werner Heisenberg,\(^8\) argues that the understanding of particles at
the sub-atomic level is relational in that it is impossible to predict their dynamic
movements exactly (i.e. the 'uncertainly principle'). The subatomic particles have no
meaning in isolation and are understood only through their interactions and
interconnections with their surrounding environment. This unpredictability of particles
implies that inevitable uncertainty exists in the world (Capra 1982; Pike and Selby
1988; Selby 2007b). According to Capra (1996), "In quantum theory we never end up
with any 'things'; we always deal with interconnections" (30). Such a realization is a
significant conceptual revolution for physicists who had strongly believed that all the
physical phenomena could be divided into solid material particles and so analyzed
(ibid.).

\(^8\) In *Physics and Philosophy* (1962) Werner Heisenberg originated the uncertainty principle
(Capra 1982).
By using a notion of 'unbroken wholeness,' Bohm also explores the web of relations at a deeper or 'non-manifest' level, in other words, at a 'implicate' or 'enfolded' level. What is significant is that from this implicate level the unbroken whole (or the universe) manifests itself and eventually returns to the whole. He called this dynamic flow 'holomovement'. For him the universe is one indivisible, dynamic whole, whose parts are all inextricably interrelated and each part is considered as carrying the signature of the whole (Selby 2007b), like a hologram. He argues that in the real world the whole is also enfolded in each of its parts. So for him, 'everything is enfolded in everything else.' This point is fundamentally different from the view obtaining in most holistic worldview literature as described earlier, i.e. that everything is connected to everything else, with its emphasis on enfoldment rather than relationship. Bohm also suggests that to understand holomovement, the Cartesian mind and matter dichotomy has to be replaced by a perception of the complementarily of both (Capra 1982; Pike and Selby 1988; Selby 2007b).

One key school of ecological thought, deep ecology, has played an important role in informing an ecological paradigm. Deep ecology is both a philosophical and sociopolitical activist movement, which is "calling for a deeper questioning and a deeper set of answers to our environmental concerns" (Naess 1998:134). It questions the consumerist and materialist assumptions and encourages us to live more simply (Naess ibid.). It embraces eco/ bio-centred (or earth-centred) values, as opposed to anthropocentric (or human-centred) ones, and recognizes intrinsic value in nature and all living things. It holds a biocentric⁹ egalitarian perspective on all members of the ecosphere as well as all identifiable entries and forms in the ecosphere (e.g. rivers, landscape). All living things are considered to have their own needs and freedom to live and unfold their life forms. For deep ecologists, human beings are but one member of the web of life and no species is superior to any other species, and therefore,

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⁹ Deep ecologists have an extremely broad view of life which encompasses all "individuals, species, populations, habitat, as well as human and non-human cultures." In this sense Fox suggests the term 'ecocentric' would capture their orientation better than biocentric, because ecocentric views see the biosphere as a totality, while biocentric views focus on individual living beings (Fox 1998: 228-229).
human beings are deeply embedded in nature (Capra 1996; Devall and Gessens 2005; Fox 1998; Naess 1988). Deep ecologists also advocate the notion of self-realization through a process of identification with a larger organic Self, which means a spiritual consciousness or awareness of belonging to wholeness, or a higher level of unity (Capra 1996; Dryzek 2005; Macy and Brown 1998).

Ecofeminism is another influential school of ecological thought in relation to the ecological paradigm. A central argument of ecofeminism is that there are connections between dominations and exploitations of women, subordinated human groups, non-human animals and non-human nature. Ecofeminists argue that mentalities and structures of oppressions are based on ‘androcentrism’ (or male-centredness) (Fox 1998; Warren 1998). The ‘master narrative’ predicated on value-ridden hierarchies (see pages 16-17) has justified a logic of domination, exclusion, and exploitation (Plumwood 1993).

Warren (1998, 2005) has captured key characteristics of ecofeminist ethics that include:

- Being opposed to any ‘isms’ (e.g. sexism, racism, classism, naturism) that presuppose or advance a logic of domination;
- A contextual ethic in which ethical discourse and practice emerge from the ‘voices’ of entities located in different contexts and historical circumstances;
- An inclusivist ethic that grows out of and reflects the diversity of perspectives of women and other Others;
- Making no attempt to provide an ‘objective’ (i.e. value-neutral, transcendental, ahistorical) point of view;
- Providing a central place for important values that have gone largely unnoticed, underplayed, or misplaced (e.g. value of care, love, friendship, and appropriate trust);
- Understanding human embeddedness in human, cultural, ecological relationships and communities;
- Rejecting the traditional ascendancy of reason and rationality and taking ‘moral
emotions' (love, care, empathy) seriously;

- Acknowledging that theory is in process and changing over time


When it comes to ancient spiritual traditions, or perennial philosophy, including Taoism, Hinduism, Buddhism, as well as mythical Christianity, Judaism, and Islam, there have been significant convergences with emerging holistic ecological paradigms. This is not surprising given that these spiritual traditions have commonly had an understanding of human embeddedness within a larger living whole. For instance, one Buddhist doctrine, 'dependent co-arising,' is about a profound understanding of mutual causality where our being deeply depends upon other beings, and hence building harmonious and responsible relationships among all beings is of critical importance (Macy and Brown 1998; Kumar 2002). Macy and Brown (ibid.) state that the shift from a mechanistic worldview to an ecological worldview is relevant to the 'rediscovery' of spiritual traditions in our current Industrial Growth Society, where limitless consumption of resources has made us blind to such traditions.

Based on the discussion so far, key insights to overcome the deficits of a mechanistic worldview include: dynamical balance, nature embeddedness, relational epistemology, and spirituality. Firstly, it is crucial to heal Cartesian dualisms and to see things in dynamical balance. Using the analogy of Chinese Tao Philosophy, where opposed values, yin (e.g. care, cooperation, synthesis) are in dynamic balance with yang (e.g. assertiveness, aggression, competition, rationality, analysis), Capra (1982) asserts that it is important to understand that these opposites do not belong to different categories but are extreme poles of a single whole.... What is good is not yin or yang but the dynamic balance between the two; what is bad or harmful is imbalance (35-36).

So, in the discussions of holistic and ecological paradigms, simply reclaiming the oppressed other is not enough, because if we do so, according to Sterling (2004c), we will risk falling into the trap of one-sidedness, of dualism, again.

This discussion of balancing is also pertinent to the question of parts and the whole. By only emphasizing the whole, there is a danger of mere homogenization by losing
the autonomy and unique diversity of individual parts (Plumwood 1993; Warren 2005).

In the words of Kumar (2002), in order to overcome the Cartesian dichotomies of 'Separational Philosophy' which leads to an either/or position, we need 'Relational Philosophy' which fully recognizes a both/and position. A dynamic balance of opposites is the key, as Kumar (ibid.) affirms:

Individual and society are two sides of the same coin. Matter and spirit exist together; art and science complement each other; we need a reductionist approach where appropriate and within the context of the whole. We need rationalism in balance with intuition and emotion. Life is not a battleground, not a sphere of conflict; rather, life is a ground of symbiotic relationships, where even battles and conflicts have a place, as do compassion and harmony (179).

Another key aspect is to develop a profound understanding of human embeddedness in nature, as opposed to the Cartesian human/nature dichotomy. Nature is neither a mere resource for human use and exploitation, nor alienated 'other'. Ecofeminists such as Warren (2005) remind us the notion of unity and diversity regarding the relationship between human beings and nature:

humans, 'as ecological selves' are both members of an ecological community (in some respects) and different from other members of that community (in other respects) (270) [italics in original].

Also, relational epistemology is significant to holistic and ecological worldviews. It is considered that everything is interconnected and phenomena can never be understood in isolation. Inspired by Bohm's 'unbroken wholeness,' Selby (2002) takes this view a step further using a metaphor of 'dance,' symbolizing 'radical interconnectedness' which regards relationship as of primary importance and any entities – things, objects, ourselves, which are usually construed as solid, separated - as temporary manifestations of flows of the whole, and in a constant change and movement. So he states "everything is enfolded into everything else" (82) as Bohm claims, and things are "expressions of the dynamic unfolding, the being and becoming, of the whole" (83).

Diversifying ways of knowing by making connections is critical, as Macy and Brown (1998) highlight below:

The mechanistic view of reality separated substance from process, self from other, thought from feeling. In the systems perspective, these dichotomies no longer hold. What appeared to be separate and self-existent entities are now seen to be interdependent. What had appeared to be "other" can be equally
construed as a concomitant of 'self,' like a fellow-cell in a larger body. What we had been taught to dismiss as mere feelings are responses to our world no less valid than rational constructs. Sensations, emotions, intuitions, concepts, all condition each other, each a way of apprehending the relationships which weave our world (42).

Lastly, to address spirituality is important since it was neglected in the mechanistic narrative. Although spirituality takes a form of religion for some, it is not constrained by religion. According to Miller (2000), spirituality is a living awareness of the wholeness that pervades the universe. It is the realization that our lives mean more than material wealth or cultural achievement can provide; our lives have a place, a purpose in the great unfolding story of Creating...(73).

Table 3 below indicates the key characteristics of the emerging holistic and ecological worldviews discussed in this section.

<table>
<thead>
<tr>
<th>Characteristics</th>
</tr>
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<tbody>
<tr>
<td>Relationships, interconnectedness, interdependence ('The whole is greater than the sum of the parts')</td>
</tr>
<tr>
<td>Enfoldment ('Everything is enfolded in everything else')</td>
</tr>
<tr>
<td>Systems thinking</td>
</tr>
<tr>
<td>The observer and the observed connection</td>
</tr>
<tr>
<td>Synthesis, integration</td>
</tr>
<tr>
<td>Value in uncertainty and approximate knowledge</td>
</tr>
<tr>
<td>Diversified ways of knowing (including the emotional, intuitive, and spiritual)</td>
</tr>
<tr>
<td>Value in feminine qualities</td>
</tr>
<tr>
<td>Deeply questioning consumerism and materialism</td>
</tr>
<tr>
<td>Contextual knowledge</td>
</tr>
<tr>
<td>Eco/bio centred (or Earth centred) values</td>
</tr>
<tr>
<td>Human embeddedness in nature</td>
</tr>
<tr>
<td>Being aware of the intrinsic value of nature</td>
</tr>
<tr>
<td>Participation, egalitarianism, non-hierarchy</td>
</tr>
<tr>
<td>Process-oriented</td>
</tr>
</tbody>
</table>

Table 3. Key characteristics of holistic and ecological worldviews
The review of the characteristics of mechanistic and holistic worldviews has revealed that current market driven globalization, discussed earlier, is clearly underpinned by the mechanistic worldview, not holistic and ecological worldviews. The dualistic and reductionist outlook of the mechanistic worldview has alienated human beings from nature. Nature, as a dead machine, is reduced to a commodity, giving moral justification for her exploitation. This is a convenient logic for the growth of capitalist markets. 'Development' pursuit from this perspective is part of the problem rather than part of the solution. This issue will be further discussed in this thesis in relation to education.

1.4.3. Paradigm Implications for Educational Change

Considering dominant influence of the neo-liberal globalization and the mechanistic worldview, it is not surprising to realize that the field of education, as a subsystem of a wider paradigmatic sphere, has been strongly overshadowed by the mechanistic mindset (Miller 2000; Sterling 2001). Therefore, briefly reviewing implications of worldviews in education will be useful to lay the foundation for the examinations of emergency education and sustainability-related education in the following chapters.

There are a number of characteristics of education that are predicated upon a dominant Western mechanistic and fragmentationalist worldview. In terms of educational change process, it tends to be top-down and short-term targeted towards measurable and quantifiable results (Hargreaves and Fink 2006). The formal curriculum (or schooling) is disconnected from the rest of society in terms of space and time (i.e. learning is considered to take place within a school building during particular segments of the day for particular age group) and non-formal and informal learning taking place beyond school walls are not sufficiently valued and integrated with the formal curriculum. Formal learning within the standard curriculum set by the authorities is compartmentalized by subjects and grades, and their potential synergies are undervalued or are often ignored. Its predetermined learning outcomes are to be
measured quantifiably (Illich 1971; Pike and Selby 1988; Selby 2002; Steen 2008). Knowledge is, by and large, considered as a static entity which is transmitted from those who are construed as the primary source of right knowledge (i.e. teachers and experts) to those who are considered as the passive recipient (i.e. students). Learning through abstract concepts and developing analytical and memory skills are highly encouraged, while learning involving feelings, intuitions, and sensory awareness is undervalued (Pike and Selby 1988; Sterling 2001). The formal learning environment tends to be organized in an homogenized way (e.g. learning only among the same age group), and individualistic, competitive, and hierarchical learning are characters of learning culture (Illich 1971; Pike and Selby 1988; Steen 2008; Sterling 2001).

In contrast, according to the proposals of educators drawing on a holistic worldview, educational change is a multi-faceted, non-linear and 'organic' process, which allows unexpected spin-offs to emerge. In a change process, making connections among different stakeholders, creating a collegial culture, addressing the needs of whole person, distributing power by involving stakeholders in the change process - are all considered important (Greig et al. 1989). In the curriculum sphere, integration between different subjects is encouraged and interdisciplinarity is promoted. Developing a formal curriculum and non-formal/ informal learning link is another key element to be advanced from a holistic perspective. Valuing contextuality and participation, curriculum contents are open for negotiation to meet emergent learner needs in particular learning contexts. In terms of pedagogy, co-operative, experiential, action-oriented modes of teaching and learning are commonly suggested. The process of, not the product of, teaching and learning is valued. The underlying belief is that learners have valuable knowledge to bring to the learning community and teachers are also learners. The importance of interplay between cognitive and affective learning (integrating emotions and intuitions in learning) is recognized as critical to deepening the learning experience and developing self esteem, and a sense of personal empowerment (Miller 2000; Selby 2002; Sterling 2001). Creating an affirming learning environment also plays an important role in enhancing the quality of learning (Selby 2002).
1.5. Research Questions

The discussion so far has sought to articulate the dynamically interrelated causes of emergencies using a broad brush: globalization, climate change and the dominant mechanistic worldview. More precisely, it has been argued that globalization, climate change, and resultant emergencies are 'symptoms' of a hegemonic mechanistic worldview and that embracing a holistic worldview is vital in making positive changes of a more fundamental nature.

In the pursuit of developing learning principles that could be effective in coping with, preempting and mitigating interconnected imminent and seemingly distant emergencies, the following questions guide the inquiry.

1. What is the current range of renditions and understandings of the concept of emergency education?
   - What is understood as constituting a crisis or emergency?
   - What are the proposals, arguments and justifications advanced by different schools of thought within the field of emergency education?
   - What paradigmatic underpinnings lie behind those different schools of thought? In what ways and to what extent do the mechanistic and holistic worldviews manifest themselves in those different schools of thought?

2. What is the current range of renditions and understandings of the concept of education for sustainability?
   - What are the various understandings of sustainable development and sustainability?
   - What are the proposals, arguments and justifications advanced by different schools of thought within the field of education for sustainability and its sister schools (including education for sustainable development, education for a sustainable future, and sustainability-related education)?
   - What paradigmatic underpinnings lie behind those different schools of thought? In what ways and to what extent do the mechanistic and holistic
worldviews manifest themselves in those different schools of thought?

3. What holistic and sustainable principles arise from examining the interface between emergency education and education for sustainability in order to respond to humanitarian crises in a more comprehensive way?

4. What insights arise from applying holistic and sustainable principles to concrete and projected emergency education situations fomented by climate change and other causes?

1.6. Summary and Thesis Structure

This chapter has given a broad overview of the background of the proposed study in order to lay a foundation for the discussions to follow. It has highlighted the issue of globalized inequality in today's world, especially as fuelled by dominant neo-liberalism, as well as disturbing yet plausible potentials for further social marginalization and global emergency as a consequence of climate change. The chapter then examined why the dominant Western mechanistic worldview needs to be overcome if we want to deal with interconnected global problems in a more fundamental way. It has also looked into the transformative premises which holistic and ecological paradigms hold.

This study is going to draw upon the experience of two contemporary educational responses - emergency education and sustainability-related education – and the study will develop holistic and sustainable learning principles which could help in addressing ongoing and plausible future humanitarian crises.

This study will unfold in the following chapters as follows. Chapter Two will describe the methodology, data collection and analytical methods used in this inquiry. Chapters Three and Four will, respectively, explore trajectories and key characteristics of emergency education and sustainability-related education in some detail. Chapter Five will discuss the interface between emergency education and sustainability-related education, and will suggest holistic and sustainable learning principles for humanitarian crises. Chapter Six examines the insights of educational practitioners regarding the learning principles developed in this study through the engagement with the ongoing
initiative of the NGO Plan International, Children and Young People at the Centre of Disaster Risk Reduction, and the organically emerging follow-up multi-agency initiative called Children in the Changing Climate. Chapter Seven further investigates the applicability of the six learning principles. Two of Plan International's completed emergency education programs (i.e. the Yogyakarta Earthquake Response and Recovery Program in Indonesia and the Rapid Education Pilot Project in Sierra Leone) are examined to illuminate contextual valuables in the application of the principles. Chapter Eight discusses the key insights emerging out of this study and advances implications for future research.

A main conceptual challenge in this research is uncertainty: How can we prepare for something uncertain and unpredictable, such as plausible future insecurities and devastations caused by climate change? Paradoxically, however, this is exactly the point of doing this study by exploring the ways in which learning could be anticipatory and proactive rather than being deterministic and reactive towards the multifaceted challenges we face. Caine and Caine's (1997) question quoted above (see page 20) resonates with the thrust of the study: "Why do we prepare people for a predictable, controllable world when in fact they will face a life filled with uncertainty and ambiguity?"
CHAPTER TWO
RESEARCH METHODOLOGY

2.1. Introduction

The main purpose of this chapter is to describe the research methodology used in this study. In general, methodology means "a distinct way of approaching research with particular understandings of purposes, foci, data, analysis and more fundamentally, the relationship between data and what they refer to" (Scott and Usher 1996: 61). Methodology is usually explained in relation to the underpinning research paradigms which inform the nature of reality (i.e. ontology), and nature of knowledge and the relationship between the knower and the would-be known (i.e. epistemology) (Mertens 1998). In other words, "all research originates from some view of reality, which means that there are different ways of gaining an understanding (i.e. knowledge)" (Hart 1998: 51).

The chapter first clarifies my own subjectivity and ideological position as they have consciously and unconsciously influenced my choice of research methodology and process of research for this study. The chapter then describes qualitative research methodology, data collection and analytical methods employed, ethical considerations raised, and issues of credibility. There follows a section that introduces research participants in the study.

2.2. Subjectivity of the Researcher

2.2.1. My Story

I agree with Kirby and McKenna's view (1989) that "who I am circumscribes what kind of research I can do"(19) and that personal experiences, thoughts, feelings, or "conceptual baggage" (ibid.: 21) necessarily influence the research I am involved in. The subjectivity of the researcher can be an asset, but only if it is critically reflected on throughout the research process. Therefore, I would like to describe key moments of my own journey that led me to this study and, so, seek to clarify my own subjectivity
and ideological perspective.

Growing up in the southwest part of Japan, Shikoku Island, in the 1970s, I had a happy childhood. As a child, I liked collecting flowers, observing insects, reading books, and drawing. In my hometown, traditional cultural values and sense of community were strong in spite of the changes in society during the so-called ‘era of rapid economic growth’ after the Second World War. Agricultural and cultural events marked the cycle of the year and people in the community helped each other in conducting annual festivals and cultural events, and in undertaking shared community responsibilities. Although academic achievement was not expected for girls (as it was for boys), I enjoyed studying and did well at the public schools. Throughout my junior and senior high schools days (age from 13 to 18) I was very active in the school music bands, while I was working hard in preparation for university entrance exams.

After competitive and successful entrance examinations, I began my first degree in English at Okayama University. It did not take me very long before I became disappointed with university life. Even at the university, I was expected to be a passive listener and to memorize what was taught. I felt a great sense of alienation in the big lecture rooms, and also felt lost about my future direction.

In my third year, with one of my friends who felt similar frustrations about study at the university, I visited one of the young lecturers for some advice. After hearing our stories, he encouraged us by saying that no time would be too late for starting learning and our sincere efforts would surely pay off. Then he suggested we read a very short English story from James Joyce’s Dubliners together so that he could guide us on how to read it. Three of us met on several occasions to discuss the story. Although his questions were often very challenging, I enjoyed every meeting very much because we could express our opinions and ask questions freely in a comfortable atmosphere. Unfortunately, such basic interactions were not common at everyday university lectures. In these special sessions, our voices were heard and treated seriously. I began to appreciate English literature for the first time. At our last meeting, he encouraged us to study abroad in order to learn not only the English language but also about English-
speaking people, culture and society. After exploring scholarship programmes for study abroad, very fortunately, and rather accidentally, within one year I was given an opportunity of studying at Ball State University, U.S.A., for two semesters with a full government scholarship.

One of the most significant experiences I had at Ball State University was the study trip run by the anthropology department of the university. About 10 students and a professor traveled by van for one month around the southwest parts of the U.S.A. in order to learn about the Native American people and their cultures. We visited and stayed at several Native reservations of the Navajo, the Hopi, the Appachi, and the Pueblo. Wherever we went, we received warm hospitality and friendship. It was truly fascinating for me to learn about their rich culture, history and spirituality, with which I was totally unfamiliar. It was also fantastic to visit and stay at several beautiful national parks in that area. However, it was very depressing to learn about the plight of these native peoples: the history of oppression and alienation. I was particularly disturbed when I learned about the high drug, alcoholic and suicide rates especially among youth in the reservations we visited. It was a Hopi teacher who told me of the important role which education could play for young people in her deprived community. "Education is a hope," she passionately said to me. At the time I was wondering about my future career and I began to think about becoming a teacher back in Japan.

Then from 1994 to 1998, I worked as an English teacher at a private high school in Japan. I was passionate about developing international understanding and communications skills among young students learning English. However, the teaching approaches I was expected to adopt often conflicted with my beliefs. Since developing exam-oriented skills was the expectation of students, parents, and peer teachers, I adopted the teacher-centered teaching style of my colleagues with a strong focus on exam-oriented knowledge and skills. Gradually I began to feel dissatisfaction and question what I was doing. I tried to make small changes in my classroom but I felt less confident in doing so. In fact, I was not sure about how to articulate my concerns and I did not have the skills and knowledge to teach alternatively and creatively. At the same
time, I became increasingly disturbed by student violence, bullying, and truancy. Those who caused trouble were often suffering from a sense of apathy and powerlessness, and perhaps even a lack of self-esteem and sense of purpose in their school life.

Although leaving a secure full-time teaching job was not 'normal,' I decided to pursue a Masters degree in order to explore alternative educational models. The program at the Ontario Institute for Studies in Education of the University of Toronto, Canada, helped me to reflect on my assumptions and teaching experiences, to develop a theoretical and methodological foundation in education, and to put educational issues in broader socio-political and cultural contexts. In particular, Professor David Selby's graduate course on global education, a holistic and ecological approach to education, gave me a framework to address my concerns. I became aware of the connections between local and global, web-like connections between various issues, the importance of our own outer and inner learning journeys, democratic and participatory pedagogy, and holistic educational change processes. It also helped me to go deeper to explore the root causes of the global condition: a dominant mechanistic worldview.

During my studies at the University of Toronto, I was very much affected by one of my classmates' experience of civil war in her home country, Sierra Leone. What she revealed to me was almost beyond my understanding and I felt my responses were often very superficial and naïve. It was very difficult for me to comprehend her horrific descriptions and sense of hopelessness. As a person who grew up in post-war Japan, the violence of war had not impacted upon me personally, although I had heard about my parents and relatives' experiences during the war. It was not until I was exposed to her experiences and feelings that I 'felt' what it meant to live through such circumstances. Her story of oppression and cyclical violence became a catalyst for me. I also became aware of the privilege I took for granted and the responsibility which accompanies that privilege. This became a reason why I was motivated to consider my own connection to global issues, as well as how I might contribute at least to a small extent to altering in some way the violent reality of today's world. In retrospect, this was the seed for me to explore education in emergency situations.
In my major Masters research paper, *Towards the more effective practice of transformative/holistic peace education: An exploration of the worldviews of peace educators in Ontario* (Kagawa 2001), I conducted qualitative research with both formal and non-formal educators to explore how the worldviews of peace educators are manifested in their educational philosophies and practices. One of the significant issues I learned in this project is that a holistic worldview is of crucial significance for educators for peace. Secondly, although the pedagogical innovations and commitments made by the educators were indeed enormous, it was very challenging for them to keep intact their views and sustain their practices within a rigid formal educational environment. Therefore, it is necessary to develop a support system and network to maintain educators' motivation and creative initiatives.

Following the completion of my Masters degree, I worked for two educational projects based at the University of Toronto. Firstly, I was involved in the Ford Foundation Education for Global Citizenship Project. As a country specific researcher for South Africa, I obtained insights into the daily complexities which people experience in a transitional society. Educational undertakings are extremely challenging because of poverty, inequality, racism, HIV/AIDS, and environmental degradation to name but a few major socio-environmental issues. Secondly, I was involved in the UNICEF CARK (Central Asian Republics and Kazakhstan) Global Education Project as Graduate Coordinator and consultant. Through this curriculum renewal and teacher training project in five Central Asian countries, I also became aware of the educational challenges in the region. They include poverty, the crisis of identity in a transitional society, meeting the needs of vulnerable people (e.g. girls, female students, ethnic minorities, and the poor), lack of support for teachers, and weak national governance in the face of strong international donor and aid agencies.

Involvement in the above projects made me consider real issues and tensions in educational change. First, major challenges, which are not necessarily South African

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10 An academic article was published based on this work is as follows: Kagawa, F. (2004), Wholeness and hope: An exploration of the worldview of peace educators in Ontario. *International Journal of Curriculum and Instruction*, 6, (1) 3-20.
and Central Asian specific, I saw as including: a tension between education for economic development and education for social justice for all in the face of economic globalization and the emergent needs of people; the difficulty of translating new policies and curriculum to classroom level; issues of survival in extreme poverty; lack of support and resources for teachers in the face of new government educational initiatives; addressing historical injustice in education; dealing with identity crises; and difficulties in promoting educational reform within a dominant mechanistic and positivistic paradigm. Second, I saw that educational reform is political: whose interests count?; who has access to resources and information? Decisions around education are invariably influenced by power.

I then moved to the U.K. to pursue my doctoral studies at the University of Plymouth in September 2003. Although my initial plan was to explore stakeholders' experiences of the UNICEF CARK Global Education Project, I changed my focus to the examination of the interface between emergency education and education for sustainability. This happened for two reasons. One concerned practicality. There was uncertainty about the continuation of the CARK Project and as a result of changes in my work status (e.g. my work involvement in emergency education as Research Assistant in the Faculty of Education as well as in education for sustainability first as Research Assistant and later as Research Team Coordinator at the Centre for Sustainable Futures, University of Plymouth). The other was my increasing realization of the unexplored relationship between the fields of emergency education and education for sustainability.

In terms of my readiness for conducting research at doctoral level for this research, I felt my confidence and capacity to have been growing over the past few years. It was helpful to have both formal training in research methodology at a post graduate level and a number of empirical research experiences (both qualitative and quantitative) independently and collaboratively. Through trial and error, I was able to develop my capacity to plan, implement and write up a research project. The wide scope of this research has been a challenge for me to grapple with and synthesize complex ideas, so the progress of the thesis has been slower than I had anticipated.
Overall, looking back over my background, interestingly and sometimes rather accidentally, one experience took me to another and I found myself in a process of continuous journey. My previous life experience had influenced me to pursue my doctoral work. It had made me interested in looking into connections between seemingly discrete phenomena, issues, and concepts. And this is why I decided to examine the interface between two fields of work I have become passionate about and engaged in. My personal experience had also made me patient and open to unfolding processes and uncertainties. This doctoral research is an exploratory development of learning principles for education in response to emergencies. As this study has unfolded, I have recognized the increasing significance of emergency education in the face of climate change and I would like to explore this issue more in the future. When I started, I was not completely sure where the journey would take me.

2.2.2 Where Do I Stand?: My Ideological Position

So what lens do I bring to this doctoral study? Who am I? How do I see the world? How do I think we can know about the world? What are my personal morality, values and ethics? What is my ideological standpoint (which I take to consist of my axiological, epistemological and ontological perspectives)? And what is its implications for my normative view on being a researcher? There are a number of clues in my personal history described above. Below, I try to elaborate the key essences which constitute my ideological position.

My ontological and epistemological positions have been influenced by a number of holistic frameworks, renditions and thinkers. What is described in Chapter One in the holistic and ecological worldview section (see pages 20-28) sets out those key influences. They include quantum philosophy, deep ecology, ecofeminism, and spiritual traditions (which, as described immediately above, include indigenous traditions). All commonly offered profound, often times radical, interpretations of interconnectedness, relationship and contextualism. I do not think I neatly fit into one particular rendition or school of thought, but I borrow ideas eclectically from these different recognized
streams of holistic thinking. In this sense, I embrace eclecticism, rather than purely adhering to a particular school of thought.

Within the multiple renditions of a holistic perspective, I adhere closely to David Bohm's notion of unbroken wholeness, a view of the world as a dynamic, seamless web of relationship, where all forms of the material universe (or 'explicit order') emerge from the 'implicate' or 'enfolded' order and return to the whole (Nichol 2003) (see also pages 22-23). Within such a conception of the world, reality is not static but in a constant flow of movement. This is ultimately a process philosophy that embraces inconstancy, and perpetual emergence. Bohm's notion of unbroken wholeness also holds that reality cannot exist independently from our being, and that, while there is an independent reality, we can never capture that reality in its entirety. The multidimensional cannot be fully known.

The concept of 'holarchy' coined by Arthur Koestler (Capra 1982) is also an important notion in my ontological understanding of reality. As distinct from a hierarchical worldview, underpinned by an either/or way of seeing the world, holarchy is a both/and philosophy, thus, for example, embracing mechanism as a constituent element within holism. Opposites are, therefore, in dynamical complementarity.

Having this dynamic and interrelated view of the world, I adhere to a relational epistemology in which nothing can finally be understood in isolation. Knowing is also not limited to rationality. Knowing come to us through our whole being - emotions, feelings, bodily senses, intuition as well as logic and reason. From the belief that the self and external world (the researcher and the researched) are not separable, I question the usefulness of objectivity and neutrality aspirations in an inquiry involving human beings. It is important to be reflective and open about perspectives going into the research. I am inclined to use an inductive logic by looking at patterns and associations, allowing the theory to emerge organically rather than imposing and testing a predetermined hypothesis. Accepting the ultimately unknowable nature of reality and my own limitations to know the world fully, modesty, humility as well as openness about the limitation of knowing is also an important part of my epistemology.
In terms of my perspective on the human-nature relationship, growing up in a non-western society, I have internalized the value of human embeddedness in nature not necessarily in a rational way, but in a non-rational and spiritual manner through everyday living.

Considering my axiology (value, ethical and moral stances), I embrace an international and culturally sensitive disposition, which has been developed through my experiences in living abroad as a foreigner and so belonging a minority. My overseas experiences also made me more conscious about issues of power and marginalization. Respect for human dignity and human rights regardless of circumstances has become an important value for me.

In further examination of how my values position links with my ideological position, I have borrowed Barry's (2007) explanation of ideologies. He points out that any ideology is characterized by the following three features: an analysis of the current social order based on its own fundamental ethical and political principles; an alternative and normative view on society; a theory of transition or agency. He also notes that each ideology has a particular view on the relationship between human society and non-human world.

So, for me, in looking at contemporary society, it is critical to address mutually reinforcing socio-economic and environmental vulnerabilities and devastations. I see these challenges as global and transnational in scope; I see issues are structural, and underpinned by the modern mechanistic worldview. As an alternative view, I envisage a society which helps to fulfill quality of life for all, including both human beings and the non-human world. Therefore, I believe that it is important to expand our moral and ethical boundaries beyond human beings and to include non-human species and environment. Creating locally self-sustaining forms of social and economic order and practices that stay safely within environmental capacity should be prioritized. In the transition to such an ideal society, changes should take place at various nodal points and from various directions. I hold a positive view of individual human potential and her/his critical role as a change agent, believing that each individual's fullest potential is
nurturable, rather than predetermined. So to create effective social change, structural changes and individual changes should go hand in hand. Overall, my view is transformative, rather than status-quo confirmative, conformative, and conservative.

My ideological position has also shaped my normative view on the purpose of research. I hold a strong belief that processes and goals of research activities should contribute to solve the problems of injustice and serve the common good and betterment of the society, even in a small way. I consciously employ non-exploitative and participatory research methodologies and try to create a reciprocal relationship between the researcher and research participants, so that participation in the research is meaningful and empowering for them as much as myself.

2.3. Qualitative Research Methodology

2.3.1. Key Characteristics of Qualitative Research Methodology

This study employs qualitative research methodology. From my ontological and epistemological positions, the letter and spirit of qualitative methodology better suit the purposes of this research. But how? First, I briefly overview quantitative research methodology, since historically the development of qualitative methodology is closely linked to overcoming the perceived limitations of quantitative methodology for understanding human society and human social interactions.

Quantitative methodology is predicated upon a positivist paradigm and/or its successor, a postpositivist paradigm. Both positivist and postpositivist paradigms work on the assumption that there is one reality and the reality exists external to people, driven by natural laws. In this paradigm, reality, or the world, consists of observable and measurable facts. For positivists, it is a researcher's job to 'discover' such a reality. Postpositivists similarly think that it is a researcher's task to discover the reality, but within probability limits, because of their acknowledgement of the human limitations of the researcher (Cohen et al. 2000; Cresswell 1994; Glesne 1999; Mertens 1998).

Underpinned by the above-mentioned assumptions, quantitative methodology employs a deductive form of logic. Its goals are "to develop generalizations that
contribute to the theory and that enable one to better predict, explain, and understand some phenomenon" (Cresswell 1994: 7). Objective, observable, and quantifiable data are collected through experimental,\textsuperscript{11} empirical and/or statistical methods, which are commonly used in natural science. Quantitative researchers affirm the objectivity and neutrality of their research and believe that research should be value-free, so they seek to avoid influencing or being influenced by the object of the research, separating facts from values and biases (Cohen et al. 2000; Cresswell 1994; Glesne 1999; Mertens 1998). Therefore, in the words of Guba and Lincoln (1994), "inquiry takes place as through a one-way mirror" (110). A quantitative methodology clearly shares ontological and epistemological commonalities with the mechanistic worldview discussed in Chapter One (see pages 15-19) because of an overriding belief in the sole or primary validity of analytical and empirical methods based on separation, prediction, objectivity, and measurement.

In contrast to quantitative methodology, qualitative methodology emphasizes qualities, processes and meanings which are not measured through experiments. Qualitative methodology is underpinned by non-positivist paradigms\textsuperscript{12} and it embraces ongoing critiques of positivist paradigms and methods (Denzin and Lincoln 2000). Qualitative research methodology is referred to as naturalistic inquiry, that is investigating real world situation in a "non-manipulative, non-obtrusive and non-controlling" way (Patton 1990: 40).

Non-positivist paradigms include, most influentially, the constructivist/interpretive paradigm, and the emancipatory/critical paradigm. The constructivist paradigm is based on the relativist ontology that reality is socially constructed and there exist multiple constructions of reality. Epistemologically, research findings are created through an interlocking and interactive investigation process between the investigator and the

\textsuperscript{11} Postpositivism suggests 'quasi-experimental methods' because of their awareness of the limitations of the application of scientific methods to human beings (Mertens 1998).

\textsuperscript{12} In their historical review of development of qualitative methodology, Denzin and Lincoln (2000) point out that qualitative methodology was originally strongly influenced by positivist and postpositivist paradigms, and qualitative researchers aimed at conducting "good positivist research with less rigorous methods and procedures" (9).
enquired. Methodologically, it is considered that individual social construction is to be “elicited and refined only through interaction *between and among* investigator and respondents” and interpretation is made hermeneutically and dialectically (Guba and Lincoln 1994) [italics in original]. Because of the close link between investigator and the object of investigation, the strict distinction between ontology and epistemology disappears (*ibid.*).

The emancipator/critical paradigm was inspired by dissatisfaction with dominant research paradigms and practices which were largely developed by white able-bodied male researchers. This paradigm is supported by critical theorists, Marxists, feminists, and action researchers, i.e. those who intend to directly address various forms of oppression. They think that reality is “shaped by social, political, cultural, economic, ethnic, and gender values crystallized over time” (Denzin and Lincoln 2000: 168) and comes to be perceived as ‘real.’ This paradigm particularly emphasizes the multiple realities of those who have been marginalized, and stresses that epistemologically it is important to develop an empowering relationship between the researcher and research participants (Denzin and Lincoln 2000; Mertens 1998). It is acknowledged that investigators influence the inquiry process, so research findings are considered as “value mediated”. The emancipatory/critical paradigm recognizes that “what can be known is inextricably intertwined with the interaction between a particular investigator and a particular object or group,” so, as with the constructivist paradigm, the boundary between ontology and epistemology becomes blurred (Guba and Lincoln 1994:110).

Qualitative methodology predicated upon these assumptions commonly uses an inductive form of logic, where categories or themes emerge from a specific context, rather than being identified as priorities in advance by the researcher. Research questions can evolve and change as the process of inquiry unfolds. Qualitative researchers are engaged in a set of interpretive activities through interaction with research participants. They aim at understanding and describing multiple social constructions of reality, and do not intend to reduce them to a norm. They regard the nature of inquiry as value-laden, so it is important for them to make explicit the values
embedded in the investigation as well as the subjectivity of the researcher (as I have
done). Objectivity is questioned, even denied (Cohen et al. 2000; Cresswell 1994;

Those paradigms underpinning qualitative methodology share commonalities with
the holistic perspective described in Chapter One (see pages 20-28). Examples
include: being aware of the interdependence and complexities of phenomena; the
mutual embeddedness of the observer and the observed; valuing contextual
knowledge by rejecting generalization and objectivity; appreciating diverse ways of
knowing. The ontological assumptions made by constructivist and emancipatory
renditions of qualitative methodology seem to be more in line with the interrelated view
of holism (i.e. everything is related to everything else) than an enfolded interpretation
(everything is enfolded into everything else).

The reasons for choosing qualitative research methodology, as against quantitative
methodology, for this research are twofold. As described above, clearly, my ontological
and epistemological positions as underpinned by a holistic perspective are in line with
the letter and spirit of qualitative methodology. Another rationale arises from the nature
of the research questions and consequent purposes of my research. I intend to explore
the interface of two fields to develop learning principles that are applicable in
emergency situations. I also want to be open to what has emerged during the research
process rather than fixing all the steps of the research beforehand. Qualitative
methodology accords with such intentions.

2.3.2. Qualitative Case Study Research

Qualitative case study research seeks to understand unique and complex human
interactions and unfolding events relating to real life cases. The ‘case’ refers to a single
particular phenomenon, entity, or unit that is bounded (e.g. an event, a situation, a
key characteristics of case study research are “particularistic, descriptive, and heuristic”
(29). She explains that case study research is particularistic because of its focus on
one specific situation, event, programme, or phenomenon. It is also descriptive since the case intends to provide rich, ‘thick’ and vivid descriptions “so that readers will be able to determine how closely their situations match the research situation, and hence, whether findings can be transferred” (Merriam 1998: 211). It also often offers a chronological narrative of the chosen case. Case study descriptions are also characterized as “holistic, lifelike, grounded and exploratory” (ibid.:30) [Italics in original]. Regarding the heuristic, Merriam states that a case study “can bring about the discovery of new meaning, extend the reader’s experience or confirm what is known” (ibid.:30).

Case studies are diverse and various typologies of case studies have been suggested. For instance, Stake (2003) categorizes case studies into three types: intrinsic case study (i.e. analyzing and intensively describing the case in order to better understand it); instrumental case study (i.e. using a case to provide an insight into other issues or clarifying a hypothesis); collective case study (i.e. studying a number of different cases for possible theory building). According to Merriam (1998), three categories of case study are: descriptive (i.e. narrative accounts), interpretive (i.e. examination of initial assumptions through developing conceptual categories inductively), and evaluative (i.e. explaining and judging).

There are no particular data collection and analytical methods attached to qualitative case study research, but frequently-used data collection methods include: observation, interviews, site visits, and the analysis of documents and records (Merriam 1998; Wellington 2000). There are many presentational styles in case study research but what is important is to give a ‘rich, thick’ description, as described above.

As against the various strengths which qualitative case study research can offer — rich, vivid and holistic descriptions of the case, unique and illuminating insights and meanings for the readers — it is important for both the researchers and readers of the case study research to be aware of the researcher’s bias from both ethical and illuminative points of view. What is presented in a case study is only a ‘slice of life’ and a researcher inevitably selects the data by deciding her/his own criteria for
representation (Merriam 1998; Stake 2003). In this sense, as Wellington (2000) states, it is important for researchers to take a reflective and ethical approach and for readers to use their own judgment based on their own knowledge and wisdom.

A qualitative case study approach was employed for phase two of the research (see pages 55-58) examining the fourth research question (see page 31). By applying holistic and sustainability principles to both actual and anticipated emergency education situations, this amounted to an instrumental case study as described by Stake (2003). The application of the principles retrospectively to two further cases (see pages 210-225) also comes under this heading. The limitation of this further application to a survey of documentary evidence means that this latter piece of research can also be described as a documentary case study (Merriam 1998).

2.4. Data Collection and Analysis Methods

2.4.1. Literature Review

Hart (1998:13) defines a literature review as follows:

The selection of available documents (both published and unpublished) on the topic, which contain information, ideas, data and evidence written from a particular standpoint to fulfil certain aims or express certain views on the nature of the topic and how it is to be investigated, and the effective evaluation of these documents in relation to the research being proposed (13).

Since any literature is written from a specific perspective (i.e. moral, ethical, political, ideological) and the analysis of literature also involves our own perspective, one of the important tasks for the reviewer is to be aware of our own perspective (ibid.:25).

My perspective, as described in the section above, is holistic and transformative in essence.

Hart points out that the purposes of literature review include understanding both the historical background and landmark studies as well as current debates on the topic, providing an appropriate framework for the new research, and avoiding unnecessarily duplication of academic work. More specifically Hart comes up with a list of purposes for
a literature review, each of which resonates well with the overall purpose of my review:

1. distinguishing what has been done from what needs to be done;
2. discovering important variables relevant to the topic;
3. synthesizing and gaining a new perspective
4. identifying relationships between ideas and practice;
5. establishing the context of the topic or problem;
6. rationalizing the significance of the problem;
7. enhancing and acquiring the subject vocabulary;
8. understanding the structure of the subject;
9. relating ideas and theory to applications;
10. identifying the main methodologies and research techniques that have been used;
11. placing the research in a historical context to show familiarity with state-of-the-art development (ibid.: 27)

As described under my story section (see pages 33-39), I moved away from my initial research proposal focusing on the UNICEF CARK project due to increasing uncertainty regarding project continuation and potential logistical and technical difficulties in conducting field-based research in the Central Asia while working full time at the University of Plymouth. When I was re-considering the new direction of my research, my supervisor suggested I read The Principles of Sustainability (Dresner, 2002) and his PhD dissertation, Sustainability: A survey and critical analysis (Dresner, 1996) to see if Dresner's research approach might offer signposts for my research. Dresner (1996, 2002) examines contemporary debates on sustainability by combining methods of critical literature review of the field, a number of semi-structured personal interviews with key thinkers in the debates, and observations at a few international policy negotiations and conferences. His interviews aimed at obtaining the latest thinking of key thinkers in the field. In his writing he integrates his interview and participant observation data with the literature review. I immediately perceived a practical usefulness in his data collection and presentation methods for my
circumstances in that I could organize my data collection without involving myself in a lot of travel.

Obviously, the 'usefulness' of the data collection methods had to be justified in relation to my research aims, questions and methodology (Mason 2002; Ritchie and Lewis 2003). When the aim of my research was determined as one of exploring the characteristics of holistic and sustainable learning principles as applied to humanitarian emergencies, the combination of literature review and qualitative interview data looked right. It overcame the patchy nature of the emergency education literature and even patchier nature of the literature on the interface between the two fields while the interviews allowed for richer and deeper insight than could be obtained from a literature review alone.

The literature search was conducted through the major library databases (i.e. British Education Index, Australian Education Index, ERIC, Web of Knowledge) using combinations of the following keywords: emergency, conflicts, wars, natural disaster, disaster risk, education, learning, pedagogy, curriculum, policy, non-formal, globalization, sustainability, holistic, transformative, development, worldview, paradigm, climate change.

First exploring titles and abstracts, I began to select relevant books, articles and conference papers for more careful reading to familiarize myself further to my chosen areas. I did not have very specific criteria for selection and, in retrospect, I proceeded in a heuristic manner in that after reading and saturating myself in a great amount of literature, I began to see trends, key words, key thinkers/organizations for further searches and reading. I gradually focused down the list. While reading literature, I always looked at reference lists/bibliographies and picked up further titles that seemed relevant to my research area.

I primarily searched academic literature but also looked at key governmental and professional documents through websites paying particular attention to documents frequently cited in other literature. In terms of the literature in the field of emergency education, on-line resources and the regular email news of Inter-Agency Network for
Education in Emergencies (http://www.ineesite.org/) were very useful to obtaining the latest information in the field.

Because of my holistic and transformative perspective and research objective of coming up with holistic and sustainable learning principles, I placed more emphasis on gathering and examining literature in line with a holistic philosophy, although I did not exclude other renditions. This bias is revisited under my discussion of the limitations of the study (see pages 65-68).

The review of literature played a somewhat different role at different points in my thesis. In Chapter One, the main purpose of reviewing the literature was to give a broad backcloth to the causes of emergencies. In the following three chapters, the literature review was strengthened, following Dresner's examples, by combining the discussion of literature with the perspectives of key thinkers in the two fields. The latter points will be further clarified in the section on phase one of the research immediately below.

2.4.2. Data Collection - Phase One

The empirical research in this study was carried out in two phases. Phase one (from November 2005 to January 2008) explored the first three research questions and phase two (from June 2008 to January 2009) examined the last research question (see pages 30-31 for all the research questions).

The purpose of phase one was twofold: first, to elicit the very latest thinking of participating emergency educators and sustainability educators about their own fields as well as to explore participants' views on the interface between the fields of education for sustainability and emergency education; second, to come up with holistic and sustainable learning principles for humanitarian emergencies. During the first phase, I conducted semi-structured interviews with a total of ten key personnel (five individuals per field) who have contributed to the theoretical development of emergency education, on the one hand, and education for sustainability, on the other, on two occasions. The sample size was chosen based on the practicability and efficiency of my research time-frame.
The use of the semi-structured interview as a data collection method is linked to the ontological and epistemological components of social reality which the qualitative researcher embraces (Mason 2002). Ontologically, I see people's knowledge and views as meaningful insights on social reality and epistemologically I see engaging with people through conversation as a meaningful way to generate knowledge or data. There was also a pragmatic reason for using the interview method. As mentioned earlier, my justification was that the data I wanted (insights on the interface of the fields of emergency education and education for sustainability) were by and large lacking from the literature while interviewing would generate such data. Embracing the approach of "conversation with a purpose" (Mason 2002), I aimed at being flexible and spontaneous, and maintaining a good balance between talking and listening.

From each field, five educators were recruited using sampling methods based upon a combination of purposive and convenience criteria. According to purposive sampling, "information-rich cases for study" will be selected, since from them the researcher "can learn a great deal about issues of central importance to the purpose of the research" (Patton 1990:169). According to Patton (1990), convenience sampling means selecting samples on the basis of convenience or easy access. It is important to emphasize that there was no intention to claim the sample as 'representative' of the wider population. Rather it intended to choose the samples which 'provide a flavor' or 'the best illumination' (Mason 2002) in relation to my research questions.

By means of a thoroughgoing literature review of each field I first came up with a list of potential participants; educators whose publications are particularly important in the conceptualization and development of the fields, and who possess profound theoretical and practical knowledge as well as working experience in their respective field (i.e. purposive sampling). Then I narrowed the list down according to their willingness to participate my study and their availability within the confines of my research schedule (i.e. convenience sampling).

In general, approach to potential participants was made by informal email communication and in some cases through informal discussion at conferences in which
I participated. There were however, different recruitment procedures and criteria applied for each field. For emergency educators, while I also contacted by email, I took an advantage of informally approaching key figures at the international conference on Education and Conflict: Research Policy and Practice at University of Oxford, U.K. in April 2006. When potential participants expressed some interest in becoming involved in the research, I followed up with a formal invitation letter to explain the details of the research by email. I invited nine emergency educators to join the study and five agreed to participate. It was clear that availability was an issue as they were frequently involved in field work.

For the educators for sustainability, after coming up with an initial list of possible participants, I decided to approach sustainability-related educators at the Think Tank on the Theory and Practice of Sustainability-Oriented Education and Its Implications for Higher Education run by Centre for Sustainable Futures (CSF), University of Plymouth at Schumacher College, Dartington, U.K. in November 2005. The recruitment of sustainability educators in this way was pragmatic but justifiable for the following reasons. Firstly, for this event, CSF invited the most prominent academic thinkers from the field of education for sustainability who happened to be available from around the world. Since a holistic and broad definition of sustainability and sustainable education was applied by CSF, those who were invited were a mixture of academics who labeled themselves as ‘sustainability educator,’ ‘environmental educator,’ ‘peace educator,’ futures educator,’ transformative educator,’ ‘feminist educator’ or combination of same. Attending the Think Tank were 13 academic leaders of international renown in the sustainability-related field from 7 countries. The participants in the event were I considered satisfying the criteria for ‘information-rich cases’ (Patton 1990).

Although there are often stereotypical and sometime negative views attached to the Schumacher College because of its innovative alternative educational approach, it is important to emphasize that the participating sustainability educators at this Think Tank

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13 Schumacher College is a world-renowned private institute for the study of sustainability (http://schumachercollege.org) and CSF and Schumacher College had an institutional partnership from 2005-2008.
were recruited by the Centre for Sustainable Futures and that Schumacher College did not intervene in any way in the process of selection. CSF consciously chose participants so that there was diverse philosophical and practical expertise in relation to sustainability education at the Think Tank. Secondly, I also took advantage of 'easy access' and contact to these prominent sustainability educators during the event, while I was working with them through as part of my work as Research Assistant to CSF during the event. The profiles of research participants for phase one will be described at the end of this chapter (see pages 68-73).

Critically reflecting upon the process I undertook, it is important to point out my own bias as it influenced the selection of research participants. Because of my above-clarified ideological stance, and because the purpose of the research was to develop holistic and sustainable learning principles, I selected sustainability educators who were inclined to holistic and/or transformative perspectives on approaches to education, rather than those embracing a mechanistic or 'business as usual' position. In truth, the worldview of research participants was not a conscious sampling criterion. Neither was it in the case in the choice of emergency educators, in this case for pragmatic reasons as will be discussed later (see page 65-66).

During the first phase, two rounds of interviews were conducted on a person-to-person basis and/or using a telephone conference facility depending on convenience and geographical location of the participants. The first interview session lasted from sixty to ninety minutes and was a semi-structured interview around questions laid out in Appendix 1. Semi-structured individual interview guides (phase one) (pages 240-241). The specific aims of the interview were: to elicit, even extend, the participants' latest thinking on their own field of expertise (which I could not do just by reading their publications); to explore participants' views on the interface of the fields of emergency education and education for sustainability.

With prior permission from participants, interviews were audio-recorded for analysis. Full transcriptions were made and sent to research participants by email for them to make amendments, additions and/or deletions. I also created two source-anonymous
summary documents of issues emerging from the first round of interviews (see
Appendix 2. Summary of first round of individual interviews with emergency
educators, pages 242-248; Appendix 3. Summary of first round of individual
interviews with sustainability educators, pages 249-255). Research participants
received the summary from those interviewed within their own field and were asked to
reflect on the document prior to the second interview.

The use of the anonymous summary document for feedback was, first, to make the
research process transparent and, second, to create an opportunity for opinion sharing
among participants who were geographically separated. This use of an anonymous
summary is a technique informed by the Delphi method. According to Skulmoski et al.
(2007), the Delphi method is “an interactive process to collect and distill the
anonymous judgments of experts using a series of data collection and analysis
techniques interspersed with feedback” (1). The Delphi method has been used for
various purposes, including problem solving, decision making, forecasting, programme
planning and administration, and knowledge development (ibid.). Delphi’s multiple
iteration processes to collect data can be flexibly modified to meet the needs of the
given study (Murry and Hammons 1995; Skulmoski et al. 2007).

The second (follow-up) interview sought further clarification of what had been
discussed in the first interview as well as elicitation of participants’ responses to and
reflections on the summary document. Time intervals between the first and second
interview were from eight to twenty months. The second interview lasted from forty five
to sixty minutes. It was conducted using a telephone conference facility in the case of
nine participants and in person for one participant (the choice made being based upon
participant preference). Similar to the first interviews, all the individual interviews were
transcribed and transcriptions sent to participants for amendment, addition and/or
deletion.

Through interactions with the participants during the first phase and by means of an
ongoing literature review, I then drafted holistic and sustainable learning principles for
humanitarian emergencies. More specifically, they emerged according to the following
steps. After identifying key characteristics of the mechanistic and holistic worldviews (see pages 15-28), each field was examined as against these worldview characteristics (see the summary tables in pages 111-112 for emergency education and 150 for sustainability-related education). The interface analyses of the two fields (see pages 152-162) also contributed to highlighting the key issues to be addressed in the framework. The emerging ideas were then synthesized and presented according to six headings: slowness, balance, resilience, social justice, interconnectedness, and anticipation. Chapter Five of this thesis will elaborate and discuss these principles in detail.

The first draft summary document of the principles (see Appendix 4. Draft holistic and sustainable learning principles, pages 256-259, was sent to the phase one participants via email for their reflections and feedback in July 2008. Similar to the first summary documents, my intention was to make the research process transparent, and also to invite participants' feedback so that I could reflect on the suggested principles more critically. Seven out of ten participants gave me specific comments, while three participants only acknowledged receipt of my request but did not manage to offer feedback mainly because they were out of touch at that time. The framework was finalized by reflecting upon and synthesizing feedback obtained (see the final version on pages 177-180 in Chapter Five).

2.4.3. Data Collection - Phase Two

A main purpose of the second phase of the empirical research was to examine both the applicability of and practitioner receptivity to the holistic and sustainable learning principles through the lens of one initiative involving an educational response to an emergency. The case study method was employed in this phase (see pages 45-47).

The initiative in question was chosen through a combination of purposive and convenience sampling criteria. My criteria for selecting an initiative was: (1) having a comprehensive conceptualization and approach to emergencies (e.g. an educational approach which addresses long-term consequences and root causes of emergencies,
by dealing with not only the acute/immediate emergency contexts but also ‘pre’ and ‘after’ emergency contexts) (purposive sampling); (2) the availability of five to six personnel from the initiative for involvement with the research during the suggested period of research (convenience sampling).

After identifying a few possible initiatives through literature and website searches, the initiatives of an NGO, Plan International, drew my attention. Plan International is one of the largest child-centred community development organizations globally. Its project areas include health, education, livelihood, habitat and relationship building in 49 developing countries around the world. Plan UK is one of 16 national offices that are based in developed countries (Plan 2007a, 2008a). Although Plan is not a relief organization, it is increasingly addressing emergency humanitarian responses and emergency preparedness in its programmes (Plan 2007a).

After receiving a positive email reply from Plan UK, followed by a telephone conversation with Nick Hall, Manager for International Disaster Risk Reduction, we further discussed in person the potential involvement of Plan personnel. Because of limited availability of sufficient Plan personnel involved in any particular initiative during the suggested period of empirical research, a newly launched multi-agency initiative, Children in a Changing Climate (CCC) was suggested as an alternative, Plan being a key and active member. According to the project website, CCC is “global collaborative action-research, advocacy and learning programme” and it aims at “secur[ing] children's influence in preventing and adapting to climate change at every level – from their families and communities to the United Nations climate change negotiations” (CCC 2008).

Since the Children in a Changing Climate (CCC) programme had been launched just a few months before the empirical research, the suggested case study was considered to be anticipatory or extrapolative, hence, as much if not more grounded in participants' previous experience as in their experience in the CCC initiative itself. In spite of its potential weakness, choosing this initiative was considered beneficial as

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14 For further details of Plan International, see pages 183-186 in Chapter Six.
filling the current gap in addressing climate change-related emergencies in both the fields of emergency education and sustainability-related education.

However, the empirical research faced some difficulties in obtaining rich insights into the proposed principles mainly because of the emerging nature of the CCC initiative. Because the initiative had emerged from the Plan's ongoing project called Children and Young People at the Centre for Disaster Risk Reduction, it was decided to also include this initiative. This programme aims to "reduce immediate and long-term impact of disasters on communities, particularly children and young people" by enhancing community resilience through active participation of children, their family and community members in problem solving (Hall 2007a).

Recruitment was done based on the list of potential research participants provided by Nick Hall, a key player in both initiatives. I contacted total 21 colleagues and finally eight of them participated in the research.

Interviews were conducted on a person-to-person basis, using a telephone or email facility depending on the preference of each participant. Each interview session lasted about one hour around the semi-structured questions laid out in Appendix 5. Semi-structured individual interview guide (phase two) (see pages 260-261). The aim of the individual interviews was twofold. Firstly, each interview aimed at eliciting participants' personal narratives on the Children and Young People at the Centre for Disaster Risk Reduction and/or Children in the Changing Climate initiative; second, it aimed at eliciting their views and reflections on the applicability of the suggested principles to the initiative. Full transcriptions of the individual interviews were sent to the participants for them to make amendments, additions and/or deletions. After the interview, participants were contacted for any required clarification and with follow-up questions by email, phone or by a meeting in person based on their availability and

15 For more detailed explanations of the Children and Young People at the Centre of Disaster Risk Reduction Programme, see pages 186-189.

16 There were three other people who participated in the interviews (via email or telephone) in a limited manner (i.e. no detailed comments on the proposed principles) and the proposed follow-up interview did not take place after a few abortive attempts. So I decided not to use the limited data contributed by the three people concerned.
convenience.

In order to ensure an open research process, an anonymous brief summary document of issues emerging from the eight individual case study interviews was sent to all the participants in phases one and two for their information (but not feedback) in June 2009 (see Appendix 6. Key insights and issues arising from a study of two linked cases, pages 262-264).

In addition, two retrospective document-based case studies were conducted in order to examine more specific 'contextual valuables' when applying the six learning principles in different emergency education contexts. Two emergency education programmes responding to different triggers by Plan International were chosen based on the availability of written documentation explaining the context of each emergency related educational program, and analysis and evaluation of their implementation. One was a response to the 2006 earthquake in Indonesia, the Yogyakarta Earthquake Response and Recovery Program, and the other was a response to a civil strife in Sierra Leone, the Rapid Education Program.

2.4.4. Data Analysis

Before describing the technical steps taken in qualitative data analysis for phases one and two, it is important to remind myself of my methodological framework as underpinned by my core ontological and epistemological assumptions. Processes of data analysis - reading data, making categories, making an argument, producing a theory (including considering the role of theory) - are neither technically and/or conceptually neutral activities. Without careful reflection on the core ontological and epistemological assumptions which the researcher holds, there is the possibility of some inconsistency or incongruence between assumptions and technical steps (Mason 2002; Spencer et al. 2003).

I read raw data generated from the interviews interpretively and reflectively, rather than literally. This meant that instead of reading data at face value I primarily read "through or beyond the data" by considering what I thought the data was signaling, and
by further reflecting on the intrusion of my subjectivity into the data generation and interpretation process (ibid.:149).

In terms of categorization of data, I generated categories in a grounded and emerging manner based on ongoing processes of reading the data interpretively and reflectively, rather than by testing out any hypothesis. It is important to point out that emerging categories are also shaped by my overall research aims and questions. In other words, emergent categories need to be constantly cross-checked with my research questions. The cross checking was done by writing down the emerging ideas on post-it papers and regularly sorting them under each research question (and their respective sub-questions) as written on a large sheet of paper.

As discussed earlier, I am generally inclined to take an inductive approach (theory comes last, moving from particular to general) rather than deductive one (theory comes first, moving from general to particular). But more precisely, it is more appropriate to locate myself somewhere between the two approaches. Taking the view that qualitative research has "both theoretical grounds and theoretical consequences" (Mason 2002: 179), I hold that theories are formed through processes of ideas generation and modification.

Based on those assumptions, I used Cohen et al.'s (2000: 148-152) eight steps as a 'guide' for my data analysis. It is important to note that I did not see these analytical steps in a rigid and linear sequence moving from step one to step seven, but rather by moving fluidly between the steps backwards and forwards. I also retained an open and flexible attitude to new ideas and refinements, and to revisiting the original or synthesized data during the process of analysis.

- **Step 1: Establish units of analysis of the data, indicating how these units are similar to and different from each other**

  I read through the collected qualitative data several times carefully and over a period of time until I became very familiar with them. I then ascribed codes emerging from the data that had not been predetermined. At this point a code
was a word or a phrase to capture an idea.\footnote{What follows are some of the examples from phase two case study interviews in a no specific order: global justice; reconsidering role of education; emergency preparedness; resilience; vulnerability; capacity building/agency; contradiction of a holistic framework; accountability; contextuality; wider applicability.}

- **Step 2: Create a 'domain analysis'**
  
  I grouped the units into coherent sets, themes, or patterns (i.e. domains). I did a careful cross-checking between what emerged and my own methodological perspective which I brought to the research.

- **Step 3: Establish relationships and linkages between the domains**
  
  I looked at further associations and connections between subsets of data by reviewing them carefully over time.

- **Step 4: Make speculative inferences**
  
  I continued examination and tentative explanation of the relationships of data.

- **Step 5: Summarize**
  
  I wrote a summary of key concepts and issues arising from the data analysis. These were shared among the research participants for their feedback. During phase one, each participant received the summary from those interviewed within their own field and was invited to share their views during the follow-up interview. Phase one participants were also invited to share their feedback with me on my draft learning principles. During the second phase, all research participants from the both phases received a summary of the analysis of the phase two research.

- **Step 6: Seek negative and discrepant cases**
  
  I looked for exceptions to or disagreements (i.e. negative cases) to my initial assumptions and my ongoing analysis. This was mainly done through interactions with the phase one participants. The above mentioned summary documents shared during phase one played an important role in identifying negative cases (questions and disagreements to what I have developed).

- **Step 7: Theory generation**
I moved back and forth between data and analytical concepts (an ongoing process).

Holistic and sustainable learning principles emerged through the above steps combined with the literature review that continued throughout the research (see pages 54-55). The phase one empirical research data and the analyses were integrated in Chapters Three, Four, and Five, and the data and analyses from phase two in Chapters Six and Seven. The concluding chapter Eight also draws upon all the data and analyses.

2.5. Ethical Considerations

Cohen et al. (2000) and Glesne (1999), among others, claim that ethics should be considered throughout the whole research process. There are no absolute ethical principles, but it is important to negotiate and interpret them according to context. I consciously interacted with those who were involved in the research "with openness, honesty and respect" (Glesne 1999:105).

It is common practice to obtain informed consent, to avoid any harm to research participants, and to protect research participants' confidentiality and anonymity. In this research, I first obtained ethical approval from the Faulty of Education to conduct this doctoral research in November 2005 and I obtained informed consent from all the participants (see Appendix 7. Sample informed consent letters and forms for phase one, pages 265-272 and Appendix 8. Sample informed consent letter and form for phase two, see pages 273-275). The consent letters included the following: clear explanations of the purposes and processes of the research, and the expected roles of research participants; an explanation of the schedule for the research; the principle of voluntary participation; and a statement of the anonymity and confidentiality of participants. Finessing the last point, all the research participants were given an option of allowing me to use their real names in my thesis if they chose to do so. This
was because of their already known\textsuperscript{18} and/or potential contributions to theory
development in education for sustainability and emergency education and my intention
of giving them due academic credit. This option was clearly described in the informed
consent letters for both phases. Except for one person in phase one, all participants
agreed that their real names and bio pieces be included in the thesis.

I did not foresee any significant risk to the participants in this research, since the
questions were asking nothing about them personally but simply trying to elicit their
views of the origins, nature, development and impact of the fields of education for
sustainability or emergency education, as well as their views on the interface between
the two fields (phase one), or asking their views about the suggested learning
principles and their perceptions of their appropriateness and usefulness (phase two).
Only I had access to all the raw data which I kept in a locked file in a locked room in my
residence. One year after the successful completion of my thesis, audio interview files
and copies of interview transcripts are to be completely destroyed.

In consideration of research rapport, i.e. building an effective relationship between
the researcher and the research participants (Glesne 1999), during the initial
information meeting for the phase two case study, I discussed what benefits the
potential participants would like to expect from participating in the research. I was
requested to make my final case study section and whole thesis pdf file available for
those who participated and maybe contribute to joint writing around the initiative in the
future as a part of the outcome of the research. I agreed to both requests.

Reflecting on the research process, one of the ethical issues was the anonymity of
the phase two research participants. As described above I invited those recommended
by the key informant, Nick Hall (see page 57). Approaching them mentioning the name
of the key informant did not protect their total anonymity, and some of them might have
felt a slight pressure to participate because of his position within the programmes. I
emphasized the principle of volunteer participation. All the participants agreed that I
could use their real names in my thesis, so it did not become a major ethical issue as

\textsuperscript{18} This point is particularly relevant to phase one participants.
things turned out.

2.6. Issues of Credibility

Credibility, which is the same as internal validity,\(^{19}\) or trustworthiness, concerns whether there is "a correspondence between the way the respondents actually perceive social constructs and the way the researcher portrays their viewpoints" (Mertens 1998:181). The following strategies are suggested as ways of showing the research to be credible, although it is not necessary to address every aspect within the one study (Cohen et al. 2000:108).

1. prolonged engagement and persistent observation in the field
2. triangulation (use of multiple data collection methods; use of variety of data sources, use of multiple investigators and/or use of multiple theoretical perspectives)
3. peer review and debriefing (exposing oneself to external reflection and input)
4. negative case analysis (by consciously looking for negative cases and unconfirmative evidence in order to amend a working hypothesis)
5. clarification of researcher bias (reflection on researcher's own subjectivity)
6. member checking (by sharing interview transcriptions, preliminary/final analysis with the research participants to check the adequacy of the analysis)
7. providing rich, thick description (which allows the reader to understand research context sufficiently)
8. external audit (an outsider's examination on field notes, research journal, coding scheme)

This study has incorporated most of these elements. For example, triangulation (point 2) took place to some degree: multiple engagements with research participants (the follow-up interviews and engagement through the summary documents); multiple data sources for the phase two case study (e.g. semi-structured interview data, publicly

\(^{19}\) Internal validity concerns "the explanation of a particular event, issue or set of data which a piece of research provides can actually be sustained by data" (Cohen et al. 2000:107).
available program materials as well as some of the internal project documents). The comments I received upon my earlier drafts of thesis chapters from the thesis supervisory team helped me reflect upon the coherence of the data analysis and presentation (point 3). Negative cases (point 4) were considered in two ways: through sampling strategy and analysis strategy. For the former, engagement with emergency educators (the group does not necessarily share the 'holistic education' assumptions which I hold) helped me to consider practical and pragmatic elements in developing the learning principles for humanitarian crises. Examination of the two completed emergency education cases responding to different emergency triggers (see Chapter Seven) was also helpful in putting my thinking to the test. The examination revealed that the proposed principles (i.e. my hypotheses) are not ubiquitously applicable given contextual variables. The use of the above mentioned summary documents for feedback was helpful in identifying my own blind spots. Regarding clarification of researcher bias (point 5), the section above (see pages 39-42) describes my subjectivity in relation to this study in detail. Member checking (point 6) took place in the form of sharing interview transcripts, and sharing summaries of preliminary data analysis with the research participants to invite their comments. In terms of providing rich and thick description (point 7), which is most relevant to my case study in Chapter Six, I made sure that the descriptions were sufficient for the readers to understand the context.

I judged that points 1 and 8 above were irrelevant to my analysis for the following reasons. Regarding point 1, I was not conducting field observations so it was not applicable to my research. I did not think the external audit (point 8) was particularly necessary as a means of increasing my research credibility.

Transferability, which is parallel to external validity or generalizability, concerns “the ability of the researcher (and user of the research results) to extend the findings of a particular study beyond the specific individuals and setting in which the study occurred" (Mertens 1998: 254). What is relevant to my study is the notion of 'theoretical or inferential generalization.' According to Mason (2002), theoretical generalization is a
position between context free generalization and an idiosyncratic position that considers no meaning exists outside the particular context. Theoretical generalization asserts that analyses and explanations of how and why a specific phenomena has happened will "widen the resonance of [the researcher's] argument by asking questions about the lessons for other settings" (ibid.:196) [italics in original]. In order to enhance resonance, the elicitation and "discovery of new meaning, extend[ing] reader's experience or confirm[ing] what is known" (Mertens 1998), thick descriptions (see page 46) are commonly suggested.

Mason (2002) points out that theoretical generalization is strengthened when the explanations of the phenomena (i.e. why and how it works or happens) are made in "a strategically selected range of contexts." She goes on to state that: "By making comparisons between these contexts you can then produce cross-contextual generalities that are derived from an understanding of processes or phenomena in specific contexts, that are strategically compared" (ibid.:196 -197). Theoretical generalization is inevitably linked to a purposive sampling strategy (ibid.). In my study, two documentary case studies on concrete and completed emergency education programs were added to the originally developed two linked cases. This addition was made because of my increasing self-critical reflection on the two linked cases, which did not seem to sufficiently illuminate the context specific valuables. Mason (ibid.) points out that it is justifiable to adjust sampling and data generation strategy as new analytical insights emerge during the qualitative research process. Two documentary case studies examining why and how each principle was applied (or was not applied) to the two strategically chosen cases, one social and one environmental emergency (within the limitation of only using available documentations), helped to increase the theoretical generalizability of my research.

2.7. Limitations of the Study

As a limitation of this study, the design and selection of samples for phase one interviews become salient. It is important to highlight that my sampling method was not
probability sampling commonly used for quantitative statistical research. Probability sampling is a useful method to test hypothesis and aims at producing a statistically representative sample from which distribution of characteristics to the wider population is estimated and measured (Ritchie et al. 2003).

This logic of representative sampling is very different from, and works against, qualitative sampling, which does not aim at being representative of a wider population. In reflecting upon sampling methods used in the study (i.e. purposive sampling and convenient sampling), two points stand out. First, my sample selection criteria for phase one was rather too broad (i.e. educators whose publications have contributed to the conceptualization and development of the field and who have profound theoretical and practical knowledge, as well as work experience in their own field). As mentioned in an earlier section (see page 53), what was missing was the conscious use of 'holistic worldview' as a criterion in selection. However, in retrospect, this was the 'unstated' criterion I actually used especially for the selection of sustainability educators given that the purpose of this research was to come up with holistic and sustainability principles. The five participating sustainability educators were those who commonly possessed and/or were sympathetic towards non-mechanistic and transformative perspectives on education. Therefore, they were a homogeneous sample, belonging to the “same subculture or [having] the same characteristics” (Ritchie et al. 2003: 79). In the case of the selection of emergency educators, the same ‘unstated’ criterion was also applied. However, since the pool of the educators who publish in this field is very much smaller than in the case of sustainability education, I eventually decided on adhere to my original broad criteria. For this group, availability became an important factor, since potential participants had limited availability because of their frequent engagement in the field work. Although my selection process was not ‘ad hoc,’ a compromise had to be made because of pragmatic reasons.

These biases emerging from initial broad criteria and availability of participants, inevitably, caused the incompatibility of the two expert groups participating in the phase one research. Sustainability educators were ‘homogenous’ in sharing non-mechanistic
and transformative aspirations, while emergency educators were not necessarily bound together by such characteristics. There are further contrasts between these two experts groups in terms of types of expertise. The sustainability educators are all academics working (or having worked) at tertiary level, while only two of the emergency educators currently work in universities although they are all involved in academic research and publications. Most of the participating emergency educators have extensive field experience around the world and work across different facets of education, while most of the participating sustainability educators work at the theoretical rather than field level. Participating emergency educators are particularly focused on conflict induced emergency situations rather than environmentally triggered ones. On the other hand, most of the participating sustainability educators are strongly concerned about environmental and ecological crises. In considering that both fields are huge fields covering different levels (primary, secondary, tertiary education), types (formal, non-formal and informal education), and facets (policy, pedagogy, formal curriculum, community/informal education) of education in different cultural and geographical contexts, it was technically difficult to make those groups compatible. These gaps might reflect on the general tendencies of those who work in each field. I did not pay attention to this matter earlier during the recruitment of the research participants, and I think those gaps and accompanying biases should be borne in mind.

Considering the methodology used in this study more broadly, one fundamental question occurs to me. Was my research conducted in a way that simply confirmed my own original assumptions? Did I choose only ‘confirming’ cases? As discussed above (see pages 60 and 64), examining negative cases has helped to increase the credibility of the research. I put my ideas and explanations to the test through sharing my preliminary analyses developed during the study with participants, while I also looked for negative cases as I conducted the analysis. I also reexamined my methodology in the light of my own (axiological, ontological, epistemological and ideological) assumptions and reflected upon their implications for each step of the research I had undertaken. So I believe that my alertness to the dangers of writing a simply
'confirming' study enabled me to take steps to confront the issue squarely.

2.8. Dramatis Personae: Short Stories of Research Participants

What follows is a brief introduction to the research participants in this study. It is intended that this information will be helpful in enabling readers to understand the perspectives of these participants better. I first gathered their personal information from the publicly available sources (websites, publications) and composed a short statement. I then checked what had been written with each participant. For those who I could not find information on the public domain, I asked them to provide their biographical information. All agreed to my including their bio pieces in this section.²⁰

2.8.1. Emergency Educators

Peter Buckland is a Lead Education Specialist in the Human Development Network in the World Bank. Prior to this he was employed in the Middle East and North Africa Region of the World Bank, where he was task team leader for education projects in Iraq and Jordan. From May 2002 to January 2004 he worked in the Bank's Human Development Network focusing on education and post-conflict reconstruction. Prior to joining the Bank, he spent five years at UNICEF. In both of these posts, he has served as headquarter's focal point for education in situations of conflict, crisis and instability. Peter is a South African citizen and has worked in education in various capacities in Zimbabwe and South Africa: starting in teaching, and moving through the ranks of academia (to the post of Director of the Institute of Education, University of Bophuthatswana), public service (as Secretary for Education and Culture in KaNgwane, and later as Acting Superintendent-General of Education in Gauteng) and the private sector (as Director of the Education and System Change Unit of the National Business Initiative). His book, *Reshaping the future: Education and postconflict reconstruction* (2005) was published by the World Bank. He has been a member of the Inter-Agency

²⁰As mentioned in page 46, one participant preferred the pseudonym, but this person has approved the brief bio piece which appears in this thesis.
Network for Education in Emergencies (INEE) Steering Group since 2001, and at the
time of writing chairs the INEE Working Group on Education and Fragility.

Nick Jackson (pseudonym) has significant experience working and researching in
war-torn contexts around the world. As a researcher, educator, and consultant, he has
worked broadly on issues of youth and education, peace education, conflict negotiation,
security, child soldiers, urbanization, human rights and coordination in emergency,
post-conflict and development contexts. He has worked and researched at university
level and published a number of influential books and articles on the above topics.

Susan Nicolai has worked for over a decade in the field of education, international
development, and emergency relief. She worked for several years with Save the
Children, working on education for children affected by conflict and disaster. Her work
on education in emergencies and post-conflict settings has taken her around the world,
to countries as diverse as Democratic Republic of the Congo, Kosovo, Liberia, South
Sudan, Sri Lanka and the occupied Palestinian Territories. Her books, Learning
Independence: Education in emergency and transition in Timor-Leste since 1999
(2004) and Fragmented foundations: Education and chronic crisis in the Occupied
Palestinian Territory (2007) are published by UNESCO IIEP, and her Education in
emergencies: A tool kit for starting and managing education in emergencies (2003) by
Save the Children UK.

Gonzalo Retamal is Visiting Lecturer on Education in Emergencies at Princeton
University. He has a long-term involvement in the development of the field of
emergency education through working with various UN organizations. His previous
work includes:

- Senior Research Specialist in the UNESCO Institute for Education in Hamburg
  (developing education systems for displaced children in Sierra Leone and Youth
  in Kosovo; evaluating non-formal education systems of Latin America and the
  Middle East, and advising the Governments of Botswana and Tunisia on Youth
  and Adult Learning Systems);

- Head of the Department of Culture for the Joint Interim Administration of the
United Nations in Kosovo (UNMIK);

- UNESCO representative in Iraq for the 'Food for Oil' programme;
- Senior Education Advisor for Humanitarian Assistance at the UNESCO International Bureau of Education in Geneva and with UNESCO in Eastern Africa, where he originated the Programme for Education for Emergencies and Reconstruction (PEER) mainly for Somalia, Rwanda, Djibouti, Ethiopia and refugee camps in the Region;
- Chief of the School Education Programme of UNRWA in the Middle East during the process of the first Intifada;
- Senior Education Officer of UNHCR in Geneva until 1990.

Before those positions, he worked in the field in Central America and the Caribbean as a Social Services/Education Officer during the crises in Nicaragua, El Salvador and Guatemala and Haiti in the 1980s. Gonzalo holds a PhD from the Adult Education Department of the University of Hull, UK, and has been involved in non-formal education in Honduras, Belize, Colombia, Peru, Palestine, Southern Africa, Sudan and Bosnia since the 1970s. He is a Chilean citizen and his publications, including Retamal, G. and Aedo-Richmond, R. (Eds) (1998) Education as a humanitarian response, have been very influential in the area of refugee and humanitarian education.

Margaret Sinclair began work as educational planner in 1969. She worked as an adviser on vocational training and income generation for UNHCR in Peshawar, Pakistan, from 1988 to 1993, and served as the Senior Education Officer in UNHCR Headquarters until 1998. During this time she initiated a pilot programme of education for peace, conflict resolution and life skills, which has now reached refugees, internally displaced and returnee communities in several countries, and has also been shared with other agencies. Margaret has written extensively on emergency education and has undertaken several field assignments. Her recent books, Planning education in and after emergencies (2002), and Learning to live together: Building skills, values and attitudes for the twenty-first century (2004) were published by UNESCO IIEP and UNESCO IBE respectively.
2.8.2. Sustainability Educators

John Barry is Reader in Politics at Queen's University Belfast, Northern Ireland. He has written extensively about normative aspects of environmental politics and the political economy of environmental policy, education for sustainable development and environmental politics in Ireland. His publications include, *Rethinking green politics: Nature, virtue, progress* (Sage 1999) [Winner of the PSA's WJM Mackenzie Prize for best book published in political science 1999]; *Environment and social theory, 2nd edition* (Routledge 2007); with John Proops, *Citizenship, sustainability and environmental research* (Edward Elgar, 2000); and has co-edited (with Marcel Wissenburg), *Sustaining liberal democracy: Ecological challenges and opportunities* (Palgrave 2001); (with Gene Frankland) *The international encyclopedia of environmental politics* (Routledge 2001); (with Brian Baxter and Richard Dunphy) *Europe, globalization and sustainable development* (Routledge, 2004) (with Robyn Eckerlsey); *The state and the global ecological crisis* (MIT Press 2005). He is also a co-editor of two journals, *Environmental Politics* and *Ecopolitics Online*. He has recently authored 'Spires, plateaus and the infertile landscape of Education for Sustainable Development: Re-invigorating the university through integrating community, campus and curriculum', *International Journal of Innovation and Sustainable Development*. He has been co-chair of the Green Party in Northern Ireland since 2003. He is the party's sustainable development spokesperson.

Abelardo Brenes-Castro is former Professor of Psychology at the University of Costa Rica and former Director of the M.A. in Peace Education at the United Nations Affiliated University for Peace based in Costa Rica. He has been involved both in activist and academic work in the areas of peace, human rights, and sustainable development since 1983. He was Director of the Central American Program for the Promotion of Human Rights and Peace Education in 1992, and the Central American Program for a Culture of Peace and Democracy from 1994 to 2001. In 1998 he joined the drafting team of The Earth Charter and is currently a senior advisor to this
Initiative. At the time of writing, he is also a member of the Monitoring and Evaluation Expert Group (MEEG) of the United Nations Decade of Education for Sustainable Development.

**Edmund O'Sullivan** is a former Professor of Transformative Learning and Director of the Transformative Learning Centre at the Ontario Institute for Studies in Education at the University of Toronto, Canada. Over more than twenty years, he taught courses in child development, educational psychology, critical mass media studies, critical pedagogy and cultural studies. He is the author of numerous books, book chapters and articles, including *Transformative Learning: Educational Vision for the 21st Century* (Zed Books 1999).

**Stephen Sterling** is Schumacher Reader in Education for Sustainability at the Centre for Sustainable Futures in the University of Plymouth, U.K. and Senior Advisor to the Higher Education Academy Education for Sustainable Development Project. He is also a Visiting Research Fellow at London South Bank University and at the Centre for Research in Education and the Environment at the University of Bath. He has worked as a consultant in environmental and sustainability education in the academic and NGO fields nationally and internationally. He was a co-architect of the Education for Sustainability Masters Programme at London South Bank University. His research interest is in the interrelationships between systemic change, learning, ecological thinking and sustainability. His key publications include *Education for Sustainability* (Earthscan 1996), *Education for Sustainable Development in the Schools Sector* (Sustainable Development Education Panel 1988) and *Sustainable Education: Re-visioning Learning Change* (Green Books 2001).

**Arjen Wals** is an Associate Professor within the Education and Competence Studies Group of the Department of Social Science of the Wageningen University in the Netherlands. He specializes in environmental education. Within the environmental education field he is particularly interested in social learning and participation. He is the (co) author of over 150 publications on issues related to environmental education and education in the context of sustainability, including Wals, A. (Ed.) *Social Learning*
towards a Sustainable World (Wageningen Academic Publishers 2007). He serves on the editorial (advisory) boards of all major environmental education research journals.

2.8.3. Case Study Participants

**Avianto Amri** is Disaster Management Specialist for Plan International Indonesia. He leads the disaster management department. He designs, coordinates, implements and monitors the Disaster Risk Reduction programme and the Disaster Response programme. He is also in charge of several projects including the development of Plan Indonesia's internal disaster preparedness and response policy; leading emergency programmes on flood, earthquakes, volcanoes in Jakarta, Yogyakarta, Aceh, Kelud, and Dompu; Environment and Climate Change programme; Child Centred Community Based Disaster Risk Management.

**Jo Butcher** is Assistant Director of Health, Well-being and Environment in the Well-being Department at the National Children's Bureau (NCB), which promotes the interests and well-being of all children and young people across every aspect of their lives. She leads a national unit on promoting and improving the health and well-being of children and young people in health, community, supported housing and secure settings and on public health and sustainable development. She was seconded to the Department of Health for 3 years in 2001 as policy lead on drug education, to support children and young people's participation in policy and developed the Government's framework on Volatile Substance Abuse (VSA), published in 2005. Prior to this she was Coordinator of the national Drug Education Forum and wrote the National Healthy School Standard guidance on drug education published in 2003. She has a background in youth work, including facilitating personal, social and health education (PSHE) programmes and developmental group work and providing one to one support to vulnerable young people. She is also a qualified counsellor and has counselled young people on a range of issues affecting their lives.

**Nick Hall** is Plan International's Manager for the international disaster risk reduction (DRR) program. He has initiated projects in several countries that aim to help
children become aware of disaster risk so they can help prevent disasters in the future. He grew up in Zambia, earned a degree in economics from London School of Economics, then, after ten years as a roof thatcher in England, studied for a PhD. before gradually concentrating on development aid and disaster management. He has helped to prepare national disaster management strategies for the governments of Kenya and Bangladesh, and has published books and papers on disaster management and on urban poverty. As a London University research fellow, he spent many months living with village communities in Asia and Africa, studying and discovering how modern risk management methods have often degraded indigenous coping capacities.

**Hamish Mackenzie** is School Development and Marketing Officer in Plan International. He currently manages all the development education activities for the UK section of the organization. He has successfully completed a number of Plan projects. 'Make the link, Break the Chain' ([http://www.plan-ed.org/learningcentre/antislavery/](http://www.plan-ed.org/learningcentre/antislavery/)) was his award-winning development education project on slavery. Working closely with National Museums Liverpool, he implemented a school link project involving 10 schools in Liverpool, Senegal, Brazil, Haiti and Sierra Leone for students to discuss the legacy of slavery. 'Make a Link, Be the Change' ([http://www.plan-ed.org/inthenews/bethechange/](http://www.plan-ed.org/inthenews/bethechange/)), in which he took a lead, was a climate change international education project involving 3000 students in 13 countries. 'Shoot Nations' ([http://www.shootnations.org/](http://www.shootnations.org/)) was the global youth engagement project documenting the issues that concern them via medium of photography. He is also Interim Learning Manager for the Children in a Changing Climate programme. He previously worked as National Project Manager in Sri Lanka for the Hikkaduwa Area Relief Fund for both humanitarian and community development projects in the wake of the 2004 Tsumami.

**Tom Mitchell** is a geographer specializing in climate change adaptation and disaster risk reduction and how these topics link to poverty and governance. His current research interests include child-centred disaster risk reduction and adaptation, and he leads the Institute of Development Studies (IDS)-based Children in a Changing Climate programme. He is currently leading research projects in partnership with Plan.
that explores opportunities for making children’s voices heard in disaster policy making in El Salvador and the Philippines.

Megh Rai is Emergency Programme Manager in Plan International based in its Timor Leste office. In response to the crisis in April 2007 in Timor Leste, she supports vulnerable and disadvantaged people at 11 camps with 18000 IDPs and currently supports their reintegration and community capacity building. She previously worked as Project Coordinator for the Community Preparedness for Disaster Risk Reduction (CPDRR) in Central and Eastern Nepal. As a Member of Tsunami Task Team, she conducted an evaluation for UNICEF Regional Office for South Asia of Tsunami responses in the region, particularly in conflict affected areas. She is an Emergency Personnel and Member/Resource Person for RedR India (Registered Engineers for Disaster Relief). She has traveled widely in Southeast Asia and is conversant with its physical, socio-economic and cultural conditions.

Francis Sathya is Senior Policy Advisor on Universal Primary Education at Plan International. He is in charge of developing Plan International's strategic framework, policies and guidelines to support primary education in all the regions and countries where Plan works. He has a profound understanding and experience of education and development programs in Africa, Asia, and Latin America and is on a quest for continuous learning, research, and creative solutions to challenge and knowledge sharing. He has worked for a number of national, international, quasi governmental and private non-profit organizations on various education and development projects at the local, regional and international levels.

Lucy Stone is Climate Change Project Manager for UNICEF UK. She leads a new climate change project at UNICEF UK which involves policy development as well as cross-organizational management to support climate change adaptation in countries most vulnerable to climate change. Previously she has had five years experience in public policy research at two of the UK's leading progressive think tanks. She has a particular interest in issues of climate change and democratic reform. One of her forthcoming publications is a co-authored report titled *The equity and public...*
acceptability of personal carbon trading (Royal Society for the enhancement of Arts, Manufacture & Commerce).

2.9. Conclusion

This chapter has sought to critically reflect upon the qualitative research methodology used for this study. To do so, it was vital to examine my own taken-for-granted axiological, epistemological, ontological and, hence, ideological assumptions, since they are both mutually influencing and, together with the research questions, lay the foundation for decisions made during the qualitative research design and process. Importantly, those relationships are not static and require constant reflection throughout the research process. Methodological strategy is also influenced by the practical issues emerging during the research. Overall, complexity of qualitative research design and implementation requires great rigour, care, as well as intellectual, strategic and reflective thinking.

Now I turn to Chapters Three and Four in order to explore the fields of, respectively, emergency education and education for sustainability. I trust that these two chapters will clarify the state-of-the-art of the two fields and highlight key issues by integrating voices and perspectives of the above-introduced field experts.
CHAPTER THREE

'USUAL BUSINESS IN VERY UNUSUAL CIRCUMSTANCES' \(^1\): EDUCATION IN EMERGENCIES

3.1. Introduction

This chapter addresses the first research question set out in Chapter One: What is the current range of renditions and understandings of the concept of emergency education?, and its sub-questions:

- What is understood as constituting a crisis or emergency?
- What are the proposals, arguments and justifications advanced by different schools of thought within the field of emergency education?
- What paradigmatic underpinning lies behind those different schools of thought?

In what ways and to what extent do the mechanistic and holistic worldviews manifest themselves in those different schools of thought?

To this end, the chapter first describes the trajectory of the field of emergency education focusing on different international discourses as a backcloth. They include increasing recognition of the impact of armed-conflicts and natural disasters on basic education [Education for All (EFA)], addressing the dialectical relationship between schooling and armed-conflicts and education, and disaster risk reduction education. Secondly, the chapter intends to map out the field by examining the definitions of emergency, rationales, and key characteristics in terms of policy/guidelines, curriculum, and pedagogy. Following that, key issues in the field of emergency education are highlighted. Contested notions of development, and the meaning of preparedness in relation to the consequences of climate change will be discussed. Finally, the field is examined through a paradigmatic lens.

The analysis and discussion in this chapter are based on a literature review and interactions with five experts in the field of emergency education who were chosen through a combination of purposive and convenience sampling methods (see pages 21 Buckland (2005).
Each participating emergency educator has contributed influential literature and possesses significant field experience as well as deep knowledge and expertise of conflict induced emergency education initiatives. However, these emergency educators do not necessarily belong to a homogenous group sharing non-mechanistic and transformative aspirations for education. It is important to remind the reader of the purpose of including these experts in my research: to elicit their latest thinking on the field of emergency education and their view on the interface between the field and that of education for sustainability.

3.2. Trajectory of Emergency Education: International Discourses

3.2.1. Emerging Challenges in Education Systems

Emergency education is an emerging field of study (Seitz 2004; Sinclair 2002; Sommers 2002) but with a long history in the form of refugee education, which goes back to the creation of the United Nations High Commissioner for Refugees (UNHCR) in 1950 and the United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA) in 1949. Because of an increase in organized violence in the form of war, civil strife, armed conflict and political oppression since the end of the Cold War in 1989\(^2\) as well as the increase of the number of natural disasters in the 1990s, education in emergency and crisis situations has become a major concern for the international community (Retamal and Aedo-Richmond 1998; Seitz 2004; Tawil 1997; UNESCO 2000a). Education is increasingly recognized as the 'fourth pillar' of humanitarian aid in such crises, along with food and water, shelter and health care (Machel 2001).

At the 1990 World Conference on Education for All (EFA)\(^3\) in Jomtien, Thailand,

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\(^2\) Conflicts include the Gulf War, the genocide in Rwanda, conflicts in Angola, Afghanistan, the former Yugoslavia, parts of the former Soviet Union, Liberia, Sierra Leone, Somalia, and Sudan, to name but a few strands in the web of crisis.

there was very little mention of education for emergency situations. The 1990 World Declaration on Education for All, emerging from the World Conference, describes "war, occupation, civil strife" as part of the constellation of "daunting problems" which "constrain efforts to meet basic learning needs" (Preamble, UNESCO 1990). The 1996 Mid-Decade meeting on Education for All in Amman highlighted the importance of "delivering of basic education in situations of crisis and transition" (UNESCO 2000b: 7). Recommendations include creating safety zones during conflict, better understanding of the role of education for conflict management and prevention, and developing education systems to meet the needs of traumatized and displaced populations (UNESCO 2000b).

Graça Machel's Impact of War on Children (2001) is an influential study, which was commissioned by the UN General Assembly24 (the original document being submitted to the UN in 1996). This study examines a wide range of issues relating to children in devastating armed conflicts and post-conflict conditions. According to the study, two million children died during armed conflicts from 1986 to 1996; six million children were seriously injured or permanently disabled and millions were separated from their families, physically and psychologically abused, and abducted into the military; girls were particularly traumatized by sexual violence and rape. The study puts an emphasis on the 'psychosocial' recovery of war-affected children. A psychosocial approach acknowledges the dynamic relationship between psychological effects (i.e. emotion, behaviour, thoughts, memory, learning ability, perception and understanding) and social effects (i.e. relationships altered or distorted by death, separation, and estrangements), and also emphasizes the importance of respecting local culture, incorporating community based approaches, and promoting children's participation in education.

The Thematic Study on Education in Situations of Emergencies and Crisis25


25 The study was originally published by UNESCO for the International Consultative Forum on Education for All, as part of the Education for All 2000 Assessment leading up to the World Education Forum held in Dakar in 2000 (UNESCO 2000b).
(UNESCO 2000b) looks into the state-of-the-art in emergency education. The study concludes that "man-made [sic.] and natural disasters have emerged as major barriers to the accomplishment of education for all" (1) [Italics in original]. Based on a review of about fifty emergency education programmes around the world, it points out that "existing programmes deal mostly with basic education in the classical sense of traditional schooling" (34). The study emphasizes the importance of including education programs which promote education for human rights, peace, democracy and tolerance, and the environment, and involving a participatory pedagogy and conflict resolution methods in a more systematic manner.

Following the growing recognition of urgent demands for education in emergency situations, the 2000 Dakar Framework for Action26 (UNESCO 2000a) highlights deprivation of educational opportunities because of emergency situations as a major barrier to access to schooling, in addition to poverty, gender and disability. The Framework calls for national EFA plans to include provision for education in emergency situations. One of the twelve stated strategies is to:

Meet the needs of education systems affected by conflict, natural calamities and instability and conduct educational programmes in ways that promote mutual understanding, peace and tolerance, and help to prevent violence and conflict (paragraph 8, UNESCO 2000a).

Education in emergency situations is emphasized as one of the nine EFA flagship programmes.27 Along the same lines, the 2000 Oxfam Education Report recognizes the absence of peace and stability in many developing countries as one of the greatest obstacles to achieving the goal of basic education for all since it undermines the educational infrastructure and the capacity of states to support basic education (Tawil

26 The six goals suggested include: early childhood care and education; complete free and compulsory primary education of good quality by 2015; meeting learning needs of all young people and adults; a 50% of improvement of adult literacy by 2015; achieving gender equality in education by 2015; eliminating gender disparities in primary and secondary education by 2005; improving all aspects of the quality of education with measurable outcomes in literacy, numeracy and essential life skills (UNESCO 2000a).

27 The nine flagship programs are school health, HIV/AIDS, early childhood care and education, literacy, girl's education, disabilities, education for rural people, education in situations of emergency and crisis and teachers and the quality of education (UNESCO 2000a).
and Harley 2003). Furthermore, emerging from the 2000 Winnipeg Conference on War-Affected Children, the Framework for Commitment to War-Affected Children declares that “Education is central to humanitarian action” (Canadian International Development Agency 2000: 47).

Following a decision to develop inter-agency collaboration and communication at the above-mentioned 2000 Dakar conference, the Interagency Network for Education in Emergencies (INEE) (http://www.ineesite.org) was established in 2000. It is an open network of UN agencies, donors, NGOs, governments, research institutes and universities, practitioners, and individuals and aims at sharing knowledge and experience in order to ensure the rights of education for all those affected by emergencies, crises or chronic instability (INEE 2004; UNESCO 2006a).

In 2007 the Machel Study 10-year Strategic Review (see pages 79-80) was co-convened by the Special Representative of the Secretary-General for Children and Conflict and UNICEF and the report was submitted to the 2007 UN General Assembly (A/62/228). It points out that during the past 10 years, new features of armed conflicts have emerged. They include an increase of ‘one-sided violence’ by lightly armed groups on civilian populations; ‘asset wars’ where economic and natural resource interests trigger and prolong conflicts; involvement of non-state actors such as transnational criminal groups; increasing attacks on civilians and civilian facilities such as schools and hospitals; widespread gender based violence. In spite of the progress made during the last decade, the report emphasizes the continuous significant violation of children’s rights. Not only ensuring the resources and services for long-term recovery and integration for conflict affected children, but also active promotion of child and youth participation in decision making are identified as critical in non-violent change processes and in preventing conflict (UN Special Representative of the Secretary-General for Children and Conflict and UNICEF 2007).

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28 INEE is led by a steering group which consists of CARE International, the International Rescue Committee (IRC), the Norwegian Refugee Council (NRC), the International Save the Children Alliance, UNESCO, UNHCR, UNICEF, and the World Bank (UNESCO 2006a).
3.2.2. Addressing a Dialectical Relationship between Formal Schooling and Armed-Conflicts

One of the international discourses around emergency education has begun to emphasize the dialectical relationship between formal schooling and armed-conflicts. The idea of the dialectical relationship between schooling and society has been discussed previously (e.g. Freire 1970), and, more generally, the sociology of education has been examining the role of schooling in relation to the reproduction of social inequalities (e.g. Bowles and Gintis 1976). However, the special application of the idea to conflict-affected contexts is a more recent development. In a personal interview, Peter Buckland\(^\text{29}\) confirms this point stating that ten years ago “in the international field [of emergency education] everyone was talking about what had happened to the educational system [but] not what role it might have played in the first place” (personal interview 2006).

Among the various factors which exacerbate inter-group hostility under conditions of ethnic tension, Bush and Saltarelli (2000) have critically reflected on the role of formal education. Bush and Saltarelli’s study titled, *The Two Faces of Education in Ethnic Conflict: Towards a Peace Building Education for Children*, closely examines the dynamics of the negative and positive impacts of schooling. In terms of negative forces, they explore how educational contents and processes perpetuate social exclusion rather than promote social inclusion and conclude that formal education can be one of the sources of identity-based conflicts when the following elements exist independently or in combination:

- The uneven distribution of education as a means of creating or preserving positions of economic, social and political privilege;
- Education as a weapon in cultural repression (i.e. a culturally distinct people lose their identity as a result of policies designed to erode their

\(^{29}\) Peter Buckland’s views included in this thesis are personal and do not represent the organization to which he belongs.
distinct language, religion, culture);

- Education as a means of manipulating history for political purposes;
- Education serving to diminish self-worth and encourage a hate for others;
- Segregated education as a means of ensuring inequality, inferiority, and stereotypes;
- The role of textbooks in impoverishing the imagination of children by manipulation of information;
- Authoritarian systems and processes of teaching and learning

(ibid.: 9-16).

Their arguments regarding the positive force of education will be discussed later in this chapter (see pages 101-102).

There are other bilateral development agencies and multilateral organizations which began to examine the link between education and armed-conflicts with a particular focus on the negative influence of formal education. For instance, a paper published under the auspices of the Canadian International Development Agency (CIDA) (Issacs 2002) explores the role of education in peace building with an emphasis on formal education as a possible contributor to conflict. It comes up with a broad outline of conflict monitoring and risk indicators with regard to the political, economic, social/cultural and institutional factors to be taken into account for warning purposes.

By the same token, a paper issued by the British Department of International Development (DFID) (Smith and Vaux 2003) claims that education is “part of the problem as well as part of the solution” in terms of conflict (2) and emphasizes the need for critical examination of “the type of education that is on offer and the values and attitudes it is promoting,” because “simply providing education does not ensure

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30 Key bilateral development organizations in relation to emergency education include British Department for International Development (DFID), Canadian International Development Agency (CIDA), Deutsche Gesellschaft für Technische Zusammenarbeit/ German Federal Ministry for Economic Cooperation and Development (GTZ), Swedish International Development Agency (SIDA), Norwegian Agency for Development Cooperation (NORAD) and United States Agency for International Development (USAID). Multilateral organizations are the World Bank and the UN organizations such as UNESCO, UNICEF, UNHCR.
peace" [Italics in original] (10). The document urges the development of indicators for a 'conflict sensitive education system.' It also suggests that insights from educational initiatives in conflict situations should inform the mainstream education sector. However, the authors do not elaborate the characteristics of a conflict sensitive education system in any great detail.

A comprehensive study commissioned by German Federal Ministry for Economic Cooperation and Development (GTZ) (Seitz 2004) critically examines the roles of education in the creation, prevention and resolution of social crises. The study identifies key elements for conflict sensitive education systems, which include developing inclusive and integrative educational facilities and structures, a democratic educational environment promoting a participatory learning culture, and multiple identities consisting of languages, religions and cultures. It similarly suggests the mainstreaming of such conflict sensitive education systems.

In terms of multilateral organizations, a World Bank Study (Salmi 2000) observes that educational context, structure, and delivery systems may themselves be catalysts for violent conflict. The study offers an analytical framework for examining links between various forms of violence and education. A 2005 World Bank study titled *Reshaping the Future: Education and Postconflict Reconstruction* (Buckland 2005) also offers a critical examination of the role of formal education in relation to conflicts and states:

> Education does not cause wars, nor does it end them. It does, however, frequently contribute to the factors that are [sic.] underlie conflict, but it also has the potential to play a significant role both directly and indirectly in building peace, restoring countries to a positive development path, and reversing the damage wrought by civil war (86).

### 3.2.3. Disaster Risk Reduction through Education

A link between responding to natural disasters and the positive role which education and training can play have been addressed particularly by those who are working from a ‘disaster risk reduction’ framework. For them, disasters are distinguished from natural hazards (e.g. cyclone, earthquakes) and disaster risk is considered to arise “when
hazards interact with physical, social, economic and environmental vulnerabilities” (UN International Strategy for Disaster Reduction 2005:1). This idea is expressed in the following well-used equation in the field: “Risk = Hazard x Vulnerability” (UN/ISDR 2004:71).

The key policy document is the *Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters*, which was adopted at the 2005 World Conference on Disaster Reduction (WCDR) in Hyogo, Japan, by 168 delegates (UN/ISDR 2005). It states that disaster risk has become a "global concern" because of the increasing number of the disaster, pointing out that more than 200 million people per year have been affected by natural disasters during the past two decades. The *Hyogo Framework* suggests that disaster risk reduction "should be factored into policies, planning and programming related to sustainable development, relief, rehabilitation, and recovery activities in post-disaster and post-conflict situations in disaster-prone countries" *(ibid.:4)*.

One of the five priorities for actions in the *Hyogo Framework* proposes to "use knowledge, innovation and education to build a culture of safety and resilience at all levels" *(ibid.:6)*. Under this priority, the *Framework* suggests the more specific actions including: embedding disaster risk reduction knowledge in school curricula; implementing local risk assessment and carrying out programmes to prepare for disasters and to minimize the hazards; providing community-based training to enhance local capacities; including gender and cultural sensitivity in disaster risk reduction education and training *(ibid.:9-10)*.

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31 Disaster risk reduction's link to sustainable development will be revisited in Chapter Four. Disaster risk reduction is considered an essential part of sustainable development (UN/ISDR 2005; Wisner 2006).

32 Other action priorities are: to "ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation," to "identify, assess and monitor disaster risks and enhance early warning," to "reduce the underlying risk factors," and to "strengthen disaster preparedness for effective response at all levels" (UN/ISDR 2005: 6).
3.3. Mapping the Field of Emergency Education

In a very broad sense, emergency education initiatives take place in situations "in which conflicts or disasters have 'destabilized, disorganized or destroyed' the education system" (Chand et al. 2003: 224). They are the situations which overwhelm "the capacity of a society to cope by using its resources alone" (Nicolai 2003: 11). In the similar vein, Margaret Sinclair defines emergency situations in relation to national education capacity saying that:

Conceptually, I envisage that a country is not in emergency if it has an education plan which is proceeding in a more or less steady fashion. And I see an emergency if education is interrupted in a way which could not be part of the planning process and implementation (personal interview 2006).

The 2000 Education for All Dakar Framework of Action emphasizes the need to support populations still severely 'affected by' conflict, disaster or instability. According to this view, educational initiatives during post-emergency recovery and reconstruction are also understood as part of emergency education (Sinclair 2002). This suggests that the field of emergency education is, indeed, broad. Sommers (2002), on the other hand, states that the reconstruction immediately after the war and longer-term post-war reconstruction are separate areas which have their own sets of experiences and, consequently, literature. Reconstruction is the stage when normalcy and stability are established, although in a limited way. Government starts to function and gets more recognition by the people. Displaced populations begin to repatriate and settle. There is a strong focus on reconstructing educational infrastructures and policy development at this stage (Sommers 2002).

Educational approaches, contents and emphases differ depending on the needs of specific emergency-affected populations: refugees; internally displaced populations (IDPs); different age groups (early childhood, primary school age, secondary school age, adolescent, and adult) and gender; special need groups (child soldiers, ex-combatants, children with disabilities, separated children); minorities (Sinclair 2001). The socio-political conditions of the country, especially whether there is a functioning government mechanism or not, have tremendous implications for educational
undertakings such as national curriculum and policy development, delivery of education, and co-ordination of international donor and aid agencies (Sommers 2004).

Furthermore, the breadth of educational initiatives in emergency-affected contexts becomes clearer if we enumerate the range of tasks involved. They include physical reconstruction (e.g. school buildings, electricity and water facilities), ideological reconstruction (e.g. democratization), psychological reconstruction (e.g. dealing with trauma), policy and curricular reconstruction (e.g. national educational policy, curriculum and textbook development; supplies provision), school management and administration (e.g. certification and validation of pupils and teachers, funding), human resource development (e.g. capacity building of teachers and community members), inter-agency co-ordination, and school feeding (Arnhold et al. 1998, Nicolai 2003; INEE 2004). This comment by Susan Nicolai reminds us of diversity that the term 'emergency education' covers:

I feel like [emergency education] has moved on slightly, as a term in recent years. And it still can be used but is probably used more as a shorthand for the range of education interventions in crisis that includes education in terms of emergencies, recovery and in prevention. And I think there are different phrases that are used for that sometimes but I think going through and defining an evolution of understanding in emergency education is useful as well, because if you talk about [emergency education] as a broader piece I think it becomes a little bit more diluted (personal interview 2008).

Before looking into the further details of emergency education proposals, the section below will review the views of emergencies employed in the field.

3.3.1. Views on Emergencies

As described earlier, discourse on emergencies appeared within the international community in the 1990s. From the outset, it is important to note that in Sinclair’s words: “every emergency is different, and there are no sure formulae for a successful response” (2002: 26). Some authors emphasize the abrupt nature of the events, stating that an emergency is “a condition which arises suddenly, and the capacity to cope is suddenly and unexpectedly overwhelmed by events” (Herne 2002:2). Similarly, Margaret Sinclair states:
emergency education so far has mostly dealt with people who are unexpectedly caught by conflict or natural disaster... So the actual agencies that are in INEE [the Inter-Agency Network for Education in Emergencies] are mostly those which are responding to sudden events...[which] don't fit into normal governmental policy (personal interview 2007).

Others emphasize, in contradiction to Sommers (see page 86), a longer time span of emergency by regarding it as "encompassing not only the first days or months after an event, but also the effort to deal with the on-going effects of the crisis, and reconstruction" (Nicolai and Triplehorn 2003:2).

According to proponents of emergency education, 'emergencies' often fall into two broad categories: natural disasters (i.e. hurricane/typhoon, earthquake, flood, and drought) and human-made crises (i.e. war, internal conflict, and genocide) (Obura 2003; Pigozzi 1999; UNESCO 2006a). In addition to these, Pigozzi (1999) highlights silent/chronic emergencies such as persistent poverty, growing numbers of street children, and the HIV/AIDS pandemic. She further states that, in a broad sense, countries in transition and newly independent states face tremendous challenges that we can construe as emergencies. In those countries the source of an emergency is the, often financial, collapse of a system. Challenges then faced have some commonalities with countries which suffer from the emergencies caused by disaster or strife in terms of the importance of restructuring and rebuilding systems. Complex emergencies33 consist of a combination of the above-mentioned different elements, the term seeming to capture the reality of many contemporary emergencies (Bush and Saltarelli 2000; Evans 1996).

It is important to note that the identification of these different types of emergencies does not necessarily mean that the field responds to them equally. There are conflicting views on the current emphasis of the field. For instance, Chand et al. (2003) observe that emergencies caused by natural disasters remain rather a secondary concern

33 The term, 'complex emergency' was coined by the United Nations to describe crises requiring a system-wide response. In a 1992 UN document, titled An Agenda for Peace, then UN Secretary-General Boutros Boutros-Ghali delineated the responsibilities and responses of the UN and the international community in dealing with contemporary armed conflicts. His framework suggests major areas of activity: preventive diplomacy, peace making, peace keeping, and post-conflict peace building (Lederach 1997).
compared to conflict-triggered emergency education. On the other hand, Save the Children (2006) notes that educational responses caused by conflict are still lacking, although education became a familiar aspect of humanitarian operations in recent natural disasters, such as 2004 Asian Tsunami, and earthquakes in Iran, India, Pakistan, and Indonesia. These discussions also need to reflect on the fact that majority of the countries in which emergency education takes place are frequently at risk from both conflict and natural disaster, according to the analysis of emergency education projects around the world undertaken by Save the Children (Nicolai 2003). For Sinclair (2002), dominant emergency education does not deal with silent and chronic emergencies "except in so far as they occur during situations arising from armed conflict or natural disaster" (23).

Agencies involved in emergency education commonly categorize emergency situations into different phases/stages. For instance, UNESCO (2006a) suggests the following categories: acute outset; protracted emergencies; return and integration; early reconstruction. Figure 1 below shows another linear framework particularly for armed-conflict triggered emergency situations.

<table>
<thead>
<tr>
<th>Conflict status</th>
<th>Non-conflict; relative &quot;peace&quot;</th>
<th>Internal trouble; &quot;pre-&quot; conflict</th>
<th>Armed conflict</th>
<th>Transition out of violence; peace process</th>
<th>&quot;post-&quot; conflict</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of educational initiative</td>
<td>Education for prevention</td>
<td>Education in emergencies</td>
<td>Education for social and civic reconstruction</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Figure 1. Conflict status and types of educational initiative (Tawil and Harley 2004:11)*

There is increasing criticism of such a linear conceptualization and 'artificial' division of emergency phases and resultant compartmentalized educational responses, since emergencies rarely move in a linear and sequential manner, and there is no consensus regarding when one phase starts and ends (Sinclair 2002; Smith and Vaux 2003; Sommers 2002).
3.3.2. Rationales for Emergency Education

This section describes five rationales frequently appearing in emergency education discussions, rationales that are not always mutually exclusive.

One of the main rationales for emergency education is that access to education is an inalienable right for all children despite their circumstances. The 1989 United Nations Convention on the Rights of the Child (CRC) sets out the overall framework for any discussion of education and emergencies/crises. The CRC and other key international instruments\(^3\) oblige ratifying States to:

- actively prevent discrimination, on the grounds of ethnicity, against children and their families, with additional specific protections for children of minorities and indigenous peoples;
- ensure the right to education without discrimination;
- ensure that education is directed to encouraging respect for human rights, peace, tolerance, non-discrimination and non-violence;
- ensure the protection of the child’s right to freedom of religion;
- ensure the child’s right to diverse information and encourage the positive involvement of the mass media;
- protect children from all forms of physical and mental violence (with specific provisions protecting the child from various forms of violence and exploitation of children affected by armed conflict).

(Bush and Saltarelli 2000: 36).

According to Smith and Vaux (2003), the rights-based approach is of strategic importance in advocating emergency education nationally and internationally. However, it is often controversial to prioritize a specific right over other rights in the light of

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different perspectives. For instance, Maoists in Nepal have been attacking schools
which, for them, symbolize governmental authority, as part of their struggle for social
justice. The right to education is undermined in this context by a group prioritizing
another right (ibid.).

The second rationale for emergency education is that it plays an important role in
protection. This perspective is strong within the international humanitarian community,
and protection is understood as part of the rights-based approach (Nicolai and
Triplehorn 2003; Smith and Vaux 2003). The proponents of this view think attending
school is a measure of protection since it physically keeps the children away from risks.
Through education, children can learn the skills and knowledge to cope with increased
risks, which in turn, allows them to protect themselves (Nicolai 2003; Nicolai and
Triplehorn 2003). A weakness of this view is that schools are not always safe. School
buildings are often active targets in conflict zones, being seen as symbols of national
authority. Other risks at school include: student recruitment into the army; sexual
harassment of female students; corporal punishment often stemming from teachers'
own stress (Nicolai and Triplehorn 2003; Sommers 2002).

There is a psychosocial rationale as well. For instance, Machel (1996, 2001) avers
that children and adolescents living through conflict need psychosocial support, and
that such support is a prerequisite to learning anything after a traumatic experience.

Armed conflict affects all aspects of child development – physical, mental and
emotional – and to be effective, assistance must take each into account ... ensuring, from the outset of all assistance programmes, that the psychosocial
concerns intrinsic to child growth and development are addressed (Machel 1996:
49).

Some suggest that attending school or the availability of structured activities naturally
enhance a sense of 'normalcy,' and in turn, help the process of healing. According to
Sinclair (2001), many agency staff members feel that structured activities have a
beneficial effect on the mental state of children and adults. However, others think that
simply attending school or the provision of organized activities by themselves are not
sufficient and they therefore propose more proactive and dedicated interventions
directed towards addressing psychosocial needs of conflict-affected children through
story telling, drawing, drama, writing, music, and games involving engagement with peers (UNICEF 2006). Choosing the various media of expression is indeed the children’s right as Article 13 of the 1989 Convention on the Rights of the Child states.35

From the latter perspective, Gonzalo Retamal asserts that “children who are victims of violence have to be treated differently.” He goes on to state that:

> If you do not do it, you are losing time in a way, because those children are going to fail. They are traumatized and they cannot learn mathematics or languages. So providing them with mathematics and languages without providing them first [with] recreation, expression, dealing with their past, [and] trying to realize what it is like the life in the future, ... even if they have textbooks and trained teachers to teach mathematics and language, it does not work ...(personal interview 2006).

A caution concerning the psychosocial debate is that if an intervention is made in a therapeutic mode (e.g. individual counselling) it could be disempowering. Those who hold this view state that it would be even damaging since it could re-victimise the children and adolescents especially when given by non-professionals, on a short-term basis and/or out of cultural context (Machel 2001; Peter Buckland, personal Interview 2007; Sommers 2002).

There are others who consider emergency education as a long-term social investment in development and/or a nation building. For instance, in the words of UNESCO (2000b) emergency education is “a humanitarian imperative which has development promoting outcomes” (9). Likewise, according to Susan Nicolai (personal interview 2006), Tawil and Harley (2003), and Pigozzi (1999), education in emergency situations needs to contribute to achieving universal basic education by 2015 as laid out in MDGs (see footnote 5 on page 10) and EFA (see footnotes 26 and 27 on page 80 ). In particular, Pigozzi (ibid.) emphasizes that emergencies can provide “an opportunity for transforming education along the lines envisioned at the Jomtien World Conference on Education for All” and further states that emergencies “allow for the possibility of reconstructing a social institution that helps develop and form the human resources that determine the way a society functions” (4). According to Aguilar and

35 “The child shall have the right to freedom of expression; this right shall include freedom to seek, receive and impart information and ideas of all kinds, regardless of frontiers, either orally, in writing or in print, in the form of art, or through any other media of the child’s choice” (Article 13, Convention on the Rights of the Child).
Retamal (1998), one of the important purposes for educational humanitarian interventions is "contributing to the future economic/human resource development of countries in crisis," along with meeting humanitarian and psychosocial needs of those who are affected by crises (8).

Relating to the fourth rationale described above, among the international development agencies and donors there is a view that education in emergency contexts plays an important role in addressing an interconnected development and security agenda especially after the 9.11 terrorist attacks (Novelli and Cardozo 2008; Rose and Greeley 2006; World Bank 2003). The underlying assumption is that, in the words of Sinclair (2002), "the absence of education will be destabilizing locally and may be a threat to regional and global security" (27). When we recognize one of donors' interests is meeting international development objectives such as MGDs, human, social and economic costs caused by conflicts are apparent obstacles to achieving them. Also, the donor agencies' common assumption is that there is an interplay between poverty and conflict.36 Accompanied by an instrumental view of education as a tool for human development and poverty reduction, educational interventions in conflicts chime with the interests of development and donor agencies (Buckland 2005; Seitz 2004; Smith and Vaux 2003; Stewart 2003). Table 4 below summarizes the emergency education rationales discussed so far.

<table>
<thead>
<tr>
<th>Rationale</th>
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<tbody>
<tr>
<td>Emergency education as a human right</td>
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<tr>
<td>Emergency education as (humanitarian) protection</td>
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<tr>
<td>Emergency education to meet psychosocial needs</td>
</tr>
<tr>
<td>Emergency education as social investment / (economic) development</td>
</tr>
<tr>
<td>Emergency education to contribute to an international security and development agenda</td>
</tr>
</tbody>
</table>

Table 4. Summary: Rationales for emergency education

36 Regarding a dynamic relationship between poverty and conflict, Buckland (2005) states that about 60 percent of countries rated as 'low' in the Human Development Index have been involved in conflict since 1990 (7).
3.3.3. Tendencies and Tensions within Emergency Education Initiatives

In emergency-affected contexts, like elsewhere, defining priorities in educational initiatives, and achieving consensus on the content and delivery of learning and teaching, can be highly controversial. What follows is an attempt to capture key tendencies and tensions in the field in terms of policy/guidelines, curriculum (both formal curriculum and non-formal/community-based curriculum) and pedagogy. These divisions are rather pragmatically, ultimately arbitrarily, employed for the sake of mapping the field. In fact the division between curriculum and pedagogy is in the final analysis questionable in that the two notions overlap significantly especially from the holistic perspective that this study employs. Another caveat in the conceptual mapping of the field is that 'phases' are employed, although the use of phases remains controversial, as discussed earlier (see page 89).

(A) Policy/Guidelines

One of the most influential policy developments in the field is the guide Minimum Standards for Education in Emergencies, Chronic Crises and Early Reconstruction launched in December 2004 (INEE 2004). The guide is designed to support emergency response, emergency preparedness and humanitarian advocacy in a wide range of contexts including natural disasters and armed conflicts, by articulating “the minimum level of educational access and provision to be attained in a situation of humanitarian assistance.” The Minimum Standards are “meant to be universal and applicable in any environment” (INEE 2004: 9). The guide is an outcome of a two-year consultation process facilitated by the Inter-Agency Network for Education in Emergencies (INEE) with over 2250 individuals from more than 50 countries. The document is based on the Convention on the Rights of the Child, the Dakar Education for All framework, the UN MDGs and the Sphere Project's Humanitarian Charter. Together with key indicators

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37 The Sphere Project's Humanitarian Charter and Minimum Standards in Disaster Response (1997) outlines what rights emergency-affected populations can be guaranteed
and guidance notes, a set of minimum standards are put forward according to five categories (followed by standard areas): community participation and resources; educational access and learning environment; teaching and learning; teachers and educational personnel; education policy and coordination (INEE 2004). It has already been translated into 10 languages and used in more than 80 countries (INEE 2008).

According to Andina (2007), the Minimum Standards help standardize processes of otherwise often chaotic educational initiatives in the aftermath of crises, combining the two popular international discourses of human rights and human capital in order to obtain wider acceptance. The tension between human rights discourse and human capital discourse will be discussed in the section below.

Margaret Sinclair, who was involved in the consultation on the Minimum Standards comments on a weak emphasis on the environment in the Standards. In retrospect, she says, "[the environment] was an unintended omission." Although her focus was on including citizenship and peace elements during the consultation, she would like to advocate the inclusion of the environment more strongly when the Standards are revised in the future. She now considers that "citizenship, peace, conflict resolution relate to environmental matters" and that "children can discuss a conflict about water or trees without the same emotional problems ..., compared to ethnic topics and conflicts" (personal interview 2007). So she now sees inclusion of the environment as having both intrinsic and instrumental value. INEE itself plans to streamline natural disaster risk reduction in its 2009 review, although the Minimum Standards include disaster risk reduction (INEE 2008).

(B) Curriculum

Depending on the phases of emergencies and their impact on the formal educational systems, curriculum initiatives have placed emphasis on either formal

through humanitarian assistance. It covers the areas of water supply, sanitation, food and nutrition, health, and shelter (Sphere Project 2004), but it does not include educational provision. Therefore the Minimum Standards for Education in Emergencies, Chronic Crises and Early Reconstruction were developed to fill in the 'gap' (INEE 2004).
National curriculum reform usually requires systematic and long-term commitment allied to strong and clear political leadership, operational capacity, national consensus building through consultation, material development and extensive teacher training (Buckland 2005). So, some emergency educators are cautious about undertaking national curriculum reform in any thoroughgoing manner in the immediate wake of a crisis situation. In a personal interview, Peter Buckland elaborates this point:

One of the most common mistakes was the attempt to reform the curriculum on the assumption that since the curriculum served to promote conflict in the past, you have to have a new curriculum in order to negate that impact. And that may fail because the curriculum reform: (a) requires some kind of national consensus and is not something internationals can do; and (b) in a post-conflict situation there is very rarely any real national consensus. This is not just national consensus about the type of society they want. It is the type of economy, the type of development, all of those things are linked…. It is naive to imagine that you can change the curriculum in a matter of two or three years which is where most international agencies’ intentions tend to lie (personal interview 2006).

Along the same lines, Nick Jackson points out the structural constraints in national curriculum change initiatives within post-conflict situations:

... in an early post-war situation, what does the Ministry of Education even look like? Can they use the curriculum that they used before the war? And then if they can, where is everybody? Most of the good people have been hired by international agencies... because they have been paid so much more. And it is very hard. You are dealing with a Ministry of Education that you can depend on, but has a very, very depleted capacity... And a lot of times the people are just overwhelmed.... One of the big challenges is that they don't have any money but quite often agencies do. International agencies do. And the danger is and the tension that comes up is, who is really controlling these agencies? It can maybe be coordinated by a very, very weak Ministry of Education, and generally speaking that doesn't happen (personal interview 2006).

Jackson here highlights the issue of the power inequalities between external agencies and internal stakeholders. In his follow-up interview, he also touches upon a fundamental issue about the meaning of ‘nation’ and the role of the citizen in relation to national curriculum change within conflict-triggered emergency situations. He says, "You have to understand that one of the causes of war, civil war, is curriculum. Southern Sudan, Kosovo, those are two really big examples of that." He goes on to comment that post-crisis curriculum reforms in such contexts include an inevitable fight over the contents of a national curriculum in relation to the meaning of nationhood.
So, although crises are often considered to bring the window of opportunity for rethinking the old education system and introducing radical innovations within the system as a whole, the tendency to stick with the 'familiar' old education system from before the crises erupted is often equally strong (Williams 2006). In the continuum of curriculum change at national or official curriculum level, resumption of previously used curriculum stands at one end of the spectrum, thoroughgoing and systematic curriculum reform at the other, and curriculum renewal or enrichment somewhere in the middle. In reality, these different tendencies are sometimes intermingled and the choice of one rather than another is not always ideological and philosophical but practical and pragmatic. For instance, examining educational reconstruction in Kosovo, Sommers and Buckland (2004) highlight real tension between the need to resume schooling as quickly as possible and the call for significant curricular reform in the face of conflict.

In the formal curriculum renewal process in contexts affected by a conflict, one of the key elements is to examine and eliminate racial and gender biases and manipulation of history (Pigozzi 1999; Sinclair 2002; Tawil and Harley 2004). In the words of Peter Buckland, this is a process of “expurgating the curriculum”, which is basically different from comprehensive national curriculum reform (personal interview 2006).

Learning goals commonly suggested for curriculum renewal include:

- **Skills:** conflict resolution/conflict prevention; problem-solving; communication; critical thinking; cooperation
- **Attitudes:** tolerance; self-esteem; commitment to justice and equity; bias awareness; respect for rights and responsibilities
- **Knowledge:** safety; the environment; health; peace and conflict; rights and responsibilities; cultural heritage

(Pigozzi 1999; Sinclair 2002; Tawil and Harley 2004).

Vocational training is another element to be embedded in the formal and non-formal curriculum in some cases, based on the assumption that increasing the
employability of an emergency-affected population is key to the process of recovery from natural or human-made disasters and for building peace (UNESCO 2000b). In a similar token, Susan Nicolai (personal interview 2006) emphasizes that one of the aspirations which emergency affected children, parents, and communities have is to be self-sufficient and to develop "practical skills" which help them to "grow economically."

With regard to curriculum resumption, one example that gained recognition in the 1990s is 'education for repatriation,' an approach using a home country curriculum for refugees. The main rationale for education for repatriation is that familiar classroom materials provide practical convenience and a sense of security and identity for refugee children who have been uprooted from their own place and own national education system (i.e. national curriculum, textbooks, assessment and evaluation procedures, teacher training and validation, certification, familiar languages of instruction) (Sinclair 2001, 2002). It is often the case that refugees do not know if and when they can go back to their own country. So for prolonged refugee situations a curriculum that can 'face both ways' (i.e. to home country and asylum country) is desirable (UNESCO 2000b) but becomes increasingly problematic in that, over successive generations, a process of distancing from home culture occurs. In either case, elements of existing curricula from both original and new context are accepted in the face of ever-evolving cultural frames and, hence, learning needs.

Another example of the continuation of an existing national curriculum is manifested in accelerated learning programmes at the primary education level. Such programmes aim at assisting out-of-school children (e.g. displaced children, girls, and child soldiers) to return to formal school system through 'catch up' classes. The programmes intend to cover essential elements of formal school curriculum in a condensed form (for instance, 6 years into 3 years, or 8 years into 4 years), by incorporating supplementary topics and themes as appropriate. At the end of the accelerated learning program, children are re-integrated into a formal school or are allowed to take a recognized examination in order to obtain the formal school leaving certificate (Nicolai 2003; UNICEF 2006).

While the above-mentioned formal curriculum focused emergency education
initiatives take place during the non-acute phases of emergencies, non-formal and community-based initiatives are more often introduced during and immediately after emergencies. According to Aguilar and Retamal (1998), the first phase is the recreational/preparatory phase, in which community members are mobilized to initiate activities such as games and sports. They are also trained in needs assessment. The second phase is devoted to non-formal schooling, where basic literacy, numeracy, and life skills are taught. In the first and second phases, the distribution of pre-arranged recreational kits and educational kits is popular. This third phase involves the re-introduction of a curriculum with which both teachers and students are familiar. The phased approach intends to provide practitioners and agencies in the field with “pragmatic educational strategies for rapid educational response in a post-crisis situation” (ibid.:8) [Italics in original] since it is important to be “incorporating well-planned and co-ordinated educational programmes into emergency relief efforts” (ibid.:10). This approach also suggests leaving creative spaces for local adaptations and the approach does not “pretend to provide all the answers to a complex reality” (ibid.:3). In a personal interview, Gonzalo Retamal, who is one of the originators of this approach, has emphasized the importance of making a universal logistic effort in emergency education in order to bring those who have been excluded into the educational system. He explains that a logistic response given to basic teaching and learning resources was the driving force to bring thousands of children, importantly girls, back to school in Afghanistan (2.5 million in 6 months) and in Rwanda (800,000 in 3 months). He further comments that a logistic effort by itself is not enough, and it should be complementary to ‘a curriculum for expression’ through which traumatized children can voice themselves using various media (personal interview 2007).

An example of community-based framework is the ‘ecological approach’ put forward by Miller and Affolter (2002) and shown in Figure 2. Their use of ‘ecological’ refers to

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38 Miller and Affolter (2002)'s use of ecology is more to do with human ecology which focuses on relationships between human beings and social environments, than the holistic/ecological paradigms and characteristics described in Chapter 1 (pages 20-28).
"nested layers of actors and relationships, moving from the immediate family and the environment to community influences on the family to attitudes and values at the social level" (6).

Miller and Affolter (ibid.) hold that target populations (e.g. crisis-affected children) are embedded in "concentric rings of relationships and influence" or "different social layers" (7). From this perspective, learners' well-being and learning are improved by linking them to the well-being of the actors and environments within which they are nested. The quality of learning is enhanced in relation to the broader environment, and 'learning' is conceptualized in a broader sense than narrowly defined formal schooling. Under this approach, satisfying fundamental psychological needs is considered vital for crisis-affected populations. The ecological approach acknowledges the important link between learning and psychological well-being.39 When human beings' basic psychological needs (such as security, positive connection, positive identity,

39 They also call their framework 'the basic psychological framework' (Miller and Affolter 2002).
of well-being, which, in turn, supports their healing processes. The implications of basic human needs for learning are highlighted below:

- **Security**: Security implies absence of threat. Threat can limit the human brain's capacity for learning by restricting its capacity for creativity and higher order synthesis, and seeking safety in familiar pattern (i.e. "downshift"). Optimal learning requires a secure environment so that learners can go beyond what they know and can construct new understanding.

- **Positive connection**: Creating positive learning relationships with other individuals and groups has a positive influence on quality of learning.

- **Positive identity**: Learning and our sense of self are mutually informing. Because our identity shapes what is meaningful to us, issues of identity are at the heart of our choice about what we care to learn. Learning needs to enhance positive self-conception, and self-awareness, including about one's limitations.

- **Comprehension of reality**: There is a human craving to make sense of the world and our place within it. When this need is not satisfied, we resist learning (ibid.: 11-12).

In addition, the peace-building education framework advanced by Bush and Saltarelli (2000) is a non-formal/community-based approach. Their model is underpinned by a place-specific peace-building philosophy and acknowledges that "one size never fits all" (ibid.:25). Rather than imposing solutions generated externally, it seeks to create initiatives relying on local input and resources, with change being self-driven by those who are crisis-affected. This approach focuses on their concrete realities, rather than abstract theories. It is process-oriented and long-term focused with the causes of violence critically reflected upon. The goals of peace-building education are identified as follows:

- **Demilitarizing the mind**: Addressing and challenging the cultural or socio-psychological predisposition of individuals to use violence as a first, rather than last, resort.
Problematising and articulating alternatives: Encouraging individuals to question taken-for-granted assumptions, and helping to articulate and demonstrate alternatives

Changing the rules of game: Building bridges between groups and communities which are separated and polarized by violent conflicts, guided by the principles of tolerance, trust and hope

Delegitimizing violent forces as a means of addressing problems: Demilitarizing gun-based authority structures and relegitimizing traditional or alternative authority structures

Re-membering and re-weaving the social and anthropological fabric: Reconstructing a devastated community culturally, physically and ontologically

Nurturing non-violent, sustainable modalities of change: Encouraging participation of groups from different backgrounds in implementation and decision making processes and drawing resources from community

(ibid.: 28-31, 34).

The above-described community-based approaches allow local stakeholders more space to determine their own educational paths. The commonly expressed characteristics seem to resonate with Shiva's (2005a) notion of subsidiarity, which suggests that challenges of global unsustainability should be best handled "at the level closest to where the impact is felt" (64), or at a local level. Applying this notion to curriculum, Selby (2007a) supports locally emerging curriculum change initiatives, as against ones at a national level or ones externally originated. Similarly, for Gonzalo Retamal what is most important in curriculum development is "building up knowledge" and "starting from the field". He emphasizes the importance of learning from the local experience of instruments of evaluation and curriculum, stating "Let people show and promote what they do" (personal interview 2007).

(C) Pedagogy

In terms of the processes of learning and teaching, progressive pedagogies (i.e.
activity-based, child-centred, learner-centred and participatory approaches) are commonly proposed for emergency education programmes and advocacy (Pigozzi 1999; Nicolai 2003). Participatory methodologies are held to help children and youth internalize issues more efficiently than teacher-dominated and top downwards approaches (Sinclair 2002; Pigozzi 1999). According to Tabulawa (2003), such participatory learning is strongly favoured by international donor agencies not for pedagogical reasons but for political reasons. Democratisation became a buzzword among donors after the fall of the Berlin Wall in 1989 and political democracy is considered as a prerequisite for receiving overseas aid, which supports economic development and promotes the free-market economy. Tabulawa (ibid.) argues that although the link between learner-centered methods and democratization of society, especially in developing countries, is highly contested, education has become a central project and participatory pedagogies have become convenient tools for donors.

Participatory pedagogies are also justified from a rights-based protection point of view and align with the participatory child rights laid out in the Convention on the Rights of the Child. For instance, Susan Nicolai sees participation as a protection issue and states:

One of the ways that we really try to approach protection in a school environment is through child participation and having children analyze - what are the risks; what are the kinds of violations they encounter in their daily lives - in a child-friendly way, using drama and role-plays, drawing pictures, doing interviews of each other.... That is something we have actually been doing a fair amount of in Palestine in the last couple of years... We have got a programme there, an ongoing programme, so it was the people that are working there daily, including some Palestinians for our staff there. When they thought [it] through, there are so many violations that children experience. How do we address them? Well, the school system is the way that we can reach the most children. So let's do it through the school system. Then what can actually be done? Because violations are so pervasive, we decided to try to stay at quite a local or a school based level. Children try to look at and analyze in their own schools about some of the issues, and I guess [we help them] to develop a bit of a sense of empowerment around that. They can do something about some of the small things in life even if they can't change the big picture (personal interview 2006).

Developing a sense of empowerment among students through creating concrete changes within their immediate environment is absolutely vital when school is surrounded by enormous violence which is beyond educators' control, and where "hope
is in short supply" especially under chronic crisis situations (Nicolai 2006:25).

Set against near consensus about promoting participatory modes of teaching and learning, changing existing transmissive pedagogies at a practical level remains a challenging task. Introducing new participatory methodologies can be very difficult and even becomes a burden for teachers, and particularly so for those who are not properly trained and lack sufficient support and materials, as is often the case with teachers in emergency situations within developing countries (Ansell 2005; Margaret Sinclair, personal interview 2006). Therefore, a ‘one-size-fit-all pedagogy’ should be introduced more carefully in developing countries (Tabulawa 2003). One size never fits all, in the words of Bush and Saltarelli (2000). Sommers (2002) also points out that introducing participatory pedagogies could invite backlash since they often challenge an existing hierarchical relationship between teacher and student, and adult and child. Therefore, a careful process of negotiation in introducing new participatory pedagogies in particular cultural contexts is critical.

A broad pedagogical framework includes the learning environment as well. For instance, UNICEF’s Child Friendly Spaces/Environments (CFS/E) promotes creating a safe and affirmative learning environment (or classroom climate) by guaranteeing children’s rights to survival, development, participation and protection. Starting as a response to the refugee crisis in Albania in 1999, it is a family and community-based integrated strategy for both emergencies and their aftermath. CFS/E aims at comprehensively integrating health (e.g. basic health, nutrition), hygiene, recreation, early childcare, psychosocial support, primary education, and youth activities. According to their framework, school is considered as “a place of convergence of children and their families,” which gives comprehensive support to them (UNICEF/University of Pittsburgh 2004: 6). It recognizes a critical role which positive peer support and the teacher-student relationship play in teaching and learning processes. So the initiative affirms:

The learning space needs to become a protected healing environment where pupils and teachers are given the opportunities for building resilience, reflection, healing and self-expression. Reconciling with their own environment/community is
an essential process in which developing resilience through self expression, play, sports, story telling, dance and other socio-cultural recreational activities are critical elements. Empowering families and communities was also recognized as essential for children’s care and protection (UNICEF/University of Pittsburgh 2004: 6) [Italics in original].

The process aspect of quality of education values non-quantifiable aspect of learning such as the pleasures and enthusiasms of those who are involved as well as the atmosphere of the learning environment (Adams 1997). However, when policy makers and agencies’ primary concern is to meet the quantifiable development goals such as EFA and MDGs, process of learning, learning atmosphere, emotional and psychosocial care, and a sense of joy tend to be less prioritised, although this is a matter of quality of education. In the words of Gonzalo Retamal,

You have to bring a joyful curriculum. That is not expensive.... Children learn when they have joy... When the children of the poor sit in their classroom of the nineteenth century with the teacher talking and they repeating, [they won't learn] (personal interview 2006).

Such a view tends to be neglected by the policy makers, he states (personal interview 2006).

3.4. Key Issues in Emergency Education
3.4.1. Contested Meaning of Development

Central questions in emergency education are raised around the issue of development. Should an emergency educational intervention focus on short-term and immediate relief or be conceived of as a long-term ‘development’ initiative? Education at the stage of humanitarian crisis has often been a secondary priority among donor agencies; rather, their primary efforts are directed towards meeting basic survival needs, such as shelter, food, water, and health. Conventionally, they did not think that education should be part of a humanitarian intervention at the early stages of emergency, but awareness that education must be a priority of emergency assistance has been growing and there is an increasing recognition of the need to bridge the gap between humanitarian intervention and development activities (Sommers 2002; Tawil 1997). From this perspective, Pigozzi (1999) suggests that emergency education
should take a ‘development approach,’ in which education is regarded as a tool for nation building from the very beginning of the humanitarian intervention.

What is lacking in this ‘relief’ and ‘development’ debate is a critical examination of notions of development. Emergency education literature does not always go further to elaborate the controversial and contested concepts of ‘development’ and ‘nation building.’ The EFA framework for development and the 2000 UN MDGs, which emergency education initiatives refer to in their rationales, set time-bound targets to monitor progress. Smith and Vaux (2003) criticize quantitative approaches to development targets as lacking consideration of the ‘quality’ of education which is vital in relation to conflict-affected contexts. Similarly, Save the Children (2006) emphasizes the quality, not the quantity of, education.

Education can be a positive force for peace and contribute to the prevention of further conflict – but only if it is inclusive and of good quality. Yet education – its provision and its quality – is neglected in humanitarian responses to conflicts. And, in post-conflict situations, although there is increased interest in education and more resources put into it, it is in many cases neither appropriate nor of good quality (7).

Samoff (1999) and Torres (1991), among others, claim that EFA is based on a one-dimensional economic development model and that EFA reform can easily be traced back to the human capital theory, which underpins neo-liberal globalization, as discussed in Chapter One (see pages 4-9). Human capital theory is considered to work in the framework of a theory of modernisation in which development means economic growth following in the footsteps of Western industrialized nations. Modernisation theories commonly see human progress as a linear progression. The idea that education contributes to economic growth has spread since the early 1960s and has impacted on the educational policies of the World Bank. Economic dominance of educational discourse has become a current phenomenon (Haavelsrud 1996; Samoff 1999). The view that education is one of the most important tools for human development and poverty reduction has remained strong among development agencies in recent years (Smith and Vaux 2003).

On the other hand, alternative development models have been discussed since the
1980s based on the reflections on the negative impacts of governmental driven
development initiatives. The alternative development models concern meeting the
needs of the poor and those who have been excluded (i.e. basic needs approach)
and/or promoting participation and ownership in development projects according to the
international human rights standards (i.e. rights based approach). These are the
approaches favoured by non-governmental organizations (Ansell 2005). Alternative
development proposals are critical of the narrow view of development which focuses
predominantly on economic growth at the expense of the poor, the disadvantaged, the
environment and future generations. From an alternative perspective, development is
construed as multi-dimensional. Socio-cultural development enhancing diversity is of
vital importance as well (Galtung 1996; Haavelsrud 1996; Shiva 2005a). From this
alternative perspective, Gonzalo Retamal criticizes the strong neo-liberal tendency in
the emergency education field.

My view is that emergency is the window of an opportunity..., because first there
is a lot of money coming to the situations of emergency but they have been used
very badly in many ways. The problem is that there are dual forces: one with a
human face, humanitarian, and the other one is only with a face of the 'efficiency
of economies.' The latter is an illusion of efficiency. The view alone is not
sustainable.... The basic factor is that we have to put a human face [on]
development, especially when you are dealing with people who are victims of
wars, who are not only hungry but angry... You have to deal with anger. If you are
not doing it, you are excluding them and you are preparing the next generations
for wars... (personal interview 2006).

Further to these contrasting understandings of development, it is important to
examine Buckland (2005)'s paradoxical statement regarding educational initiatives
particularly in conflict-affected contexts, referring to education in emergencies as a
"usual business in very unusual circumstances" (26). In a personal interview, Peter
Buckland elaborates this point:

What I meant about that is all of the same challenges you would confront in
education development anywhere, all that you confront in education and post-
crisis reconstruction, except there are additional challenges and there are usually
refugees, displaced persons, child soldiers, backlogs in capital and social and
human resources development. So these things make it even worse and you are
working in an environment which is abnormal in that there is a huge pressure for
change, [and] instability. There is a limited administrative capacity and so forth.
So you are facing the same problems... You have got extra problems. You are in
a much more difficult environment (personal interview 2006).
As Buckland expresses, emergency education can be considered as the 'usual business' of developing and reforming the educational system in the sense that emergency education needs to work on all the fronts of familiar educational change tasks (e.g. national education policy development, curriculum development, teacher training, material and textbook development, development of educational administration) with his caveat saying that this does not mean 'business as usual'. However, as discussed fully in this chapter, crisis-affected contexts require quality of education more than any other contexts, addressing the needs and challenges of learners and teachers, and education needs to play a more empowering and transformative role.

When working for educational change in a 'not business as usual' manner remains a huge challenge elsewhere including 'non-emergency' contexts, and the dominant educational thinking and practice are strongly shaped by the ideology of neo-liberal globalization, it seems to be inevitable that emergency education initiatives swing between 'business as usual' and transformative modes of education. In such a context, a 'usual business' could easily be status-quo confirmative, or literally a 'business as usual' mode of education.

3.4.2. Issues concerning Preparedness

Another key issue in the current emergency education discussions revolves around a long-term perspective and its implications for emergency preparedness. Williams (2006) points out that the field has been criticised for its 'short-termism,' that is, short-sighted planning and short-term commitments. He affirms that recovery and reconstruction emergency education efforts need to continue “long after the ‘relief’ effort is over and the international workers have gone home...the special [emergency programmes and schools] must revert to the standard, the extraordinary to the ordinary” (54). Similarly, Save the Children (2007b) affirms “[s]hort-term approaches should be aligned with long-term perspectives (21). One practical step for doing this would be to embed emergency preparedness within normal educational planning as
Chand et al. (2003), Sinclair (2002), Smith and Vaux (2003) have suggested.

Looking into this issue of preparedness more closely, it seems that there are different tendencies according to the initial trigger of crises, namely, armed-conflicts or natural disasters. In the case of conflict-triggered situations, emergency education has placed its emphasis on the reactive rather than the anticipatory, preventive or precautionary. Or most of the ‘preparedness’ efforts are concentrated on educational logistics by stockpiling education materials or developing agency’s operational structures in order to respond to crises rapidly and effectively. Sommers (2002) points out that preparedness has been the most neglected and weakest area in conflict-triggered emergency education.

In contrast, preparedness is one of the important elements put forward by those who working on education from a disaster risk reduction angle. As mentioned earlier, disaster risk reduction has two key components: minimizing vulnerability (physical, social, economic, environmental) and the preparing for disasters at multiples levels including within both formal and non-formal education (Save the Children 2008; Twigg 2007; Wisner 2007).

The issue of political sensitivity relating to the nature of emergencies seems partly to explain the different attitudes regarding preparedness. Margaret Sinclair reflects on this point:

No government wants to prepare openly for internal conflict, but they could be persuaded to prepare for natural disasters, which will also benefit the conflict disasters... At least the prediction [of natural disasters] is not so political... (personal interview 2007).

A similar tension also exists regarding the level of political will in mobilizing support and resources for emergencies. One recent example is the strong international support and media coverage for 2005 Asian Tsunami, as against the relative lack of international concerns about conflict and refugee crises in Durfar and Horn of Africa (Williams 2006). This issue of media bias will be further discussed in Chapter Five.
3.4.3. Implications of Climate Change

What has been generally missing in the field of emergency education is anticipation for possible, even likely, increases in 'creeping emergencies' ⁴⁰ posed by climate change, except amongst some of proponents working from a disaster risk reduction angle. The future increase of natural disasters because of climate change was identified in documents such as Hyogo Framework (see pages 84-85) and United Nations/International Strategy for Disaster Reduction (UN/ISDR)(2004), among others.

It is important to point out, however, that a rapid change is taking place at the time of writing of this thesis. Possible consequences of climate changes are an increasing concern of agencies working on educational responses to emergencies. For instance, Save the Children (2008) acknowledges the enormous future challenges which humanitarian work might face because of the instability posed by climate change. Save the Children (2007a) also points out the potential limitations of traditional coping mechanisms and past experience as a guide to the future, and suggests the need for “new ways of working, imaginative solutions...an active engagement of children and their communities” (13). Their emphasis is that “the education available for children is suitable to the changing environment” (10). What preparedness means in emergency education will clearly not be straightforward and climate change poses significant challenges for thinking and practice within emergency education. Hence, this issue requires further exploration and unpacking.

3.5. Paradigmatic Underpinnings of the Field of Emergency Education

Through the review of the field, it has become apparent that emergency education does not explicitly include any paradigmatic discussions. Based on the examination of worldviews in Chapter One (pages 13-29), Table 5 below intends to capture key elements discussed in this chapter through the lenses of both mechanistic and holistic paradigms. The purpose of the mapping below is not to simply determine the focus as

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⁴⁰ This term was coined by Professor David Selby during discussions with the author in June 2004.
either mechanistic or holistic. Rather it tries to identify elements which are more mechanistically oriented or holistically oriented, so as to inform the holistic and sustainable principles which this study goes on to develop.

<table>
<thead>
<tr>
<th>Worldviews</th>
<th>Mechanistic Worldview</th>
<th>Holistic Worldview</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key Elements</td>
<td>Conceptualizations of Emergencies</td>
<td>Disaster risks being understood by the underlying physical, social, economic and environmental vulnerabilities</td>
</tr>
</tbody>
</table>

- Compartamentalistic conceptualization of emergencies without addressing their root causes
- No examination of the interconnectedness of the root causes
- A linear progression of emergency phases
- A stark division between human beings and nature in conceptualizing types of emergencies, and a blind spot regarding their interconnection (e.g. 'human-made' emergencies or 'natural' disasters)
- Meeting the international development goals (e.g. EFA, MDGs) with consequent accountability and qualification overtones

- Non-linear understandings of emergencies

<table>
<thead>
<tr>
<th>Educational Change Process</th>
<th>Curriculum</th>
</tr>
</thead>
</table>

- Top down, externally driven national curriculum change
- Use *Minimum Standards for Education in Emergencies, Chronic Crises and Early Reconstruction* in order to ensure standardization
- Promoting active local participation in educational initiatives with consequent emerging goals and directions
- 'Let people show and promote what they do'

- Accelerated learning programme where speed of completion matters most in spite of other learning needs in the aftermath of a crisis
- Building relationships not only within a formal school setting but also linking with the wider environment
<table>
<thead>
<tr>
<th>Pedagogy</th>
<th>Nature of Knowledge</th>
<th>View of Learners</th>
<th>View of Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Progressive pedagogies being promoted in order to develop learners' skills and knowledge useful for the free-market economy</td>
<td>• Valuing of measurable outcomes which can be passed from teachers to students</td>
<td>• Seeing learners simply as a victim or a change agent</td>
<td>• Passive recipients of new pedagogies and curriculum offered by the externals</td>
</tr>
<tr>
<td>• Enhancing a sense of joy and purpose, self-esteem</td>
<td>• Valuing contextual and local knowledge and process-derived understandings</td>
<td>• Seeing learners as both a victim and a change agent (with a more emphasis towards the latter)</td>
<td>• Source of local knowledge</td>
</tr>
<tr>
<td>• Trauma healing through building positive relationships and diverse, culturally sensitive approaches</td>
<td></td>
<td>• A whole person whose comprehensive well-being matters</td>
<td>• Both victims and agents of change</td>
</tr>
<tr>
<td>• Creating a safe and affirmative learning atmosphere</td>
<td></td>
<td></td>
<td>• Active community member</td>
</tr>
<tr>
<td>• Advocating diverse ways of knowing</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 5. Paradigmatic analysis of the field of emergency education

3.6. Conclusion

The field of emergency education has been developing its legitimacy especially during the past two decades within the international community. As a result of the ever increasing number and intensity of humanitarian crises around the world, its role has become critical. Considering creeping emergencies posed by climate change, not only responding to but also anticipating emergencies, is also salient. To this end, addressing underlying multiple vulnerabilities or silent emergencies is indispensable.

This chapter has revealed that emergencies or crises have been understood broadly in the field, but artificially divided so that discretely conceived 'human-made' emergencies and 'natural' disasters are the main concerns at the practical implementation level. Emergencies are usually considered to move in phases, from emergency, early reconstruction, to development, in spite of critiques of the linear and
compartmentalized framework.

Educational responses to emergencies are justified from a rights-based perspective and from an international development perspective particularly linked to the human capital theory. Combining those two popular discourses seems to have offered pragmatic advantages in gaining wider recognition for the field. This combination also partly explains why a number of curriculum and pedagogical proposals discussed in this chapter swing between neo-liberal development and a more alternative mode of development.

Reflecting on educational initiatives under the very unusual circumstances posed by emergencies, addressing issues of power is of vital importance:

- Who defines emergencies?;
- Whose emergencies are prioritized and why?;
- What motivates the external educational interventions in response to emergencies and why?;
- How can participation of those who are affected by emergencies be better promoted in the context where the external international organizations often possess financial and material resources (i.e. power)?

Without addressing those questions, the rhetoric of 'emergency as the window of opportunity' seems to be only a cliché or to be a convenient space to serve the interest of disaster capitalism, as Klein (2007) signals.
4.1. Introduction

This chapter explores the second research question laid out in Chapter One: What is the current range of renditions and understandings of the concept of education for sustainability?, and its sub-questions:

- What are the various understandings of sustainable development and sustainability?
- What are the proposals, arguments and justifications advanced by different schools of thought within the field of education for sustainability and its sister schools, including education for sustainable development (ESD), education for a sustainable future, and sustainable education?
- What paradigmatic underpinning lies behind those different schools of thought? In what ways do the mechanistic and holistic worldviews manifest themselves in those different schools of thought?

To examine these questions, the chapter first reviews the trajectory of sustainability-related education. Secondly, it looks into discussions around definitions of sustainability and sustainable development. Then the chapter maps out the field in terms of rationales and in the areas of policy/guidelines, curriculum, and pedagogy. Following that, three key issues emerging in the field are discussed: incompatible values underlying sustainability, the importance of participating in meaning making processes, and purposes of education.

From the outset it should be noted that the field of sustainability-related education is quite extensive and reviewing every detail is beyond the scope of this research. This chapter intends to capture key tendencies and issues in order to inform the interface analysis between the fields of emergency education and sustainability-related education and to suggest holistic and sustainable learning principles in Chapter Five.
Similar to Chapter Three, the analysis and discussion in this chapter are informed by a literature review and interactions with five experts in the field of sustainability education who were chosen through a combination of purposive and convenience sampling methods (see pages 51-53). Within broad and often contested understandings of what 'sustainability educator' means, these five participants were considered as belonging to a 'homogenous' group since they all embrace non-mechanistic and transformative perspectives on education. These five academics are also commonly concerned about environmental and ecological crises without excluding social and cultural crises. With these characteristics or tendencies in mind, their latest thinking on the field of sustainability education and their perceptions of the interface between the field and that of emergency education were explored in this research.

4.2. Macro-Trajectory of Sustainability-Related Education

Reviewing the background to the current development of education for sustainability, UNESCO (2004) explains that there were increasing governmental and public concerns about environmental issues in the 1970s and 1980s among industrialized countries. It began to be realized that their development processes were damaging and threatening the fragile balance of the natural environment, and in turn threatening the continuation of production and consumption patterns.

The term, 'sustainable development,' was first coined in the 1980 World Conservation Strategy published by the International Union for Conservation of Nature and Natural Resources (IUCN), together with the United Nations Environment Programme (UNEP), and the World Wildlife Fund for Nature (WWF) (Dresner 2002; Toakley and Aroni 1998). In this document sustainable development was defined as "the integration of conservation and development to ensure that modifications to the planet do indeed secure the survival and well-being of all people" (International Union for Conservation of Nature and Natural Resources 1980: Section 1.2).

The World Commission on Environment and Development (WCED) was set up by the United Nations General Assembly in 1983. The former prime minister of Norway,
Gro Harlem Brundtland, was appointed as chairperson. The outcome, *Our Common Future* (commonly known as the *Brundtland Commission Report*) was published in 1987, and has been very influential in shaping a global sustainable development discourse since then. In this publication, sustainable development is broadly defined as: “development that meets the needs of the present without compromising the ability of future generations to meet their needs” (WCED 1987: 43). The report was successful in combining a number of issues systematically, and, in particular, in bridging the dichotomized interests of the economically wealthy North (i.e. the natural environment and economic development agenda) and of the economically poorer South (i.e. the social and economic development agenda) (Dresner 2002; Worster 1995). As dimensions of sustainable development, the report addresses the importance of eradication of poverty and meeting the basic needs of all; of promoting the principles of intergenerational and intragenerational equity; and of recognizing the link between healthy economy and healthy environment, and it includes the idea of environmental limits. Importantly, a link between western economic activities and deepening poverty around the world, especially in developing countries began to be more roundly recognized (WCED 1987). It is important to note that an holistic understanding of global issues is expressed in the *Brundtland Commission Report*, implicitly signaling a distancing from mechanism:

Until recently, the planet was a large world in which human activities and their effects were neatly compartmentalized within nations ... and within broad areas of concern (environmental, economic, social). These compartments have begun to dissolve. This applies in particular to the various global ‘crises’ that have seized public concern, particularly over last decade. These are not separate crises: an environmental crisis, a development crisis, and energy crisis. They are all one (4).

Dresner (2002) reflects that acceptance of the *Brundtland Commission Report* took place at the right time, because incidents such as the discovery of a large hole in the ozone layer in 1985 and the Chernobyl nuclear accident in 1986 made people realize that environmental threats indeed can affect everyone in the world. It was also the time when people began to recognize environmental issues as “a new global threat to survival” at the end of Cold War period (ibid.:36).
Many commentators, including Dresner (2002), point out that the significance of the work done by the Commission was its 'political innovation' rather than intellectual innovation. Likewise, Dale and Newman (2005) state that the *Brundtland Commission Report*, addressing ecological, social and economic imperatives, was left "purposefully vague to allow various shareholders to work toward common ground" (352). Two metaphorical hemispheres, North and South, and diverse interest groups consisting of capitalists, socialists, scientists, economists, environmentalists, rural poor, urban elites, seem to have achieved 'a universal consensus' (Sauvé 2004) and could happily work together toward sustainable development "if they did not ask too many potentially divisive questions about where they are going" (Worster 1995: 418).

Its astute balance between development and environmental concerns notwithstanding, commentators including Worster (1995) and Dresner (2002) observe that the *Brundtland Commission Report* embraces a pro-economic growth stance in its uncritical position regarding consumption patterns in developed countries.

The notion of sustainable development was further mainstreamed and popularized at the 1992 United Nations Conference on Environment and Development (UNCED), or Earth Summit, in Rio de Janeiro. It was the biggest international conference in that period with more than a hundred heads of governments attending. The principles of sustainable development were laid down in the *Rio Declaration on Environment and Development* (UNCED 1992). The principles refer to human beings as at the centre of concerns for sustainable development (Principle 1), the sovereign right of states to exploit resources according to their environmental and developmental policies (Principle 2), the right to development (Principle 3), and to environmental protection as an integral part of the development process (Principle 4) (*Ibid.* 9). Dresner (2002)

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41 Others refer to sustainable development as a 'political compromise' (Sauvé 2004; Worster 1995), 'a political dream ticket' (Bonnet 1999), 'a kind of multi-purpose glue' (Pérez and Llorente 2005) and 'empty signifier' (González-Gaudiano 2005).

42 There were five documents produced out of this conference: the Rio Declaration on Environment and Development; a statement of principles to guide sustainable management of forests; United Nations Framework Convention on Climate Change; The Convention on Biological Diversity; Agenda 21 (UNCED 1992).
observes that the *Rio Declaration* was something of a retrograde step because it put more emphasis on development concerns and national sovereignty, than on promoting environmental protection and international cooperation. Pérez and Llorente (2005) explain that this was because of the enormous pressure exercised by the economic sector at the Rio Summit. In addition, Bonnett (1999) and Selby (2006a) observe the anthropocentric conception of development and its relationship with the environment as manifested in both the *Brundtland Commission Report* and the *Rio Declaration* (i.e. environment as subset of economy).

*Agenda 21* (UNCED 1992), adopted by the Rio Summit, delineates a wide range of strategies for realizing sustainable development. One of the most important characteristics of *Agenda 21* is its emphasis on the role of citizens, communities and NGOs for achieving the goals of sustainable development (Dresner 2002). Chapter 36 on promoting education, public awareness and training emphasizes the important role which education can play in “promoting sustainable development and improving the capacity of the people to address environment and development issues” (264). Objectives cited for “reorienting education towards sustainable development” include achieving “accessibility to environmental and developmental education from primary school age through adulthood to all groups of people” and to “promote integration of environment and development concepts… in all educational programmes” (*Ibid*: 265). It is important to note that controversial issues addressed in the *Brundtland Commission Report*, were either inadequately discussed (e.g. issues of consumption patterns and population) or completely dropped (e.g. issues of international debt and militarism) in *Agenda 21* (Dresner 2002; Hopkins and McKeown 2002).

The discussions and visions developed at Rio were revisited at the 2002 World Summit on Sustainable Development in Johannesburg. The conference re-emphasized the importance of sustainable development as a core to the international agenda and of taking global action to fight poverty and protect the environment (UN 2002). However, compared to the Rio Conference, Dresner (2002) observes that the World Summit did not make any substantial progress, because of the blocking of any target to reduce
non-renewable energy by the US and oil producing countries, the failure to achieve new agreements on increasing aid or relieving debt, and ending up with a weaker agreement on biodiversity protection than before. In terms of education, González-Gaudiano (2005) points out that no significant achievements were made at the Johannesburg Summit, "except for those already agreed upon in the Dakar Education for All initiative"43 (244).

Following a suggestion during the Johannesburg conference, in December 2002, the UN General Assembly passed Resolution 57/254 (UN 2002) proclaiming the United Nations Decade of Education for Sustainable Development (DESD) for the period 2005-2014. UNESCO, the lead agency for promoting and implementing the Decade, developed a Draft International Implementation Scheme for the DESD (UNESCO 2004) which was subsequently finalized (UNESCO 2006b). UNESCO identifies education as "an indispensable element for achieving sustainable development" (UNESCO 2004: 7) and states that the overall goal of DESD is "to integrate the values inherent in sustainable development into all aspects of learning to encourage changes in behavior that allow for a more sustainable and just society for all" (UNESCO 2006b: 4). DESD is characterized by the following underlying values of ESD:

- Respect for the dignity and human rights of all people throughout the world and a commitment to social and economic justice for all;
- Respect for the human rights of future generations and a commitment to intergenerational responsibility;
- Respect and care for the greater community of life in all its diversity which involves the protection and restoration of the Earth's ecosystems;
- Respect for cultural diversity and a commitment to build locally and globally a culture of tolerance, non-violence and peace (ibid.:16).

The section below (see pages 127 -129) will revisit this International Implementation Scheme.

Looking over a wider landscape there have been other international initiatives

43 See footnote 26, page 80 for the six goals of Dakar Education for All.
influencing the trajectory of education for sustainability since the early 1990s, particularly addressing improvement of quality of life and fulfillment of human rights.

The *Earth Charter* (2000) is important to highlight. Launched in 1994, the *Earth Charter* is the product of a global participatory consultation process involving thousands of individuals and hundreds of organizations. It is a universal declaration, delineating ethical principles in order to build "a sustainable global society founded on respect for nature, universal human rights, economic justice, and a culture of peace" (*Earth Charter* 2000: Preamble). It describes ethical principles of universal responsibility.

Sixteen principles are organized under four broad themes: respect and care for the community of life; ecological integrity; social and economic justice; democracy, non-violence and peace. The *Earth Charter* is radical because of its non-anthropocentric vision standing in contrast to the anthropocentric *Brundtland Commission Report* and *Rio Declaration*. It declares:

> Everyone shares responsibility for the present and future well-being of the human family and the larger living world. The spirit of human solidarity and kinship with all life is strengthened when we live with reverence for the mystery of being, gratitude for the gift of life, and humility regarding the human place in nature (*Earth Charter* 2000: Preamble).

Abelardo Brenes, who was one of the key architects of the *Earth Charter*, considers that sustainability means synthesizing the following perspectives expressed in the *Earth Charter*: ecological integrity, social and economic justice, eradication of poverty, the quality of democracy and governance, and non-violence (personal interview 2005).

The *Earth Charter* resonates well with those of a holistic and ecological worldview because of its recognition of the interconnectedness of the all life, human embeddedness in nature, and strong ethical and value positions.

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45 During the 1992 Earth Summit, there was an attempt to make a document (now known as the Earth Charter) to address interrelationship between humanity and the Earth systematically (Kahn 2008).
For the focus of this thesis, it is also important to highlight the link between sustainable development and disaster risk reduction as mentioned in Chapter Three (see pages 84-85). At the policy level, for instance, the Johannesburg Plan of Implementation adopted at the 2002 World Summit on Sustainable Development includes risk and vulnerability reduction as one of the main targets to be achieved by 2015 (UN/ISDR 2004). The impacts of an increasing number of severe disasters on development and poverty reduction efforts have become international concerns. Another policy example includes the 2005 Hyogo Framework for Action. One of the strategic goals put forward highlights sustainable development:

The effective integration of disaster risk considerations into sustainable development policies, planning and programming at all levels, with a special emphasis on disaster prevention, mitigation, preparedness and vulnerability reduction (3).

Promoting sustainable development in relation to disaster risk reduction means minimizing vulnerabilities and building 'sustainable communities' with enhanced quality of life, economic viability, social and intergenerational equity, and participatory process in decision making (UN/ISDR 2004).

4.3. Mapping of the Field of Sustainability-Related Education

The manifestation of contested notions of sustainability within education is complex not only because of different labels, multiple definitions, and interpretations, but also because of different underlying assumptions regarding the aims of education and processes of learning. Therefore, it is not to surprising to find that “there are multiple perspectives on sustainability and the way educators should interpret these ideas" (Wals and Jickling 2002: 222). Clearly, proponents of education for sustainability “are not a single homogeneous group with similar beliefs, values, politics, and practices" (Huckle 2004: 41).

Before discussing different conceptualizations of sustainability/sustainable development as well as their educational manifestations in detail, the issue of labeling is briefly touched upon here. There are those (e.g. Hopkins et al. 1996) who use
'education for sustainable development' and 'education for sustainability' interchangeably. They suppose that since these two terms are widely used among UN organizations and at international conferences, they are politically astute names to use.

In addition to these two obvious and high profile labels, Table 6 below highlights some other examples of holistic and/or critical renditions of education that embrace sustainability concerns.

<table>
<thead>
<tr>
<th>Examples</th>
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<tbody>
<tr>
<td>'education for sustainable futures,' or 'education for responsible societies' (Sauvé 1999); 'education for a sustainable future' (Fien 2001)</td>
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<tr>
<td>'global education' (Pike and Selby 1988)</td>
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<td>'education for sustainable contraction' (Selby 2007a)</td>
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<tr>
<td>'sustainable education' (Sterling 2001; 2004a)</td>
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<tr>
<td>'transformative learning' (O'Sullivan 1999, 2002)</td>
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<tr>
<td>'social learning for sustainable living' (Wals and Heymann 2004; Wals 2007)</td>
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<tr>
<td>'integral model of education for peace, democracy and sustainable development' (Brenes-Castro 2002) or 'comprehensive peace education' (Brenes-Castro 2004)</td>
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Table 6. Some examples: Holistic and/or critical manifestations of education to address unsustainability

Proponents of these labels have reservations or are even roundly critical of the notion of 'development' as carrying strong connotations of endorsing the dominant neo-liberal model of economic growth, a view which will be discussed in more detail below.

Calling the interminable discussions about the terminologies in the field 'paralysis by analysis,' Fien and Tilbury (2002: 3) warn us that it is more important not to delay actions than to debate labels and their meanings until people achieve a consensus. Similarly, Shallcross et al. (2006) wonder if it does really matter what education is called when it is about a collaborative, participatory and contextualized processes of learning towards sustainability. They also wonder whether endless discussions would discourage the engagement of busy educational practitioners whose concern is dealing
with the practical daily realities of teaching and learning. On the other hand, Sterling (2004a) points out that labels carry meaning although their implications and interpretations would vary significantly.

4.3.1. Views on Sustainability/ Sustainable Development

Defining sustainable development and sustainability is not straightforward. As mentioned earlier, some use those terms interchangeably, while others emphasize distinctions between them. According to Dobson (1996), there were three hundred definitions of sustainable development at the time he wrote, so there must be many more definitions by now. Dryzek (2005) argues that sustainable development is "a discourse" rather than a concept which can or should be defined with any precision" (148). Huckle (2004) also reminds us of the importance of contextual considerations of sustainability, stating that "what is sustainable and beneficial in our time, place, and culture may be unsustainable and destructive in another" (43). Many agree that it is an evolving as well as a contested concept (Jickling 1994; Dresner 2002; UNESCO 2004, 2006b) and that there is no single framework, conceptualization, and understanding of sustainable development (Hopkins and McKeown 2002; Sauvé 1996).

As described above, the term, sustainable development has been widely used since the 1987 Brundtland Commission Report, being further popularized in the wake of 1992 Earth Summit in Rio. The above-quoted (see page 116) definition of sustainable development in the Brundtland Commission Report is still popularly, some would say uncritically, used as a definition of sustainable development/sustainability 20 years after its birth (Dryzek 2005; Fien 1998; Selby 2006a). The Brundtland definition of sustainable development is very often understood in terms of the three interconnected key dimensions of society, environment and economy. It is "a three-tiered, ambivalent 'balancing act' of ensuring social development, ecological sustainability and economic development" (Lotz-Sisitka and Raven 2004: 67).

46 According to Dryzek (2005), a discourse "rests on assumptions, judgments, and contentions that provide the basic terms for analysis, debates, agreements and disagreements" (9).
The overall difficulty of defining sustainable development stems from values and perspectives, assumptions, and different prioritizations concerning what to sustain, for how long, and how (Bonnett 1999; Dresner 2002; Dryzek 2005). More specifically, seeking to answer to the following questions raised by Fien and Tilbury (2002) will uncover some of the underlying differences:

Over what time period are we talking sustainability? The human life span? This generation and the next? Or are we concerned with sustainability on ecological lifetime-scales? And what kind of development do we want to sustain: social, cultural, political, spiritual and/or economic? (And are these separable)? What changes are required to achieve sustainability and how are they to be achieved? What are the implications for economic growth? Are there limits to economic growth in a sustainable society and, if so, what are they? (2)

One central tension revolves around what to sustain: (economic) development or the environment. This tension is inevitable since the concept has brought together those contrasting concerns as described earlier. In the spectrum of sustainable development/sustainability discussions, one end stands for sustainable development as continuous economic growth, without considering the finite earth's physical capacity. Some of the key underlying assumptions include: a belief in technological answers or market solutions to every problem, human domination of nature, nature as resource and expert-driven initiatives.

In contrast, the opposite end of the spectrum sees the environment as foundation for all human activities. Proponents of the latter view also tend to drop 'development' from the title due to a connotation of the status-quo economic growth. From this perspective, economic activities should be modified or even restricted due to the Earth's limited carrying capacity (Huckle 1996; Orr 1992; Selby 2006a; Sterling 2001, 2004a). The latter view sees economy as a subset of ecology and the former view regards ecology as a subset of economy (Jucker 2002; Sterling 2001). For example, Stephen Sterling has elaborated this point as follows:

You can have equity, social justice, and respect... democracy and all that kind of thing but if your ecological systems are actually deteriorating critically, then none of it is sustainable. So if you look at sustainable development and so on, people say, 'oh yes, it's got to have the three underpinnings of society, ecology and economy.' But the problem with that model is it makes a sort of implicit assumption that they have equal weightings. Yet they don't. Because from a systemic point of view the maintenance of life support systems is absolutely vital.
to everything else. And the way you can figure that is that you can take away society and you can take away economy and your ecological cycles and systems will still survive. If you take away ecological cycles and systems then you don’t have economy and you can’t have society. So it is more fundamental. And, to me, that is a pretty key understanding which has to come across in talk about sustainable development. If you look at the work of ecological economists, for example, they make the same point. So, essentially economy is a sub-set of ecology, a subset of ecology (personal interview 2006).

Importantly, proponents of the latter view problematize the underlying dominant western positivistic worldview and advocate the shift towards alternative ecological, holistic worldviews. This point will be discussed further at the curriculum section below.

Furthermore, for the latter perspective on sustainability, quality of life matters. In the words of Sauvé et al. (2005), sustainability is “a vision of social development which is distinct from economic development; it insists on the importance of ethics, culture, context and participation” (279) and it embraces strong values of social justice and equity. Emphasizing the importance of clarifying ethical value positions in discussions of education for sustainability, Abelardo Brenes states:

As stated in the Preamble of the Earth Charter, ‘We must realize that when basic needs have been met, human development is primarily about being more, not having more.’ I believe that being more means that you are identified with the suffering of other sentient beings and their wish for happiness. If this becomes the purpose of one’s life, it can foster our fuller development and is the motivation required to work together to bring about the sustainability revolution (personal interview 2005).

From this perspective on ‘universal responsibility’ he further states that in order to put a stop to destructive human behaviour, “we need to cultivate empathy, not only for the plight of other humans but for all other organisms. We have to bring emotions into our educational work” (personal interview 2005).

4.3.2. Rationales for Sustainability-Related Education

This section highlights three key rationales for sustainability-related education. First, there is an international rationale. As described above, education for sustainable development emerged as an imperative at a high international level. Hopkins et al. (1996) observe that since 1992 there is “a new international consensus... concerning the critical role of education in achieving sustainable development” (2). They go on to
say that after the series of UN international conferences in the 1990s,\footnote{See footnote 44, page 120.} "the Governments of the world agreed on what needed to be done to move towards sustainability. The fundamental, cross-cutting role of education and public awareness was stressed throughout this process" (2). Assuming an international consensus, Hopkins et al. (1996) and UNESCO (2002, 2004) urge people everywhere in the world to move rapidly to reorient all education initiatives towards sustainability. In the words of UNESCO (2002), education for sustainable development requires "a new vision of education that seeks to empower people of all ages to assume responsibility for creating a sustainable future" (7).

Second, education for sustainable development is considered as an instrument for those who want to continue to advance a high level of economic growth and employment, as well as reformists whose would like to take the social, economic and environmental challenges into consideration in order to gain new market opportunities and make financial savings. For instance, Scott and Gough (2003) point out the UK's Sustainable Development Education Panel's (2001) central interest is a long-term national competitiveness. Selby (2007a) similarly highlights that the UK's Learning and Skills Council's (2005) main concern is to secure economic growth and employment. He also points out that the pro-status quo mode of education for sustainable development is often disguising its intents by using democratic rhetoric, as seen in Tilbury et al. (2004). In their education for sustainable development framework, Tilbury \textit{et al.} (\textit{ibid.}) suggest active learning, critical and future thinking, intercultural skills, in relation to "the generic skills needs of business and industry" (3). Their main concern is understood as developing learners' competitiveness in a global market place.

The third justification for sustainability-related education is distinguished from the first two because of its transformative intent through a process of engagement. According to Fien (2001), "re-orienting education towards sustainability is a process of educational reform and innovation" (140). In the words of Wals and Jickling (2002), it is a "stepping stone" which encourages educational institutions and stakeholders to
engage critically and urgently in reflection on their roles and practices in the face of interlocking sustainable challenges. Table 7 below summarizes the sustainability-related education rationales discussed above.

| Sustainability-related education as an international consensus |
| Sustainability-related education as a contribution to an economic agenda |
| Sustainability-related education for transformation |

Table 7. Rationales for sustainability-related education

4.3.3. Tendencies and Tensions within Sustainability-Related Education Initiatives

As before in Chapter Three, for the sake of mapping the field, the headings of policy/guidelines, curriculum, and pedagogy are pragmatically employed below, their somewhat arbitrary nature notwithstanding.

(A) Policy/Guidelines

There are a significant number of international, regional, and national policy guidelines regarding sustainability-related education. It is beyond the scope of this thesis to systematically review the exhaustive volume of policy/guideline documents. So only one international example is examined. It is considered to be appropriate to look at the Framework for the UNDES International Implementation Scheme (UNESCO 2006b) because this document “lays the foundation for national and regional responses to the DESD and calls for national government to integrate ESD into government policies and action plans” (Tilbury 2006). According to UNESCO (ibid.:24) DESD objectives are to:

- give an enhanced profile to the central role of education and learning in the common pursuit of sustainable development;
- facilitate links and networking, exchange and interaction among stakeholders in

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ESD;

- provide a space and opportunity for refining and promoting the vision of, and transition to sustainable development – through all forms of learning and public awareness;
- foster increased quality of teaching and learning in education for sustainable development;
- develop strategies at every level to strengthen capacity in ESD.

UNESCO (ibid.) suggests that the DESD should ensure “the maximum synergy, cooperation and therefore impact” (12) with a range of existing key international initiatives such as UN Millennium Development Goals (MDGs), Education for All (EFA) initiatives, and the UN Literacy Decade (UNLD). 49

From a perspective of lifelong learning, UNESCO (ibid.) suggests that ESD be implemented for all age levels and in all educational arenas (e.g. formal, non-formal, informal, community/adult education). The following list demonstrates the broad scope of interrelated areas which ESD encompasses:

- **Socio-cultural**: human rights; peace and human security; gender equality; cultural diversity and intercultural understanding; health; HIV/AIDS; governance;
- **Environmental**: natural resources (water, energy, agriculture, biodiversity); climate change; rural development; sustainable urbanisation; disaster prevention and mitigation;
- **Economic**: poverty reduction; corporate responsibility and accountability; market economy (ibid.:18-21).

According to UNESCO (ibid.), learners engage best with these themes through an interdisciplinary and holistic approach, rather than being addressed within separate subject areas. Pedagogically, it is important to articulate underlying value positions, develop critical thinking and problem solving skills, utilize diverse teaching and learning methodologies, integrate a participatory decision making process within the learning,

49 The UN Literacy Decade (2003-2012) aims at empowerment of everyone around the world through an increase in literacy levels (http://www.unesco.org/UIL/en/focus/unlitteracy.htm).
apply learning to personal and professional lives, and address global and local interconnectedness (17). In terms of implementation of DESD, the partnership or alliance approach is put forward among the various stakeholders at local, national, regional and international levels (UNESCO ibid.).

(B) Curriculum

'Re-orienting education' towards sustainability is interpreted and manifests itself differently, depending on the levels (e.g. primary, secondary, higher education) and types of education (e.g. formal, non-formal, informal, adult education) as well as, most importantly, depending on perspectives on sustainability and the role of education. This would imply that curriculum initiatives for sustainability-related education are indeed diverse. Here two key tendencies within the curriculum discussions of sustainability-related education are highlighted.

One is to take an uncritical position on sustainability and prescriptive educational approach based on the interest of maintaining the status-quo and equip learners with learning outcomes predetermined by experts. 'Education for sustainable development' by Hopkins et al. (1996) and Hopkins and McKeown (2002) embraces such characteristics to some extent. They propose Agenda 21 as "a key starting point for planning and implementing ESD" (Hopkins and McKeown 2002:15) and state that the forty issues identified in Agenda 21 "are the core of ESD and should be reflected in any programme related to reorienting education for sustainability" (ibid.:20). Their advocacy of understanding those forty issues in Agenda 21 is heavily oriented towards cognitive learning and rational thinking. They appeal to science and experts as sources of knowledge for ESD, implying, and not saying otherwise, that learners are passive recipients of knowledge. Their approach, using the analogys of Gough and Scott (2006), focuses on 'getting the job done' without carefully reflecting upon "how 'the job' came to be defined in particular ways, or whose interests are served" (278).

On the other hand, there are more critical curriculum proposals which address our taken-for-granted perspectives, and propose educational frameworks predicated on
non-mechanistic, holistic, and ecological worldviews. As clarified in Chapter Two, such worldview conscious renditions resonate well with my own ideological position. Because the aim of this thesis is to develop holistic and sustainable learning principles for emergencies, a few examples from such proposals will be reviewed in some detail. These examples include 'global education' (e.g. Pike and Selby 1988; Selby 1999, 2002) and 'education for sustainable contraction' (Selby 2007a), 'sustainable education' (Sterling 2001, 2004a, 2004b, 2007), 'transformative learning' (O'Sullivan 1999, 2002), 'social learning for sustainable living' (Wals 2007; Wals and Heymann 2004), and 'education for a sustainable future' (Fien 2001).

**a. Global education and Education for sustainable contraction**

David Selby and Graham Pike are key architects in developing the theory and practice of a holistic and transformative rendition of global education from the 1980s. They regard global education as an alternative educational approach predicated on a holistic, ecological and systemic paradigm as opposed to mainstream education based on a Western mechanistic paradigm, often characterised as reductionist, dualistic, and anthropocentric (Greig et al. 1987; Pike and Selby 1988; Selby 2002, 2008). Selby and Pike's (1988) four dimensional model of global education draws upon two streams of educational thinking and practice, called respectively 'worldmindedness' and 'childcenteredness.' 'Worldmindedness' stems from the notion of 'one world,' which stresses the importance of viewing the world in light of the needs of the planet. Education is aimed at understanding global issues and enhancing the ability to act on them. The idea of 'childcenteredness' was developed by progressive educators including John Dewey, Friedrich Froebel, Maria Montessori, and Leo Tolstoy. The common thread is that "children can learn best when encouraged to explore and discover for themselves and when addressed as individuals with a unique cluster of beliefs, experiences and talents" (Pike and Selby 2000:140). Pike and Selby's four dimensional model of global education consist of the spatial dimension, temporal dimension, issues dimension, and inner dimension. See Figure 3 for the four
The spatial dimension addresses interconnectedness and interdependence at local, national, regional, international and global levels. The argument is that educational practices should "foster an awareness and understanding of the interdependent nature of land and peoples" (Selby 1991: 28). 'Local' and 'global' are perceived not as opposite ends but considered as embedded in each other, hence mutually influencing one another. Although some global educators use the phrase 'think globally, act locally' as the slogan, Selby (1991) goes beyond this compartmentalised view. Coining the term 'glocality,' he sees the world as "a dynamic, multi-layered world system within which the 'local is in global and global in the local"(28).

The temporal dimension perceives the notion of time as a dynamic relationship between past, present, and future. Special emphasis is placed on 'future' because "[o]ur present thoughts and actions are shaped not only by our experience and understanding of the past but also by our future visions and aspirations" (Pike and Selby 2000: 142). Visioning a range of futures, such as probable, possible,
preferable/preferred futures$^{50}$ is encouraged throughout this learning process (Pike and Selby 1988;1999a).

The issues dimension suggests that the curriculum should include issues such as environmental degradation, human rights violation, peace and conflict, inequality, health from local to global levels. Learners are encouraged to learn about these global issues which are "profoundly interlocking in nature and that neither problems nor solutions can be conceived of within simple linear cause(s) and effect(s) frameworks" (Selby 1991: 29). The spatial, temporal, and issues dimensions are referred to as outer dimensions, which interplay with the fourth dimension, the inner dimension.

The core essence of the inner dimension is critical and illuminated self-awareness. Profound understanding of the interrelationship among the external issues will require us to re-examine our own beliefs, assumptions, and attitudes. Therefore, Pike and Selby (2000) emphasizes that "personal development goes hand-in-hand with planetary awareness" (143). More specifically:

As many people who have made voyages of discovery have found, they learn as much about themselves as about the new landscape they enter. The outward journey is also the inward journey. The two journeys are complementary and mutually illuminating (Selby 1991: 30).

Pedagogically, global education emphasizes the participatory and democratic process of teaching and learning. Referring to the notion of 'the medium is the message,'$^{51}$ its pedagogies try to model the notions of interconnectedness, interdependence, justice/fairness, peacefulness, human rights, diversity, using various interactive pedagogical methods (Pike and Selby 1988).

Based on a holistic and transformative rendition of global education, Selby's (2006a) recent work has moved to a critical examination of the dominant discourse of education for sustainable development, above all, in relation to the threats posed by climate

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50 According to Pike and Selby (1999a), a range of futures are explained as follows: "the probable future (that which is likely to happen should present trends continue), the possible future (the futures that could materialize if certain conditions were to change), and the preferable futures (the futures that students personally would like to have come about)" (14)

change (Selby 2007a). He criticizes education for sustainable development in terms of: an uncritical embrace of economic growth principles; its embrace of an instrumental conception of nature (e.g. a view of nature as resource) rather than the intrinsic value of nature; a skills-based approach which does not address the issue of paradigm and values; a focus on exteriority rather than the interplay between interiority and exteriority in the process of personal and social learning; an insufficient emphasis on peace, social justice, indigenous, and future and Southern perspectives (Selby 2006a; Selby 2007a). Furthermore, regarding climate change, he states that proponents of education for sustainable development have commonly failed to address “the multiple crisis syndrome of global heating” (Selby 2007a: 257).

As an alternative educational approach to mainstream education for sustainable development, Selby (2007a) advances ten propositions for ‘education for sustainable contraction’ 52 which would better respond to challenges posed by climate change. The propositions are:

1. Challenging learners’ taken-it-for-granted assumptions so that they do not deny the climate change threat;
2. Addressing learners’ despair, pain, grief and loss;
3. Acknowledging human embeddedness in nature;
4. Cultivating the poetic dimension of sustainability (e.g. attunement, awe, celebration, enchantment, intuition, relevance, wonder, and oceanic feelings of connectedness);
5. Bringing into play marginalized and overlooked educational thoughts and movements;
6. Coalescing with emergency education (i.e. education in emergency/crisis situations);

52 Selby is inspired by James Lovelock’s notion of ‘sustainable retreat’ in the face of radical climate change. Lovelock (2006) writes “We need people of the world to sense the real and present danger so that they will spontaneously mobilize and unstintingly bring about an orderly and sustainable withdrawal to the world where we try to live in harmony with Gaia” (ibid.:150). Instead of ‘retreat’ Selby has chosen ‘contraction’ for his proposed framework, because of his preference for using a softer, and less militaristic and more ecological concept.
7. Reconceptualizing the meaning of the ‘good life’;
8. Promoting local participatory democracy with reduced emphasis on national citizenship;
9. Moving away from atomistic/reductionist thinking to holistic ways of thinking;
10. Realizing the fact that we are threatening our existence and questioning the value of educational institutions and their responsiveness potential faced by climate change (259-264).

b. Sustainable education

Stephen Sterling (e.g. 2001, 2004a, 2004b, 2007) calls for moving away from the dominant social paradigm which is characterized as technocratic, technocentric, materialistic and reductionist, to an ecological and systemic paradigm, characterized by the democratic, eco-centric, socially concerned, and integrative (Sterling 2004b). According to Sterling (2004a), environment education, education for sustainable development, education for sustainability and sustainable education have continuously evolved one after another in recognition of the limitations of the previous frameworks. Sterling (2001, 2004a) argues that sustainable education is so far the most encompassing and holistic framework. Acknowledging the important work achieved under the different ‘educations’ he emphasizes the importance of having “an open focus” by looking at the relationships between other areas of education (personal interview 2005).

Drawing on Orr (1994)’s thesis that there is a ‘crisis of education,’ Sterling challenges a common assumption that education is always a ‘good thing’ and argues that education can be ‘part of the problem’. Sterling (2001) states that:

most mainstream education sustains unsustainability – through uncritically reproducing norms, by fragmenting understanding, by sieving winners and losers, by recognizing only a narrow part of the spectrum of human ability and need, by an inability to explore alternatives, by rewarding dependency and conformity, and by servicing the consumerist machine (14 -15) [italics in original].

During a personal interview, Sterling has raised the question, “How do we actually re-think education so it’s actually part of the way forward rather than the problem?”
Exploring this big question, he observes that what is important is to nurture “the ability of education and educators to adequately respond to the challenge of sustainability.” In his own words, this means “response-ability” (personal interview 2005; Sterling 2001).

Sterling (2004a; 2004b) highlights that one of the problems of dominant educational discourse and practice is that it is primarily informed by economic interests, characterized by vocationalism, instrumentalism and managerialism, while more liberal and humanistic perspectives on education are marginalized. Sterling says, “so before you can start to talk about education and education systems, you’ve got to understand the cultural context within which they sit,” and he goes on to say that:

What informs the educational paradigm in the first place? And if you can answer that, you can then look at the nature of an alternative socio-cultural paradigm, which I talk about as being ecological and systemic and holistic and so on. Then how can we articulate that, and how can we actually re-vision education according to that paradigm, rather than starting from where we are? (personal interview 2005)

As an alternative vision of education, Sterling (2004a) proposes sustainable education, which has four key descriptors:

- **Sustaining**: it helps sustain people, communities and ecosystems
- **Tenable**: it is ethically defensible, working with integrity, justice, respect and inclusiveness
- **Healthy**: it is an adaptive, viable system, embodying and nurturing healthy relationships and their emergence at different system levels
- **Durable**: it works well enough in practice to keep on doing it (56).

From the perspective of systemic learning theory, he emphasizes the critical importance of transformative learning which is equivalent to ‘third order learning,’ that involves the whole person, and affects change in deep levels of values and belief through a process of re-perception and re-cognition. It is not then just a matter of intellectual and conceptual learning, but engages our emotional and intuitive selves as well (Sterling 2004b: 56).

This kind of learning is different from ‘first order learning’ (i.e. non-critical, non-reflective, adaptive learning), that is "doing what you have always done" (personal interview 2005), or from ‘second order learning,’ which is learning and questioning fundamental assumptions. Using a metaphor of the fish not being aware of the water, Sterling
argues that sustainable education needs to help people to be aware of the 'water' or their worldview (i.e. second order learning), as a prerequisite for a transformative/third order learning (personal interview 2005; Sterling 2004b).

c. Transformative learning

Transformative learning is described "not as a fixed definition, but as a way to stimulate discussion" as follows:

Transformative learning involves experiencing a deep, structural shift in the basic premise of thought, feelings, and actions. It is a shift of consciousness that dramatically and permanently alters our way of being in the world. Such a shift involves our understanding of ourselves and our self-locations; our relationships with other humans and with the natural world; our understanding of relations of power in interlocking structures of class, race, and gender; our body-awarenesses, our visions of alternative approaches to living; and our sense of possibilities for social justice and peace and personal joy (Morrell and Ann O'Connor 2002: xvii).

According to Edmund O'Sullivan (1999; 2002), transformative learning is predicated on the deep critique of the dominant worldview and suggestions for creative alternatives. In a personal interview he explains that he could have called his book Transformative Learning (1999) 'sustainable education' but he ended up with choosing this title because of his particular emphasis on deeper changes on the personal and cultural levels.

He asserts that profound changes are necessary because of "deep order issues about the way humans are living in this present period of history, that actually makes the sustenance of life – not only for humans, but the web of life itself – put it in enormous jeopardy" (personal interview 2005). In the face of the serious challenges humanity faces, he argues we "have a significant responsibility for the direction it will take" (O'Sullivan 2002:2). He argues that developing critical consciousness among those in privileged contexts becomes particularly vital:

[We have] to come to understand those factors that are both destructive to us, and also create inequities, violence and go against peace processes.... We have to start to make the connection between what's happening over there as something that's just their problem that we can't help them with, to understand that that problem is partly caused by our consciousness (personal interview 2005).

O'Sullivan (1999, 2002) suggests that transformative learning consists of three
elements: survival (i.e. survival education), critique (i.e. critical resistance education), create (i.e. visionary transformative learning). Survival education helps to develop a profound understanding of the current ecological crisis by dealing with learners' sense of denial, despair and grief. Critical resistance education addresses the root causes of complex issues, not least, the modern-technical-scientific industrial worldview. It also critically examines how a hierarchical power structure based on, for instance, race, class, gender and sexual orientation interplays with the issues. In terms of visionary transformative learning, he points out the importance of expanding our consciousness, and re-thinking the meaning of quality of life instead of standard of living.

d. Social learning for sustainable living

'Social learning for sustainable living' put forward by Wals and Heymann (2004) and Wals (2007) is another example of a paradigm conscious educational approach for sustainability. Arguing that we now have entered a stage of "crisis of the whole system" or "crisis grounded deeply in our way of thinking," Arjen Wals states:

...we are beginning to see the cracks of the market driven system, of consumerism... we are now beginning to see that something needs to shift, and therefore we need to become more critical, more reflective and more willing to abandon some of these principles in order to meet this crisis...which demands that we have new ways of learning (personal interview 2006).

Social leaning is "a collaborative reframing process involving multiple interest groups or stakeholders" (Wals and Heymann 2004:125). They explain that although it has been applied to areas such as interactive policy making and conflict management, its application to education for sustainability and environmental education is a recent phenomenon. Wals and Heymann (ibid.) focus their argument on informal and non-formal learning contexts, rather than formal contexts where learning tends to be guided by predetermined outcomes.

In a social learning process for sustainability, differences in values and perspectives are openly reflected upon individually and collectively within an unthreatening environment rather than being concealed. This is considered as helping learners become aware of their own 'frames,' or underlying assumptions, and blind spots. Such
a process is called 'deframing'. In a social learning process, it is also important not only to allow diverse values and perspectives to emerge, but also to develop a shared frame for a mutually acceptable resolution. This is called 'reframing.' A rationale for this approach is that since there is no consensus on the meaning of sustainability and sustainable living, and there exists no universal way to deal with sustainability-related issues, it is important for each citizen to create meaning by and for themselves. So, key elements in social learning are continuous critical dialogue and creating space for "discord and dissensus." Hence, "the conflicts that emerge in the exploration of sustainable living become prerequisites for rather than barriers to learning" [Italics in original] (Wals 2007:501). Wals argues that it is vital to make a creative space for healthy contestation, dissonance, diversity, and dissensus in the theory and practice of education for sustainability, based on a belief that there is no one way of understanding and achieving sustainability and a such a space is extremely limited in the current education for sustainable development discourse (personal interview 2006, 2007; Wals and Jickling 2002).

In the processes of deframing and reframing, a facilitator of learning plays an important role. S/he needs to be sensitive and open to the learners' perspectives, to be aware of her/his own frame of reference, to motivate learners by showing small entry points for concrete actions, to encourage diversity of thoughts, to make sure marginalized voices are heard, to use inclusive and invitational language to encourage participation in the learning process (Wals and Heymann 2004).

e. Education for a sustainable future

In his book chapter titled Education for a sustainable future, John Fien (2001) points out that various "unsustainability" issues which we currently face are all connected and they are "symptoms, or consequences, of the wider malaise of many of the modernist values and practices that have supplanted indigenous systems of sustainability and have put the world on its present unsustainable path" [italics in

53 He uses education for sustainability interchangeably in his chapter.
He emphasizes the importance of helping learners be critical thinkers and active members of civil society. For him a focus of education for a sustainable future is:

on the ways students learn to make judgments about when, how and why to work on their own, and with others, to help build sustainability from the local level upwards (126).

Fien (ibid.) also points out the importance of an affirming alternative epistemology to modernist science which has been a major cause of environmental problems, social exclusions and poverty. He suggests eight guiding concepts for a sustainable future within two categories of ‘People and Nature’ (Interdependence; Biodiversity; Living lightly; Interspecies equity) and ‘Ecological Sustainability’ (Basic human needs; Intergenerational equity; Human rights; Democracy) (132-133).

For Fien (ibid.) addressing pedagogical issues is critical in education towards sustainability. He particularly emphasizes the importance of learning about a range of real problems to develop students’ critical thinking and encouraging their participation in the community for them to become an active citizen. Fien (ibid.) reminds us of the issue of power inequalities in learning contexts. Since introducing balanced teaching on different perspectives on sustainability does not always result in a balanced learning experience, there should be special attention to those who have been marginalized.

(C) Pedagogy

In discussions on sustainability-related education, there exists an increasing aspiration to promote process-oriented pedagogies, moving away from a prescriptive mode of teaching and learning. Process-oriented pedagogy is often characterized as: learner-centred, participatory/active, experiential, inquiry-based, and collaborative. Dynamic interlinking of theory and practice (i.e. praxis) is also a critical element of the participatory mode of teaching and learning. Sustainability education renditions predicated on the holistic and ecological worldview support these styles of pedagogies (Fien 2001; Sterling 2001; UNESCO 2006b; Wals and Jickling 2002). Above all, a transformative mode of global education described above has advanced participatory
pedagogical approaches. It strives to harmonize the hidden curriculum or medium with its core messages of interconnectedness, interdependence, justice, rights and responsibilities, diversity, and non-violence. Actual learning process and the environment is as important as the content of the learning itself. Its activity based-learning increases learners' engagements and helps to meet their multiple learning styles (see page 165 for learning styles) and create an environment where they can practice skills such as communication, cooperation, decision making and problem solving (e.g. Greig et al. 1987; Pike and Selby 1988; Selby 2008).

In sustainability-related education, one of the rationales to develop process-oriented participatory pedagogies is linked to the ambiguous nature of the concept of sustainable development/sustainability itself. Fien (1998, 2001) and Jickling (1994) point out that those who teach tend to choose certain aspects of sustainability or take a specific perspective of sustainability consciously or unconsciously, which in turn might lead to indoctrination, if critical reflections are not incorporated into learning processes. They therefore assert the importance of creating learning opportunities where diverse meanings of sustainability are critically examined and debated. With an emphasis on critical thinking, Jickling (1994) states, "In a rapidly changing world we must enable students to debate, evaluate, and judge for themselves the relative merits of contesting positions" (239).

More broadly, realization of limits of transmissive mode of teaching and learning has motivated the pedagogical innovations. For instance, the UK Higher Education Academy (2006) states that "teach[ing] in a traditional sense" is inadequate in helping learners to become 'action-oriented, sustainability-literate graduates,' by indicating a number of key skills and knowledge dispositions for sustainability literacy as follows: disciplinary understanding of the environmental, social, political and economic contexts; broad understanding of key principles and debates of contested notions of sustainable

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54 The Higher Education Academy is an independent organization mainly funded by the four UK higher education funding bodies and higher education institutions. It aims at helping higher education institutions to provide best learning experience for their students (http://www.heacademy.ac.uk).
development; non-reductionist problem-solving skills for complex real life problems; creative and holistic thinking and critical judgments; personal and professional self-reflection capacity; bridging a gap between theory and practice; working creatively in an interdisciplinary team; initiating and managing change (6).

In order to develop learners’ capacities to come up with the creative solutions for multi-dimensional challenges of sustainability, there are a number of suggestions. Interdisciplinary and multi-disciplinary approaches are suggested as an important avenue in education for sustainability in the higher education sector. They are approaches which normally involve an alliance and interchange of more than two disciplines and the instructors/ facilitators are drawn from different disciplines. By being challenged by perspectives which might not be conventional within their own discipline area, learners are considered to have more opportunities to develop an ability to synthesize or integrate diverse perspectives on sustainability, hence expanding their perspective (Eagan et al. 2002; Selby 2006b). A holistic cross-curricula approach in the school sector has a parallel assumption that complex sustainability issues cannot be dealt with effectively through a subject-based formal curriculum approach (Shallcross et al. 2006).

Envisioning (or futures thinking) is a process in which people come up with ideal future visions individually and collaboratively. The envisioning process includes clarification of individual values and assumptions underlying the visions. To act today based on preferred future visions is motivational and proactive (ARIES 2005; Hicks and Slaughter 1998; Pike and Selby 1988; 1999a; 2000).

Using diverse ways of knowing by incorporating, for instance, emotional and affective learning is also considered important in the process of personal change (Ageman and Crouch 2004; Sterling 2001; UNESCO 2006b; Wals and Jickling 2002). Rationality itself is not enough, Bonnett (1999) states, if learning helps learners to take “a more direct, felt involvement” for sustainability (321). Its learning processes need to be diversified by incorporating sensing, feeling, attunement, and intuition, especially by dealing with learners’ fears and hopes in the face of interconnected sustainability
challenges (Hicks 2002; O'Sullivan 2002; Selby 2008).

Another approach which is considered to be effective in promoting individual and collective change for sustainability is the whole school approach, which intends to connect pupils' learning in formal curriculum to the whole school experience and informal learning in the community "to form a web of coherent experience" (Shallcross et al, 2006:36). The whole school approach encourages learners to apply new knowledge and skills learned in the classroom to outside of the classroom through active participation in decision making and working collaboratively with various stakeholders. In this way, classroom learning is reinforced and it will better fill in the knowledge, attitude and action gap (ibid.).

4.4. Key Issues in Education for Sustainability

4.4.1. Incompatible Values Underpinning Sustainability

One of the key tensions among contested meanings of sustainability stems from the question of what to sustain: continuous economic growth; nature/ ecological balance; indigenous culture; basic human needs; democracy. These entities are not always exclusive but the distinctions are being made here for the sake of analysis. Arrows in Figure 4 indicate key tensions.

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**Figure 4. Key tensions regarding what to sustain**
Promoting continuous economic growth within a finite earth is the central contradiction regarding the notion of sustainability/sustainable development from the outset (Bonnett 1999; Worster 1995). Rampant economic growth under recent globalization trends has marginalized indigenous and non-western cultures, values, and livelihood (Shiva 1989, 2005a; Vargas 2000), widened inequality and deepened poverty (Chossudovsky 1997), and undermined autonomy and self-determination in and between countries (Stromquist 2002). Chapter One (pages 4-9) has delineated the devastating impacts of neo-liberal globalization.

Nature/ecological balance and democratic participation is another contentious area in the sustainability discussions. Hypothetically, Wals and Jickling (2002) have argued a scenario where democratic processes are undermined by imposing authoritative approaches to force individual behaviour changes among citizens to meet the urgency of ecological imperatives, as against democratic values and processes which when fully applied limit and slow concrete change toward sustainability. In the former scenario, people would have more chance to achieve a sustainable society at the great cost of autonomy and self-determination. By defending democratic values, however, John Barry strongly opposes the authoritative approach. He says:

...the idea of one size fits all, and that somehow what we’re interested in is ecological re-programming people, to me is deeply offensive, flawed and simply won’t work. It will end up destroying the democratic, participative, reciprocal character of sustainable development. It may be sustainable, but you’d live in...a totalitarian state. So you’ve got to question, 'What are we sustaining?' We are sustaining ways of life that we value, we are sustaining processes that we value like democracy, and trying to deepen democracy and equality (personal interview 2005).

Bonnett (1999) also questions the comfortable alliance between democracy and ecological sustainability. He points out that given the ecological imperative, certain policies become more appropriate, which, in turn, will “set the parameters within which democratic debate can be allowed to function” (315). He further states that instrumental use of authority goes against the fundamental democratic value of affirming diversity of perspectives. Defending democratic values, yet simultaneously meeting the urgent ecological challenges, is not straightforward and will touch upon a deeper issue of
values: "whose expertise, language, values are to define sustainability?" (Worster 1995: 424)

There is another tension between meeting basic human needs and protecting the nature/ecological balance in relation to natural resource use. Regarding an issue of unequal natural resource availability around the world, Fien (2001) points out that there exists deep poverty on one hand, and overproduction and overconsumption, on the other. He asks questions such as:

How can the overconsumption, waste and misuse of resources by some people be reduced? How can the severe poverty that causes many to exploit the earth just to survive be eliminated? How can the pressure on the environment from both be overcome? ... How can the nexus between the environment, social development and population growth be formulated to ensure the sustainable use of resources? (130-131)

In general, the basic needs of the metaphorical hemisphere of the south which faces day-to-day survival issues are not sufficiently represented in mainstream education for sustainability discourse, and the dominant discourse puts more emphasis on the environmental aspect than human survival (Sauvé 1999; Vargas 2000). Vargas (2000) argues that achieving intergenerational equity is not feasible without addressing intragenerational equity:

... there are fundamental inconsistencies in attempts to speak about not meeting today's needs in such a way to limit the ability of future generations to meet their needs and then ignoring the fact that some are meeting their needs in the present at the expense of their contemporaries.... In order to preserve choices for future generations, present generations must be considered in a genuine ethic of social justice (ibid.: 383).

Protecting ecological balance and meeting human survival basic needs has been the real challenge for the majority of people in the global south. For instance, O'Donoghue and Lotz-Sisitka (2006) from South Africa argue that environmental education programmes in Southern Africa have been strongly addressing social equity concerns together with the environmental and development issues before the education for sustainable development discourse become popular. The education theory and practice emerging from a Southern African context of high levels of vulnerability, caused by multiple challenges due to severe poverty, negative impacts of neo-liberal politics of globalization, health risks and issues (e.g. HIV/AIDS), and
degradation and exploitation of the environment have made it imperative to address those issues in a comprehensive manner. Along the same lines, González-Gaudiano (2005) from Mexico points out the integrations of issues of poverty, gender equality, health, environmental conservation and protection, human rights, cultural diversity, which ESD brings together, "has been a deliberate attempt by many environmental educators in Latin America and the Caribbean to bring about a better response to the complex challenges of education in a world scarred by all kinds of crises" (243). The wealth of knowledge and practices accumulated in the global south will better inform the dominant discourse of education for sustainability.

Regarding the definition of sustainability, clearly there is an issue of power in conceptualization of the term (Worster 1995). In the development of the notion of sustainability, voices of economically privileged industrialized governments and economists have been most influential in shaping the international agenda, while environmental and global social justice concerns tend to be marginalized (Bonnett 1999; Dryzek 2005; Jickling 2005; Worster 1995). Non-western cultural traditions, values, and realities are not fully acknowledged in the discussions, either (González-Gaudiano 2005; Vargas 2000). According to Abelardo Brenes, it remains the challenge for people in privileged contexts working toward education for sustainability "to have a compassionate engagement" with people in survival struggles (personal interview 2005). Similarly, Edmund O'Sullivan comments that "there is no felt urgency" about the sustainability challenges among those who are in a privileged context, and it is important for them "to get emancipation from the privilege" (personal interview 2005).

4.4.2. Implementation Challenges

As the above section discussed, clarifying the meaning of sustainability/sustainable development is a challenge. This international educational movement for reorienting education towards sustainability have a double edged potential: real transformation for educational thinking and practice, or just another neologism. In cautioning against the latter, González-Gaudiano (2005) questions:
Is ESD a new fetish or is it about to become one? Because that is the impression we get when it is presented as 'this time we've got the answer'; in other words, as a new 'sorcerer's stone' that will solve all of humanity's problems and not just those faced by education .... [Is ESD] a case of the same old worn-out manoeuvre of proposing neologisms which...cause processes of 'change so that nothing changes'? (248)

The greatest challenge is translating the transformative aspirations of sustainability into practice when the dominant education system 'sustains unsustainability,' repeating the words of Sterling (2001).

One of the issues in dominant education for sustainable development is the top-down nature of initiative. Sauvé (1999), Sauvé et al. (2005) and Jickling (2005) argue that when sustainable development is presented as “a universal agenda” with “a universal consensus” (e.g. UNESCO 2004, 2006b; Hopkins et al. 1996), it raises an ethical issue. They claim that using government-led education for sustainable development as the global framework to re-orient education everywhere “as unquestionable legitimizing authorities” (Sauvé et al. 2005: 273), and to assume that all the teachers “must deliver” sustainable development is imperialistic because it will ignore local autonomy, contextual diversity, and cultural differences. In addition, and not least, it is a neo-liberal agenda in Sauvé's view. From a democratic perspective, consensus is not something set by the powerful leaders and passed down to people, but should evolve through reflexive processes. Therefore, education for sustainable development should be considered as 'only one' of numerous possible frameworks for environment-related education (Sauvé et al. 2005).

Inadequacy of a universal proposal articulated from the perspective of participatory processes of educational change, also leads to another important point of accepting the transient nature of any educational frameworks and being flexible and creative to meet new and unexpected challenges. As Wals and van der Leij (2007) put it: "as soon as we appear to have met the challenge, things will have changed and the horizon will have shifted once again" (17). Those who are involved in education for sustainability cannot be free from a sense of uncertainty and transience given the evolving nature of understandings, and solutions for sustainability challenges.
Reflective meaning making processes, individually and collectively, also become critical in the implementation of sustainability education. Notion of sustainability needs to be unpacked because it is easily manipulated by the powerful as a means of diverting people's attention to something marginal; that is what Norm Chomsky (1988) in part refers to as "manufacturing consent." From this perspective, Pérez and Llorente (2005) are skeptical about big celebrations, commemorations, and rituals around the UN Decade of Education for Sustainable Development in the face of the real vagueness and disagreements around the meanings of education for sustainable development. They state that "[c]elebrations always play in favour of the hegemonic discourses of those who promote, sponsor and subsidise them" (297). They go on to argue that education for sustainable development is a deliberately 'foggy' concept which diverts people's attention, "while the real environmental conflicts surround, invade and restrict our existence, no longer the subject of distant legends but of everyday altercation, vital alarmism and daily hostility in the society of global risk" (304).

Similarly, Bonnett (1999) points out that there is a danger that sustainable development "simply becomes a term of political convenience used to mask and/or legitimate vested interests" (318). In this sense, the critical and participatory processes of meaning making is a way to demystify and resist to vested interests.

For John Barry, a meaning making process is equivalent to validating diverse knowledges. Acknowledging contextual differences with regard to the notion of sustainability, he has emphasized the importance of "gathering and enthusing local populations, using indigenous knowledge, the local expertise." He goes on to say that:

the language of sustainable development often is meaningless to people in the community. We need to find other ways, other words, other forms of communication to get across the core message of what sustainable development actually is.... It has to be indigenised, rooted in the local community. Otherwise it will simply become another benign colonial project of enlightened westerners – often intellectuals, academics and activists – coming in and telling people how to live. That is not what it's about (personal interview 2005).

With a focus on the learning process, Selby (2008) challenges mechanistic processes of learning process, such as debates and discussions, where our fundamental values are not necessarily brought into the surface, hence they remain
unconscious. Predicating on, but extending David Bohm’s notion of dialogue, that is a "stream of meaning flowing among and through us and between us" (Bohm sited in Selby 2008:170), he discusses dialogical learning which provides opportunities for deeper understanding of realities drawing on the dynamic holomovement (see page 23). Dialogical learning or deep learning is facilitated through empathetic and alert listening; own emotional and somatic awareness in engaging with others; pooling each other’s perceptions then temporally suspending them, being flexible in accepting what emerges from the process; open and collaborative engagement, encouraging individuals to express vaguely felt thoughts in the group process of learning (ibid.:171-172). Such a process overlaps with the above mentioned third order learning of Sterling (2001) and the critical dialogue through ‘deframing’ and ‘reflaming’ by Wals and Heymann (2004) and Wals (2007).

4.4.3. Education for the Market Place or the Planet?

Critically examining the dominant mode of education for sustainable development, Gadotti (2008) considers that without addressing the problem arising from the dominant economic model, "education cannot be decisive... An ESD without social mobilization against the current economic model will not reach its goals" (25). Education which serves the demands of the global market place is part of the problem rather than part of the solution. Arjen Wals' testimony below raises a fundamental question about the purpose of education:

...In seeing education as in its original Latin meaning of educare, which really is guiding in to, facilitating, helping develop and exploration of the self and growth of personal growth and competence, development – which is really about equipping people to make sense of the world and make their own judgments. If you don’t leave that in education, and you take [it] out [then] education becomes an instrument [for manipulation and control]. For instance, this idea of employability, which is so strong. Employability, where people should have basic competencies so that they can flexibly move from one job, one sector to the next, and then they can further be trained on the job because learning, work-based learning, will do that. That is purely driven by economic interests, not by other interests. And if you prioritize economic interests over other interests and you use education for that purpose ... then I think...that education is basically helping people to become more effective vandals of the Earth. It’s making us better at ruining the earth. So we have to really think about that, especially as education, and public education, in particular, is becoming more privatized and more adopting the same kind of
management schemes and reward schemes that business and Industry use to increase productivity...(personal interview 2005).

Educational proposals for critical consciousness about the market place cannot help asking about the meaning of the quality of life and well-being and addressing "a hyper consumers-dependent lifestyle" (Bowers 2007) especially among those who are in a materially privileged position. It is a fundamental shift from having more to being more, using the notion expressed in the *Earth Charter*. The meaning of personal fulfillment needs to be reconceptualized, as Abelardo Brenes comments:

> I think that the sustainability issue has a lot to do with people realizing that you can enjoy very fulfilled happy living with basic simplicity.... Many people are caught up in the compulsive lifestyle that the capitalist consumer societies promote that they do not know how to liberate themselves. They think they won’t be happy living in a more simple way. So if you can demonstrate to them there are people who actually are much happier [in living lightly], then I think that is a very important message (personal interview 2007).

Unless sustainability educators address our hyper-consumerist way of being and living, which has created the wider environmental and social devastations, at the first place their transformative efforts could consciously or unconsciously end up with helping learners effectively participate in the consumerist society so becoming "more effective vandals of the Earth" (Arjen Wals, personal interview 2005).

4.5. Paradigmatic Underpinnings of the Field of Sustainability-Related Education

In contrast to the field of emergency education, in the broad field of sustainability-related education, there are renditions which are particularly critical of the mechanistic paradigm and in their educational manifestations they articulate alternative proposals predicated on holistic/ecological worldviews. Using the framework developed in Chapter One, *Table 8* below maps out key elements of sustainability-related education discussed in this chapter.
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<th>Key Elements</th>
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| **Conceptualization of sustainability** | • Sustainable development primarily as an economic term, supporting continuous economic growth, the market place  
• Human beings at the centre of concern of sustainable development | • The environment as a fundamental part of sustainability  
• Seeing economy as a subset of ecology, and not vice-versa  
• Emphasis on ethics, culture, context and participation, social justice, equity  
• Human place within the nature |
| **Education Change Process** | • UN Decade of Education for Sustainable Development as a universal educational reform agenda | • Participatory meaning making processes  
• Emphasis in contextualized change |
| **Curriculum** | • Predetermined outcomes oriented | • Being sensitive to what emerges in particular learning contexts  
• Inner and outer connection |
| **Pedagogy** | • Focus on developing cognitive learning and rational thinking  
• Skills based  
• Prescriptive | • Process-oriented, learner centered, participatory pedagogies  
• Critical reflections, future thinking, interdisciplinarity  
• Diverse ways of knowing, balancing the cognitive and socio-affective  
• Whole school approach  
• Dialogical learning |
| **Nature of knowledge** | • Static predetermined knowledge which can be passed on hierarchically  
• Value in scientific and expert knowledge | • Value in contextual and local knowledge  
• Knowledge to be co-created  
• Acceptance of uncertainty and transient |
| **View of Learner** | • Passive recipient of knowledge | • A whole person  
• Change agent/active citizen |
| **View of Teacher** | • Source of knowledge/information  
• Delivering predetermined knowledge to students | • Co-learner/facilitator in learning process  
• Being aware of own frame of reference |

Table 8. Paradigmatic analysis of the field of sustainability-related education
4.6. Conclusion

The field of sustainability-related education has been evolving for more than two decades. It currently enjoys global endorsement and enthusiasm through the UN Decade of Education for Sustainable Development and it has opened up a space where people with different interests can engage with each other.

Examination of the field has revealed that ambiguity around the meaning of sustainability seems no closer to resolution, although what is unsustainable is straightforward. The central contradiction within the mainstream understanding of sustainable development stems from the pursuit of economic and material growth beyond what the finite Earth can sustain. When a 'foggy' concept of sustainability is combined with transmissive modes of education, it easily embraces and perpetuates a status-quo confirmative position.

In contrast, the holistic/ecological and paradigm conscious renditions of sustainability-oriented education primarily strive to make what is unconscious conscious in multiple ways and on multiple fronts. Eliciting insights of five experts in the field, who share transformative not 'business as usual' perceptions of and aspirations for education, helped the critical review of the field. From the paradigm conscious renditions, suggested learning processes include: individual and collective reflections; engagement with others more deeply and empathetically; using not only intellectual and abstract knowledge but also emotional, intuitive and embodied ways of knowing. Cultivating a new sense of personal fulfillment as well as a sense of responsibility to the wider world also become vital if sustainability education is to truly meet the 'needs of the present without compromising the ability of future generations to meet their needs,' rather than being a training to serve the market economy.
CHAPTER FIVE

THE INTERFACE BETWEEN EMERGENCY EDUCATION AND SUSTAINABILITY-RELATED EDUCATION: A PROPOSAL FOR HOLISTIC AND SUSTAINABLE LEARNING PRINCIPLES

5.1. Introduction

Further to the overviews of various renditions of emergency education and sustainability-related education in previous chapters, this chapter explores the third research question: what holistic and sustainable principles arise from examining the interface between emergency education and education for sustainability in order to respond to humanitarian crises in more comprehensive way?

The first half of this chapter will examine the interface of the two fields by exploring the overlaps, tensions and emerging synergies between them. Looking at the interface of different fields is considered useful in identifying conceptual, and pedagogical blindspots which might have been left unarticulated in any particular field (Selby 1995). John Barry agrees with the usefulness of looking at the interface of the fields because we are so used to make artificial separations (personal interview 2006). The second half of the chapter will propose holistic and sustainable learning principles for humanitarian crises.

5.2. Interface Analysis

5.2.1. Emergency as a Symptom of Unsustainability

As Chapters Three and Four have discussed, the ambiguous definitions of emergency and sustainability/sustainable development exist in both fields. In terms of the relationships between emergency and sustainability, and their educational manifestations, there is a view that emergency education is part of education for sustainability. For instance, UNESCO (2002) states that “[a]t its most basic level, [education in emergency situations] is education for sustainable development” (16). This is because millions of children living in situations affected by emergencies have
lost the opportunities for basic education, and this in turn perpetuates poverty, which is an obstacle for achieving sustainable development.

The interviewed sustainability educators commonly point out the dynamic relationships between emergency situations and sustainability challenges. For Arjen Wals, emergencies are "all symptomatic of a systemic problem that we have in the world" (personal interview 2005). Similarly, Abelardo Brenes refers to emergency as "a sign that there is no sustainability" (personal interview 2005).

One of the common challenges seems to be the 'invisibility' or lack of awareness of ongoing emergencies in the eyes of many, including those who are in the fields of emergency education and education for sustainability, although chronic and multiple crises are the everyday reality of the majority of people especially in the global south (González-Gaudiano 2005; O'Donoghue and Lotz-Sisitka 2006). Edmund O'Sullivan is critical about the western bias of defining emergencies "whenever they suit them" in spite of the fact that "more than 70% of people are clearly in emergency conditions...every single day" (personal interview 2005). Defining 'emergencies' or 'crises', to which the field of emergency education responds, remains problematic in that silent and creeping emergencies were given less attention and priority and the field lacks critical examination of the root causes of emergencies.

An example of a highly challenging situation arising from chronic and multiple vulnerabilities is well expressed in the statements by Jabry (2002) below. Reflecting upon the 2001 earthquake in El Salvador, Jabry (ibid.) states that it was "just another in the series of emergencies and disasters," and that:

"[t]here may never be an ideal moment, when the country is not in crisis, and when 'the time is right' to think about children and their needs.... Children need to be considered in the midst of a crisis, not after, especially as they comprise over half of the entire population of El Salvador (24)."

In a similar vein, Williams (2006) writes about multiple vulnerabilities as experienced in Africa:

the numerous formidable challenges posed by lacklustre economies and poor resource endowment have so often been compounded by emergencies in the form of human conflicts and natural catastrophes (1).
Talking about an example of serious human rights violations among the massive Nicaraguan economic refugee communities living in an urban city of San Jose, Costa Rica, Abelardo Brenes explains:

these kinds of communities only become visible when they do something that is usually violent, you know, to call attention, so then it becomes an emergency. Otherwise, they are invisibilised and the topography is of such a nature that you don't have to actually see the community – you can't see the community from anywhere else unless you go there... it's invisible (personal interview 2005).

He goes on to say that "you can choose to see that as an emergency or a culture of violence, or not to see that" (personal interview 2005).

This 'selective' nature of our awareness, or our indifference to chronic issues until they become so salient (e.g. break out in violence) is underpinned by the interrelated issues of moral exclusion (Abelardo Brenes, personal interview 2005,2006) and the media influence. For the former point, Opotow et al. (2005) explain that those who are inside "our scope of justice," or within "the psychological boundary within which concerns about fairness govern our conduct," enjoy moral inclusion and are therefore considered to deserve fair treatment. In contrast, those outside the boundary are morally excluded and "beyond our concerns, and eligible for deprivation, exploitation, and other harms that might be ignored or condoned as normal, inevitable, and deserved" (305).

In terms of the latter, there is a strong media influence determining what is an emergency. According to Nick Jackson,

If it becomes a 'CNN emergency,' then there is some more money... That is a nickname for an emergency that gets a lot of publicity. If it becomes CNN emergency, then you know they are going to get more money. That is what it is called (personal interview 2006).

Figure 5 below depicts the distinction between externally perceived emergencies and externally unperceived or silent emergencies.
What the moral exclusion and media influence suggests is that an emergency is externally recognized when it goes above the moral and/or media threshold line. Attention would continue for a while and then disappear, moving to another emergency. Emergencies, or symptoms of unsustainability, are relative to where the threshold line is. What is perceived as an emergency is indeed subjective. Therefore, it is critical to "[be] conscious of what is unconscious" because "we are unconscious in a systematic way" (Edmund O'Sullivan, personal interview 2006).

The invisibility of chronic emergencies on the part of many raises an issue of privilege since we can choose to see or not to see them, as Abelardo Brenes points out. He elaborates the issue of privilege as follows:

It would seem that where one finds policy responses based on sustainability principles, oftentimes they are very much related to the concerns of the people who are already living in privileged areas. They have been able to concentrate a lot of the earth's resources and the products of human labour. There is a sort of entropy effect that is taking place in the rest of the world. So it is the rest of the world which is oftentimes showing the first signs of emergency and therefore unsustainability. For example, with the global warming issue it is clear [that] it is the island people, the people living on the coasts and many of the global south countries that are most vulnerable. Like the tsunami [in] Indo-China, Indonesia, they didn't have a warning system. That is a very good example of vulnerability. Where are we giving priority? To the elite?

He goes on to argue that:

Sustainability issues will ultimately be global and will impact everybody. But we still have this tendency to believe that certain people are protected from these kinds of emergencies. So I would say that perception of what is an emergency and the perception of what is a sustainable priority would probably very much correlate (personal interview 2006).

In the discussion of emergency education and sustainability-related education, it is...
5.2.2. Temporal Aspects of Educational Change

One of the tensions arising from an interface analysis of emergency education and education for sustainability relates to a temporal aspect of educational change, more specifically, to preferred time scales, and the speed. The proponents of education for sustainability commonly propose a longer time scale by emphasizing the needs of future generations, and intergenerational justice (e.g. UNESCO 2004, 2006b), while for those who are in the field of emergency education a future or long-term perspective seems to be rather limited, despite increasing awareness of the importance of such a long-term perspective. Stephen Sterling (personal interview 2005) regards a narrow view of emergency education and emergency as a time ‘bounded’ concept, which suddenly starts and finishes. He thinks that “the idea of length of time is rather important because it begs the question: what leads to a crisis in the first place? And once you have the crisis... what are the scenarios following that?” His point is that educational initiatives need to be located in a longer time scale and to be predicated on non-linear educational change processes. Since any short-term, temporary intervention has long-term implications and effects, immediate interventions should be based on visions of long-term comprehensive development of society (Kagawa 2005). This is easy to argue at the theoretical level but remains a challenge in practice. For instance, Susan Nicolai articulates the challenge of a long-term perspective especially in the middle of acute emergency situations:

In the sense that education in crisis is on the continuum more about responding to more immediate needs, and really focusing on quite a practical level in terms of trying to prepare people for a future. I feel like education for sustainable development probably is a longer-term approach thinking about what are things in this community going to look like even in a hundred years and what can we do about it to really have a sustainable development approach. We would probably be looking more at five months to maybe three years or something. This is a long-term picture for the emergency education sector (personal interview 2006).

It would be simplistic to say that emergency education is to meet the short-term and immediate needs and that education for sustainability to meet longer-term concerns.
The convergence of emergency education and education for sustainability acquires great significance in helping bring a longer time perspective into the early stages of emergency education interventions. Peter Buckland puts this point as follows:

I have hardly ever heard people talking about sustainable development [in the field of emergency education]...because people are focused on getting the schooling system back functioning because people have a right to school. A right to education. And there is not a great deal of talk about why, what purpose does education serve and why. And there is an assumption that education is in itself a good thing and therefore getting kids into school is an important thing to do. But when you raise the issue of sustainability people talk about the sustainability of a system. Are there enough resources to keep the system going?

It is only when the debate gets to the topic of reconstruction [that] people start to ask the sustainability questions. What is the education for? How will it sustain the economy? How will it sustain social and political change? I think that is a mistake. I think that people need to be looking at some dimensions of sustainability from an early stage. And that is part of my earlier point about what education is for. It could be rebuilding a system that ...is both politically, economically, socially, not sustainable. I think that it is a trap we often fall into, not taking a longer view from an early stage. Now it is understandable for those agencies involved in humanitarian support to focus on the short-term and assume education must be a good thing. But it is important for agencies ... which [are] more focused on reconstruction [to take] the issue of sustainability seriously (personal interview 2006).

As both Nicolai and Buckland’s above comments articulate, addressing a long-term perspective from the outset of emergencies remains a challenge in the field. A more challenging, but critically important standpoint would be to prevent and/or mitigate emergencies in the first place as much as possible and to cut the spiral of vulnerabilities so that the context will not fall back into emergency. These points are parallel to the arguments made from the disaster risk reduction perspective (e.g. UN/ISDR 2004) as discussed previously (pages 84-85).

Another temporal aspect of educational change concerns speed. When educational initiatives take place in contexts terrorized by crises, the speed of work becomes a sensitive matter. Based on his extensive travel within a number of war-torn zones around the world, Ignatieff (1997) asserts that trauma healing must proceed slowly:

We can know something in our heads without knowing it in our guts. We can forgive people in our heads without forgiving them in our hearts. Knowledge can be propositional or dispositional. For the former to become the latter, it must be – in Freud’s phrase – ‘worked through.’ A two-way process is involved: what we know in our heads must become something we know in our guts; what we know in our guts must become something we know in our heads. Psyche and soma, which have been divided by trauma, must be reunited again. The process is bound to be slow and painful. In working through death and loss, our bodies often
resist what our minds know to be true; or our mind resists believing what the body already feels. To master trauma is not just to bring body and mind together in acceptance; it is also to recover, both body and mind, a sense that the past is past. This means shifting the past out of the present; replacing psychological simultaneity with linear sequence; slowly loosening the hold of a grief or an anger whose power traps us in an unending yesterday (168-169).

The importance of connecting psyche and soma in the trauma healing process is analogous to bridging the Cartesian division of mind and body gap, as discussed in Chapter One (pages 16-17).

Miller and Affolter (2002) also emphasize the critical importance of the slow nature of educational work with crisis-affected children as against quick approaches focused on measurable outcomes such as the number of resources distributed, the number of schools rebuilt, and the number of teachers trained. They consider that "pushing too hard and too quickly for measurable results at the expense of processes that run on a slower clock" goes against building long-lasting peace (120) and state that:

> Violence occurs quickly.... Healing and dialogue, on the other hand, are slow work. Authentic participation is slow work, especially with children. Rebuilding a sense of confidence and trust in others is slow work. Engagement with overwhelming memory is slow work. Helping children outgrow war must go gently (120-121).

The speed and time scale of educational change are interconnected. When the educational initiative is truly given time for 'working through' with traumatized populations, changes and progress require time. Being flexible, sensitive, and patient in the process of working through under multiple pressures and constraints remains a huge challenge. However, awareness of, preference for and opportunities for slow work are limited in the field of emergency education (Miller and Affolter 2002). Gonzalo Retamal (personal interview 2007) identifies the 'fast work' mentality and practice among most humanitarian organizations. He says:

> [their] intention is to do something fast ...in emergency A and be ready to go to emergency B when A has become less interesting to their donors. As a friend of mine used to say, 'they run to the next flavour of the year and leave us with their white elephants' (from Somalia, to Rwanda, to Iraq, to the Tsunami area, etc) [emphasis in bold italics is added by Retamal in his transcription].

He further states that "education is a generational process. You just cannot go there,

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55 White elephants refer to expensive school buildings built by humanitarian aid money.
build a school, distribute some hope to children, make pictures for the donors and quit
...that is immoral."

Externally driven quick fix approach could be part of the problem rather than be a
solution. Quick fix mentality and practice raise into sharp profile the power inequality
between those who set the agenda and those who receive it. John Barry's comments
below capture the tension:

'It is not legitimate to force people to a timetable that they haven’t set themselves.
I think it is about how do you align, how do you harmonize the time frames,
rhythms of an organization with the rhythms of the needs of local people? They
may say, ‘Listen our rhythms are set by our yearly meetings of all the tribes.’ It
may be set by changes of the season. In other words, the rhythm of their lives
may be completely different from the annual financial returns, or business targets
and so forth you get from an aid organization (personal interview 2006).

What Barry emphasizes is that ‘how’ to give support is as important as ‘what’ support to
give to those who are affected by crises. Genuine respect for those who are in different
cultural contexts is critical in that process. External agencies involved in emergency
education initiatives need to have a humble attitude of learning from and working with
"people in emergencies [who] are their own experts [with] their experience," as John
Barry says (personal interview 2006). Such a view has been easily marginalized or
seen as unrealistic because of the ‘urgency’ of the operation.

In sum, emergency education, especially during the acute phase, tends to have a
limited future perspective and an externally set time-bounded focus. In other words, a
dynamical view of temporal interconnectedness of past, present and future is missing.
In terms of speed of change, educational intervention should be harmonized with that
of the recovery of traumatized people and communities. Its process requires a high
level of cultural sensitivity, and an awareness of and respect for local knowledge and
experience among the external agencies working in a particular cultural context.
Genuine healing processes are not a quick fix by externals. Changes need to be
owned by the locals who need to face the consequences of emergencies before the
externals come and after they leave. In this sense, the recovery processes which are
supported by a participatory and empowering manner will help to enhance the
capacities of those affected by an emergency to cope with the situation in both
5.2.3. Emergency as a Window of Opportunity?

Emergencies and crises are often considered as a window of opportunity by a number of proponents from both fields. A critical question here is what is the opportunity for? As Klein (2007) has argued, the situations of mass suffering are easily manipulated by the interests of disaster capitalism (see pages 8-9). When the responses are predicated on and lean towards the neo-liberal development mode, the responses (including education) will tend to be a part of the future problem by perpetuating the existing exploitative system. Working with crisis affected people and communities should be done in ways that won't be the root cause of yet another crisis. Participation and ownership by locals become indeed critical in this regard.

Figure 6 below depicts the dynamic relationship between unsustainability, emergency, modes of development, education/learning, and a resilient social-ecological system (sustainability). What this study is pursuing is learning which will help create a resilient social-ecological system. As the previous chapters have described, sustainability educational proposals predicated on holistic and ecological worldviews have been promoting shift towards this end.
Figure 6. Dynamic responses to emergencies (inspired by Folke et al. 2008: 359)

When learning processes are predicated on alternative and critical modes of development, they will be more likely to contribute to creating a resilient social ecological system. A crisis can trigger moments of deep reflection for many, but there is no need to wait for an acute emergency/crisis to initiate change. In fact, what a
transformational rendition of sustainability-education suggests is an anticipatory approach to preempt a crisis in the first place.

5.3. A proposal: Holistic and sustainable learning principles for humanitarian crises

What follows are six holistic and sustainable learning principles for humanitarian crises: flexibility, balance, resilience, social justice, interconnectedness, and anticipation. They have emerged according to the steps described earlier (see pages 54-55). The draft version of the principles (see Appendix 4. Draft holistic and sustainable learning principles, pages 256-259) was revised by reflecting upon the comments received from phase one research participants.

These principles are not mutually exclusive but rather mutually embedded concepts. They are laid out below at a meta level, rather than a micro or context specific level. What is suggested is aspirational or visionary; as intending to offer an enabling and reflective framework for education policy makers and providers. After the explanation of each principle, their implications are translated into suggestions at more practical levels. The updated version is included at the end of this chapter (pages 177-180) and comments from the participants are interspersed in the section below.

5.3.1. Principle 1: Flexibility

As opposed to an externally imposed quick fix approach for instant measurable results, learning at a self-determined, flexible and gentle pace is particularly important in the long run for those who are affected by a crisis.

One of the insights from the interface analysis concerns the preferred speed of learning and the speed of educational change. The preferred speed seems to have something to do with the worldviews. For instance, Selby (2002) regards "mindful, still, and slow learning" predicated on the holistic/ecological worldview as "a counterbalance

56 'Slowness' was originally used to express the idea in Principle1. However, a number of Phase One participants pointed out that 'slowness' does not convey what I am trying to express accurately and the term seems to be a cause of misunderstanding (e.g. its negative connotation to 'slow learners' as those who are intellectually inferior and require special support).
to the packaged rush and treadmill of transmissional/mechanistic learning and the swift-paced quality of much learner-centred learning” (87). In a mechanistic mindset, speed and quantity of learning matters more than the quality and studied maturation of learning.

Although slow learning is usually considered to be inferior or even backward to fast paced learning, Hargreaves and Fink (2006) claim that “deep learning is often slow learning.” They go on to argue that:

learning that is not undertaken too fast or in a hurried way is at the heart of our capacity to incubate creative and innovative ideas; it is essential to our ability to walk around and ruminate on complex and difficult problems, then come up with unforeseen solutions.... Questioning assumptions, not rushing to judgment, and understanding emotionally and intuitively as well as rationally and deliberately – these are the hallmarks of slower knowing (44-45).

Paradoxically, when we face more urgent and complex problems to which we are under enormous pressures to respond, slower and more profound learning becomes more salient. Arjen Wals states that “the sense of urgency can do two things. It could lead to panic, and a [eco]totalitarian regime as a result. Or it can lead to an awareness that we need to really start re-thinking the foundations and principles upon which we have built this sustainability society.” What is needed, he emphasizes, is serious deep learning:

You could say that as the looming crisis becomes more urgent, the pressure to abandon transformative learning and to fall back onto indeed prescriptive learning, training, and conditioning, [the link of an eco] totalitarian regime becomes bigger. It becomes more tempting, to say, ‘well this is how we are going to do it.’ And everybody has to follow these rules. Otherwise we are all going to die.... How much time do we have? Nobody knows.... But I do sense that it is a very serious deep issue that requires serious and deep learning in order to arrive at new solutions, rather than cosmetic or buying-time solutions...(personal interview 2006).

Similarly, Sterling (2007) argues that the more urgency we face, the deeper learning is required, and that “sustainable change and sustainable social learning derives [sic.] from engagement, reflection and self-critique, rather than instruction” (79). Process-oriented learning suggested by Wals and Sterling requires flexibility, sensitivity, and patience, which is not a quick fix.

A flexible speed of learning is critical to crisis-affected contexts where a sense of
urgency prevails. Miller and Affolter (2002) remind us that healing work for crisis-affected children and rebuilding crisis-torn communities should proceed gently and slowly by attuning to their needs. Enhancing each learner's self-esteem and creating positive relationships within a learning community take time.

However, slow and flexible paced learning do not mean simply denying, or excluding, fast-paced learning. From a holistic perspective which acknowledges interrelatedness and interdependence of all phenomena, opposites are considered to be complementary (Capra1982). For instance, Abelardo Brenes points out that it is important to acquire life-saving relevant information and skills quickly in the emergency affected context as well as to understand the difficulty in learning in a state of shock (personal communication 2008). What this principle suggests is a diversification of the speed of learning depending on the needs and readiness of learners where fast-paced learning is predominant. A self-determined pace of learning tends to give each learner flexible spaces for individual and collective reflections, which is, in turn, more likely to conducive to a sudden transformation in a learning process. So paradoxically, accelerated learning (see page 98) would be more attainable when combined with a flexible pace of learning.

From a curriculum development point of view, when community based participatory approaches are employed, involving dialogue with local stakeholders and integrating local knowledge and practice, educational change initiatives move inevitably slowly (Gonzalo Retamal 2007 personal interview). Flexibility also metaphorically means to tune into the appropriate 'rhythms' of those who are concerned, as John Barry points out (see page 159). In other words, one rendition of 'flexibility' is cultural and contextual sensitivity and nuancing in working with those who are affected by crises.

5.3.2. Principle 2: Balance

In order to better meet diverse learning needs, multiple ways of knowing and expression should be incorporated into learning processes in a balanced way. Learners' own unique experiences and cultural diversities should be seen as important assets in learning.
The importance of diversifying ways of knowing as highlighted in holistic renditions of both fields is echoed by learning style theorists such as Gregorc (1982) and McCarthy (1981). The common insights arising from their four types of learning style are as follows: there is no pure learning type and one learner can have more than one learning style, there is no right and wrong learning style and no connection between learning styles and intelligence. They point out that when learning is dominated by one particular style, those who are not comfortable with it are disadvantaged by feeling a sense of stress, failure and alienation, so, in turn, affecting their self-esteem and achievement. Drawing on these learning style theories, Pike and Selby (1988) emphasize that it is critical to incorporate different learning styles so that "each student has an equal opportunity to learn and succeed" (88).

Likewise, regarding diversifying epistemology, Hargreaves and Fink (2006) argue that alongside cognitive and intellectual learning, affective learning plays an important role:

All teaching and learning are emotional practices — in a good or a bad way, by intent or neglect. Strong relationships with and emotional engagement among students provide essential prerequisites for civic responsibility, tolerance, and sustainability. When learners are diverse and demanding, caring means being responsive to students' varied cultures; inclusive of their own ideas when selecting curriculum content, defining learning targets, or sharing assessment criteria; and ready to involve their families and communities in lifting learning to higher levels. If learning isn't personalized — that is, customized to the meanings, prior knowledge, and life circumstances of each student experiencing it — then many students, especially the most disadvantaged, will scarcely learn at all (39).

So the key message of above-mentioned educators is integrating diverse ways of knowing and expression in a more balanced way. From a holistic/systemic perspective, balance is not a simply 'fixed' state of equilibrium, but it means a 'dynamic stability,' or "maintaining the same overall structure in spite of ongoing changes and replacements.

57 In Gregorc's (1982) model, by combining an axis of concrete (use of all physical senses) or abstract (use of reason, emotion or intuition) perception, and an axis of sequential (linear processes) or random (non-linear processes), he comes up with four distinct learning styles: concrete sequential, abstract sequential; concrete random and abstract random. In the case of McCarthy (1981), one axis is about ways to perceive the information (concretely or abstractly) and another is about ways to process information (actively or reflectively). The suggested four types are: the innovative learner (concrete/reflective); the analytical learner (abstract/reflective); the common sense learner (abstract/active); the dynamic learner (concrete/active) (Pike and Selby 1988).
of its components" (Capra 1982: 271). So depending on the learning context and needs of the learners, different modes of learning should be applied flexibly. It is, however, important to remember that balanced pedagogies do not necessarily guarantee balanced learning experience because of the power inequalities among learners (Fien 2001).

With regard to crisis affected learners, Gonzalo Retamal’s views below chime with Hargreaves and Fink’s point about the importance of dynamical balance between cognitive and socio-affective learning.

If you invest in children now, on a cognitive level and on a psychosocial level, you are creating citizens that are going to be integrated and productive people. If you don’t do that now, what you are going to have is a reproduction of children that are sick and want revenge. Obviously, that affects sustainable development (personal interview 2007).

In contexts affected by crises, diverse pedagogies – for instance, using arts (e.g. dancing, singing, drawing, poetry), story telling, role play – and affirmative learning environments have been already suggested and implemented (Gonzalo Retamal personal interviews 2006, 2007; UNICEF/University of Pittsburgh 2004). It is vital to balance the preponderance of transmissive mode of teaching with these participatory approaches.

Further to these points, what are the capacities for learners to develop in relation to ‘traumas’ and ‘threats’ in the face of actual and future emergencies? The notion of ‘downshifting’ seems to bring important insights to the discussion. According to Caine and Caine (1997), downshifting means “a psychophysiological response to perceived threat associated by a sense of helplessness or fatigue or both” (103). They explain that when people downshift, they are not capable of dealing with complex intellectual tasks which require creativity and critical thinking, and tend to use simple instinctual responses and foster memorization. Overall, downshifting becomes an obstacle for a lot of basic capacities which education seeks to develop. They further argue that not only traumatic experiences but also educational practices predicated upon the mechanistic paradigm lead to downshifting when combinations of the following elements exist: predetermined learning outcomes imposed by external agency; very
limited space for personal meaning making in learning; external control on rewards and punishments regarding learning; individual work on unfamiliar learning contents (ibid.: 41-42). Caine and Caine (ibid.) state "underlying all of those conditions is a belief structure that denies the learner's own purposes and meanings, even though they are a critical part of the learning process" (42). So, it is important for teachers to change their negative assumptions about learners' capacity for learning. In a fluid and uncertain contemporary world, Caine and Caine (ibid.) suggest learners develop the following dispositions:

- An inner appreciation of interconnectedness
- A strong identity and sense of being
- A sufficiently large vision and imagination to see how specifics relate to each other
- The capacity to flow and deal with paradox and uncertainty
- A capacity to build community and live in relationship with others (97-98).

5.3.3. Principle 3: Resilience

Enhancing resilience both at individual and community levels is vital for long-term survival for both human beings and the environment.

In any emergency situation full of uncertainty and replete with multiple possible repercussions, enhancing resilience both at individual and community levels is a key for long-term survival. The importance of community resilience has been particularly emphasized by those who hold the disaster risk reduction perspective (e.g. Twigg 2007; UN/ISDR 2004).

Folke (2002) defines the concept of resilience as:

the capacity to absorb sudden change, cope with uncertainty and surprises while maintaining desirable functions. Resilience provides the components for renewal and reorganization following change (228).

In contrast to a vulnerable system which would break down faced with even small changes and reverberations, Folke (ibid.) points out that "in a resilient system, change has the potential to create opportunity for development, novelty and innovation" (228).
Folke (ibid.) further states that “the degree to which the social-ecological system can build and increase the capacity for learning, adaptation and responding in a manner that does not constrain or erode future opportunities is a central aspect of resilience” (229).

Regarding developing resilience at individual and community levels in crisis-affected contexts, Miller and Affolter (2002) have posed two important questions:

What are the deep sources of resilience that carried [those who are affected] through the crisis? How can interventions respect their strength and enable communities — and children themselves - to act as the primary agents of educational reconstruction? (117)

In relation to Miller and Affolter’s first question, diversity plays a key role in enhancing resilience. For instance, Suzuki and McConnell (1997) argue that biological, genetic, human cultural diversities are indispensable to human and natural long-term survival in withstanding catastrophes. Using some examples of vulnerability in large-scale monocultural agriculture, fishery, and forestry to any perturbations such as diseases/pests and fire, they affirm that ecological diversities are vital for long-term survival of species. They also point out the mutually reinforcing nature of ecological and cultural diversities. Diverse ecosystems give rise to diverse cultures and, in turn, diverse cultural traditions and knowledge help to conserve diversities of the planet. From the perspective that “the Earth conditions are never constant” (Italics in original, ibid.138), they state that:

If change is inevitable but unpredictable, then the best tactic for survival is to act in ways that retain the most diversity; then, when circumstances do change, there will be a chance that a new set of genes, a species or a society will be able to continue under the new conditions. Diversity confers resilience, adaptability and the capacity for regeneration (138-139).

So protection of ecological diversities and diverse indigenous knowledge systems should go hand in hand. Extrapolating this to learning, diverse ways of knowing and expression, diverse speeds of learning, as well as diverse sources and forms of knowledge become important. The learners also need to gain a profound understanding of the interconnectedness and interdependence of ecological and cultural diversities.

Another source of resilience lies in community. Arjen Wals states that creating more
sustainable communities plays a critical role in both preventing and/or mitigating a crisis in the first place and in better responding to it when it occurs. He asserts that an integrated society where a sense of community and values of pluralism exist, and people interact with each other proactively, would be "more resilient like a healthy eco-system. It can sustain. It can cope with stress better than an unhealthy system" (personal interview 2005). His points are in line with the disaster risk reduction approach (pages 84-85) which highlights the importance of creating a 'disaster-resilient community' or 'sustainable community.' Such a community is characterized by mutual trust, respect for cultural diversity (including indigenous knowledge), and active community participation and self-reliance (Twigg 2007; UN/ISDR 2004).

Resilience is also enhanced by developing networks within and between communities. Such a strategy has been common among grassroots alternative movements (e.g. environmental, human rights, feminist, peace movements) to resist to a dominant force (Selby 1997). Reflecting on the fact that the current powerful global system has damaged previously existing local links and has made us more vulnerable to any perturbations, Stephen Sterling points out the importance of creating "the connectivity within the system," and he states, "we need to rebuild local systems, integrated systems, which are not dependant on huge systems" (personal interview 2006).

Regarding Miller and Affolter's second question about the ways in which to develop resilience, helping individuals develop their capacities to cope with great stress and adversity is nonetheless critical as a basis for learning in crisis-affected contexts full of uncertainty and instability. Referring to the insights of resilience research on children at various risk situations, Goldstein and Brooks (2002) describe the qualities of children able to bounce back from hardships. They possess the ability to:

- set realistic goals for themselves;
- solve problems and make decisions;
- see hardships as challenges rather than stress;
- understand their own weaknesses and vulnerabilities as well as strengths and
talents;

- interact comfortably with others;
- decide the aspects of their lives over which they have control and focus their energy and attention on these rather than on factors over which they have little influence (3-11).

This discussion on individual resilient capacity overlaps with that of life skills. According to Pike and Selby (1999b), life skills generally mean "the skills necessary for the enhancement of psychological competence - those skills which enable the individual to deal effectively with the demands, challenges and pressures of everyday life" (24). Examples of mutually reinforcing core life skills include: self-awareness, self-assessment and self-esteem; communication; cooperation; critical thinking; decision making; problem solving; negotiation; conflict management; coping with emotions and stress; assertiveness; values clarification; risk avoidance; information management; empowerment (ibid. 25). They have particularly highlighted the importance of self-esteem building since that has positive correlation with pro-social values and with positive academic attainment.

"Re-membering and re-weaving the social and anthropological fabric" (Bush and Saltarelli 2000: 34) also plays a critical role in developing resilience in the aftermath of a crisis. Drawing on the work by Carolyn Nordstrom, Bush and Saltarelli (ibid.) point out the importance of "reassemble[ling] the ontological fabric of a society" which is scattered by a war (31). In such a process, the employment of narrative is useful in understanding and expressing difficult experiences among those affected by traumatic events. UNICEF (2006) acknowledges the importance of helping children make sense of traumatic events by expressing themselves as a key element in building resilience in children. John Barry’s view below captures the importance of narrative:

[Because of emergencies] everything that you had owned, your biography, your family albums, your pictures – it could all have been disappeared, gone. And that’s deeply dangerous for human beings because we live narrative lives. We like to have lives that can be lived with stories and know where we’ve come from.

And then suddenly there's a massive rupture. So I think, psychology to me, as I understand it, is about story-telling, re-weaving the reality of your life, the thread of the connections that you have in your life and so on. So certainly for me that's something I would urge in emergency education... It's almost like when you're knitting, you lose the stitch, you lose the piece of wool... It's about re-weaving. How can people re-weave that again? ...often together with their communities (personal interview 2005).

In his follow-up interview Barry further elaborates the role of narrative as a source of personal empowerment:

...having a narrative understanding of the emergency, rupture, the stress, or the trauma does not mean that people simply have to accept. They can resist... It could be an opportunity in using the emergency as a way of handling and consciousness about the injustice of their society and that is what I mean by idea of a narrative [so] that people make the emergencies meaningful (personal interview 2006).

In addition, supporting the individual and community capacity of resilience, the role of outsiders need to be critically examined. What is key is relationship building with contextual sensitivity. Abelardo Brenes states:

...I think resilience is a quality of human beings. Human beings have different modes of resilience. So I think that in each given circumstance, as we enter into a relationship, we should be giving high priority to recognizing the forms of resilience that a particular group has. And to certainly build upon it in our relationship of solidarity with this group of people. And also help them to recognize their own assets. So as we enter through an understanding of their rationale, we are also learners. Then we are honouring that learning by supporting them in achieving their life goals (personal interview 2007).

5.3.4. Principle 4: Social Justice

_Social justice needs to be pursued by making sure of inclusiveness especially for those who have become marginalized and vulnerable in the wake of a crisis as well as those who already marginalized are further excluded and discriminated against._

One of the points discussed in the interface analysis section was the issue of social justice, more specifically, power inequalities in defining the scope and priorities for emergency and sustainability. Broadly put, social justice is about building safe, fair and healthy relationships and structures that adequately meet the basic needs of all peoples at local, national and global levels (Galtung 1969; Toh 2006). Intergenerational justice, the notion put forward by the sustainability-related education, is also an important aspect of social justice.

At one level, social justice in emergency situations means inclusiveness in terms of
access to education for those who are already marginalized and those who are excluded and vulnerable in the wake of a crisis situation (girls, the poor, minorities, in particular). In spite of the increasing international awareness and efforts to secure educational access, access for those who are affected by crises often becomes closed off. The challenge is summarized by the words of Save the Children (2006): “when education is needed to help break the cycle of poverty, destruction and conflict, it is least likely to be available” (5). Margaret Sinclair considers that it is indispensable to provide quality of education for those who are disadvantaged in the wake of a crisis (personal interview 2006). She elaborates the point as follows:

What I don’t want is that the victims of conflict, or the very under-privileged groups affected by an emergency are the only ones without education, because a sustainable future requires them to be able to participate in the society. So if 80% of the country were normal and 20% affected by conflict, and 80% has education which is steadily improving and 20% has no education or very, very bad education, then in the future those people will be very disadvantaged and it will generate future conflict. It is quite likely that the conflict happened because of divisions between regions or groups which were rich or poor anyway. In my opinion there is more priority to fund the education of emergency-affected populations than the others. It is difficult to do it. Therefore it will cost more. It is often in a country that is poor and they don't give it a priority because their political system probably doesn't prioritise those groups, or may not. [So] the international community should come in and should work on the situation until those people can be re-integrated into the national education system.

At another level, the notion of social justice and inclusiveness has profound implications for teaching and learning. For instance, diversifying pedagogies is indeed a matter of securing more equal learning opportunities and success for learners with different learning style preferences as discussed in Principle 2 above (see page 165). In an emergency affected context, Gonzalo Retamal points out that a purely cognitive curriculum plays an excluding role for those who are traumatized and emphasizes the importance of affective aspect of learning (personal interview 2006, 2007). He says:

If you do not solve the problems of anger of children who have been victims of wars or violence you are promoting violence among the excluded, not only excluding them economically but also excluding them from being. It is double exclusion. The issue has to be resolved first at the curriculum level, it is not sufficient to put it at the end of the curriculum... Psychosocial approaches... should be central [emphasis in bold italics is added by Retamal in his transcription] (personal interview 2006).

So conceived, his proposal of 'integral curriculum' which is balanced by incorporating
"more psychosocial approaches" is a matter of educational access.

From a social justice perspective, it is important to help people to understand the root causes of emergency and to participate in change processes. As discussed in Chapter Three, emergency education has been missing this critical element to a large extent. From a critical view that an emergency "hasn't simply just happened out of nowhere," understanding structural causes which made it happen becomes vital (John Barry, personal interview 2006). Critical thinking, personal and group reflection as well as communication (including listening) skills need to be developed among learners.

5.3.5. Principle 5: Interconnectedness

Helping learners to understand and realize profound interconnectedness at multiple levels.

The strong influence of the dominant neo-liberal form of globalization underpinned by the mechanistic and positivistic paradigm has been discussed in Chapter One (pages 15-19). A core characteristic of the paradigm is fragmentation, in contrast to the interconnectedness of the holistic and ecological paradigms.

In crisis-affected situations where pre-existing environmental and social structures and fabrics are broken and personal ontology is damaged, re-connecting fragmented parts and re-building relationships at multiple levels become vital (Bush and Saltarelli 2000; John Barry, personal interviews 2005, 2006; Klein 2007). Being sensitive to the local knowledge and process (Principle 1) and creating connectivity play an important role in enhancing resilience (Principle 3), as discussed above.

From a holistic perspective, Miller (2000) explains the wholeness at five different levels of interconnectedness. Key claims at each level are as follows:

- the person: the human being is considered as "a complex interrelated system of abilities, potentials, and creative being" (24) and the aim of education is to help nurture the intellectual, emotional/ affective, physical, social, aesthetic, and spiritual elements of the whole person;
- the community: community is "the group of people with whom one has frequent,
meaningful interactions on and an ongoing basis" (25), and a holistic view is concerned about the developing quality of human relationships within community, which are characterized as open, caring, democratic, participatory, and diverse;

- the society: a holistic view calls for critical examination of dominant modern scientific values which underpin economic and political systems perpetuating inequality, discrimination, violence (26);
- the planet: in order to solve planetary environmental issues, it is important to cultivate "a healed relationship between humanity and the larger context of evolving life of which humanity is only one part" (27);
- the cosmos: the cosmos or spirituality gives "an orientation to our existence that recognizes wholeness, relationship, context, meaning – including the ultimate source of meaning" and it "engenders our highest moral values - compassion, humility, altruism, peace, justice and love" (31).

Miller (ibid.) points out that it is important to be flexible in focusing on particular level(s) without losing sight of other levels. Applying his framework to current holistic-oriented interpretations of emergency education, it is apparent that they are primarily concerned with the levels of person and community (e.g. Miller and Affolter 2002; UNICEF/University of Pittsburgh 2004) and by and large miss the social level (critical examination of the dominant worldview), the planetary level (human/nature connectivity), and the cosmos level (spirituality). Applying it to the holistic renditions of sustainability-related education, some touched on all levels but others (e.g. Fien 2001; Wals and Heymann 2004) do not seem to include the level of cosmos (spirituality).

5.3.6. Principle 6: Anticipation

Learners should be given opportunities to clarify future aspirations and needs individually and collectively, and develop pro-activity and capacities for coping with difficulties, dilemmas and setbacks and for taking positive actions.

One of the insights emerging from the interface analysis is that a future perspective is not strongly represented in the field of emergency education. As argued earlier,
emergency education especially during the acute emergency, has been reactionary rather than proactive in preempting crises and taking a longer time perspective (page 156). Because of the multi-faceted nature of ongoing and future emergencies, more forward-looking thinking and action become salient.

Referring to 'anticipatory education' as a synonym of education for sustainability, Stephen Sterling and Arjen Wals have argued that education should play a proactive role rather than a reactive and remedial role in dealing with crises (personal interviews 2005, 2006). In the words of Sterling,

We need to exercise a consciousness now which is qualitatively different in as much as we need to be able to anticipate the future – which is quite difficult to do – and to be able to anticipate the consequences of our actions for the next fifty, or a hundred years plus (personal interview 2006).

In taking uncertainties and consequences of climate change (see pages 9-13) into consideration, developing adaptive capacities at both individual and collective levels also become critical; in other words, capacities for resilience as described under Principle 3.

In the discussion of the future, the notion of 'anticipatory democracy' coined by Toffler (1970) is helpful. His main thesis is that everyone needs to consider negative future scenarios and actions with a view to preempting them, as well as individual and collective positive future scenarios and actions with a view to realizing them. When the pace of change in society was slow, it was possible to adapt to emerging changes but because of the acceleration of change, he argues, we must “anticipate and design the future” (438). Reflecting on the fact that a future scenario is often determined by those who are powerful and support the status-quo, he argues for the critical importance of involving ordinary citizens in thinking about future questions, such as: “How are preferable futures to be defined? And by whom? Who is to set goals for the future?” (427) He also points out the importance of creating a system through which their aspirations can be expressed. As one such mechanism, Toffler (ibid.) suggests ‘social future assemblies’, where representatives from diverse groups of citizens including those who are normally marginalized voice their wishes for the futures and engage in
future-oriented dialogue.

Implications of futures perspectives for education have been articulated by futures educators, global educators, and sustainability educators, such as Hicks and Holden (1995), Hicks and Slaughter (1998), and Pike and Selby (1988; 1999a; 2000). They have commonly argued that a futures perspective is largely missing in current educational thought and practice, although one of the important goals for education is to prepare students for the future. Envisioning preferable futures (i.e. futures which we would like to see come about) and transforming intentions into actions are one of the critical pedagogical aspects of future-oriented education and become vital in the face of ‘creeping’ emergencies.

Furthermore, taking into fluid and uncertain futures into consideration, the following attributes become important for learners to develop: capacity to deal with paradox and uncertainty (Caine and Caine 1997); emotional coping skills to deal with overwhelming feelings (Macy 1983; Selby 2007b; O’ Sullivan 1999, 2002), and anxiety and depression (UNICEF UK 2008). The futures perspective could also play a critical role in enhancing personal resilience in the aftermath of crisis, since a vision for the future allows people to develop ways of coping with hardships (Edmund O’Sullivan personal interview 2007). Moreover, it becomes important to help learners take concrete action to make tangible changes, however small, in their immediate environment in order to sustain a sense of hope (Susan Nicolai, personal interview 2006, see page 103).

5.4. Implications of Six Learning Principles for Facets of Education

Further to the principles and rationales explained above, Table 9 below lays out the implications of each principle at more practical levels: policy, curriculum, pedagogy, non-formal/community education. The distinctions between those different levels are pragmatically, in the final analysis even arbitrarily.
Principle 1: Flexibility

As opposed to an externally imposed quick fix approach for instant measurable results, learning at a self-determined, flexible and gentle pace is particularly important in the long run for those who are affected by a crisis.

Policy

- Legitimize diverse speeds for learning, with particular emphasis on waiting for the learner’s readiness and permitting depth of reflection (e.g. secure time for experiential learning, discussion and reflection during learning; making the learning needs of the learner a principal determinant of the pace of learning)
- Focus on enhancing quality of learning and learning experience
- Involve local stakeholders in curriculum change and implementation process

Curriculum

- Include learning outcomes/goals for nurturing self-esteem, joy of learning, enhancing relationships, healing trauma of the learning community
- Build in some flexibility in timetable so that different speeds of learning could be accommodated
- Integrate local and indigenous knowledge
- Embed relaxation exercises in curriculum

Pedagogy

- Give sufficient time for personal and collaborative reflection and debriefing
- Teachers to be flexible and sensitive to different paces of learning among learners and the impacts of trauma
- Encourage multiple modes of knowing (e.g. the rational, emotional, embodied and intuitive)
- Create a supportive and safe learning environment

Non-formal/ Community

- Promote local stakeholder's involvement and contribution to planning and implementation of educational initiatives, giving voice to indigenous ways of learning, and cultivating a sense of enjoyment

Principle 2: Balance

In order to better meet diverse learning needs, multiple ways of knowing and expression should be incorporated into learning processes in a balanced way. Learners’ own unique experiences and cultural diversities should be seen as important assets in learning.

Policy

- Legitimize equal use of different learning styles
- Develop assessment and evaluation mechanisms to validate different learning styles
- Nurture comprehensive well-being of learners including the physical, mental, emotional and psychological through learning
Curriculum
- Develop learners’ cultural sensitivity and tolerance
- Leave some flexibility to adjust learning contents based on learners’ learning needs

Pedagogy
- Employ diverse teaching and learning approaches by putting more emphases on the use of arts, story telling, and role play (in order to balance preponderance of transmissive modes of teaching)
- Create an appropriate balance between cognitive, socio affective and somatic learning; balance between participatory methods and information inputs
- Ensure a dynamic balance between theory and practice

Non-formal/ Community
- Create links and synergies between formal learning and informal/community learning

Principle 3: Resilience

*Enhancing resilience both at individual and community levels is vital for long-term survival for both human beings and the environment.*

Policy
- Protect and enhance ecological and cultural diversities, and indigenous knowledge through educational practices
- Embed emergency preparedness, adaptation, mitigation, resilience in national and regional educational policies

Curriculum
- Understand the interconnectedness between ecological and cultural diversities
- Develop life skills (e.g. communication; cooperation; conflict management; emotional coping skills with stress, anxiety and uncertainty; risk avoidance; critical thinking)
- Nurture learners’ self-esteem
- Develop knowledge of self (i.e. critical awareness of own identify, perspectives, values and potentials)

Pedagogy
- Use diverse ways of knowing (e.g. narratives/ story telling, play, and future visioning)
- Balance different modes of learning (e.g. individual, peer and group learning, role play)

Non-formal/ Community
- Contribute to create a local community which respects diversities, has social support networks and communication, as well as possessing a sense of trust, caring and reciprocity
- Develop learners’ livelihood skills (e.g. skills for local economy, agriculture and arts/crafts)
Principle 4: Social Justice

Social justice needs to be pursued by making sure of inclusiveness especially for those who have become marginalized and vulnerable in the wake of a crisis as well as those who already marginalized are further excluded and discriminated against.

Policy

- Improve access to education especially for those who have been excluded from educational opportunities before, during and after a crisis (e.g. girls, the poor, ethnic minorities)
- Support diversifying pedagogies so that the quality of learning is open, enriched and enlivened for all

Curriculum

- Examine the root causes of emergencies/crises which learners have experienced
- Develop critical thinking, communication skills, and collective and individual problem-solving skills as well as pro social values and attitudes

Pedagogy

- Incorporate cooperative teaching and learning approaches
- Use personal and group reflections to deepen understanding of social justice aspects of the emergency
- Create an inclusive learning atmosphere where learners can feel a sense of belongings
- Give voice to the marginalized and severely crisis-affected
- Promote a cultural, religious and gender sensitive process of learning

Non-formal/ Community

- Make visible changes in the immediate environment, however small
- Make voices of those who are affected by a crisis heard in a policy making process

Principle 5: Interconnectedness

Helping learners to understand and realize profound interconnectedness at multiple levels.

Policy

- Legitimize whole person development including the intellectual, emotional/affective, physical, social, aesthetic, and spiritual

Curriculum

- Understand interconnectedness between learners themselves and the wider world, as well as human beings and nature
- Develop pro-social moral values such as compassion, tolerance, peace, justice, and equity
Pedagogy

- Use various modalities of learning (e.g. metaphor, story, arts)
- Use peer, cooperative and group learning so that learners can experience that their own learning depends upon others
- Develop systemic thinking and foster relational modes of knowing

Non-formal/Community

- Build formal and informal learning links by raising awareness of causes and implications of a crisis among parents and members of communities

Principle 6: Anticipation

Learners should be given opportunities to clarify future aspirations, needs and visions individually and collectively, and develop pro-active capacities for coping with difficulties, dilemmas and setbacks and for taking positive actions.

Policy

- Embed emergency adaptation, prevention, preparedness, mitigation, and resilience into all educational policies

Curriculum

- Understand the dynamic relationship between past, present and future as well as the relationship between the local and global
- Develop a vision for alternative and positive futures
- Understand long-term consequences of present actions and potential future disasters and risks
- Develop learner’s capacity (skills, knowledge and attitudes) for taking concrete actions towards envisioned futures, reducing risks, and to dealing with difficult emotions

Pedagogy

- Build a scenario (active envisioning) for preferred futures
- Translate learner’s visions of preferred futures into action plans, and implement the actions

Non-formal/Community

- Make a visible change in the immediate environment, however small (including through whole-community implementation of action plans)
- Communicate potential future risks and take actions with members at the community level and beyond

Table 9. Six holistic and sustainable learning principles: Implications

5.5. Conclusion

The interface analysis of the fields of emergency education and education for sustainability has illuminated three key issues. First, there exists a clear overlap
between emergency education and education for sustainability in that emergencies are symptoms of the wider issues arising from socio, economic, political and environmental vulnerabilities, themselves manifestation of unsustainability. In order to address emergencies at the deeper level, the moral exclusion seated in the unconscious mind of those who are materially privileged needs to be challenged. Second, it is important to examine the assumptions behind the time scale and speed of educational change and learning processes. Especially for the field of emergency education, not only considering longer-time implications of any phase of an educational initiative, but also preventing and mitigating potential emergencies are as important as responding to them. In terms of the speed of educational change, slow work – in its literal and metaphorical use – seems to be paradoxically critical in the contexts where urgency is normally emphasized. Third, for both the fields of emergency education and education for sustainability, moving away from the vicious cycle of violence by deeply reflecting on the purposes of education remains a challenge.

The proposed six principles – flexibility, balance, resilience, social justice, interconnectedness, anticipation – are attempts to address the above mentioned issues. These mutually embedded and visionary principles are underpinned by cross-cutting themes of diversity, active participation, autonomous and collective decision making, reflective meaning making processes, multiple ways of knowing, and cultural and contextual sensitivity.

The following two overlapping questions raised by the phase one participants will be kept as a frame of reference in exploring these principles in the chapters to follow. How do these principles help guide the process of prioritization when they put extraordinary demands on teachers, students and administrators? (Peter Buckland, personal communication 2008) How can these principles become useful in situations of resource constraint? (Margaret Sinclair, personal communication 2008)
CHAPTER SIX
A Cosy 'Add-on' or of Transformative Potential?: A Study of Two Linked Cases

6.1. Introduction

This chapter intends to explore the last research question laid out in Chapter One (see page 31) what insights arise from applying holistic and sustainable principles to concrete and projected emergency education situations fomented by climate change and other causes? The interlinked Plan International's Children and Young People at the Centre of Disaster Risk Reduction programme and its new multi-agency initiative called Children in a Changing Climate (CCC) programme are to be here examined as two linked cases. Through a combination of purposive and convenience sampling methods (see pages 55-56), the former was chosen because of its intention to address root causes of emergencies with a view to identifying long-term solutions, and the latter for its anticipatory focus on impacts of climate change, which is a current gap in both the fields of emergency education and sustainability-related education. As the section below details, Plan as an organization has been developing a comprehensive conceptualization and approach to emergencies, which underpin the two initiatives. The analysis and the discussion in this chapter are informed by qualitative data emerging from interactions with eight research participants as well as a review of relevant organizational and programmatic documentation.

This chapter first introduces Plan International by describing its key organizational structures, programme approaches in general and approaches to emergencies and disasters in particular. Second, it outlines the Children and Young People at the Centre of Disaster Risk Reduction programme followed by the Children in a Changing Climate programme. Third, educational practitioners' insights and perceptions regarding opportunities and challenges in applying the proposed holistic and sustainable principles within the linked cases are explored.
6.2. Plan International

Established in 1937, Plan is one of the largest and oldest international child-centred, community development organizations. It is primarily concerned with causes of child poverty. Plan implements projects in the areas of health, education, livelihood, habitat and relationship building in 49 developing countries around the world. It has 16 national offices based in developed countries, four regional offices (in Thailand, Senegal, South Africa and Panama), and its international headquarter in the U.K. Plan is a completely independent organization supported by more than one million individuals through child sponsorship as well as by various donors of grants\(^69\) (Plan 2007a; 2008a).

The organizational vision is "a world in which all children realise their full potential in societies that respect people's rights and dignities" (Plan 2008a). According to the organization's mission statement, Plan strives "to achieve lasting improvements in the quality of life of deprived children in developing countries, through a process that unites people across cultures and adds meaning and value to their lives" by:

- enabling deprived children, their families and their communities to meet their basic needs and to increase their ability to participate in and benefit from their societies
- building relationships to increase understanding and unity among peoples of different cultures and countries
- promoting the rights and interests of the world's children (Plan 2008a).

As the above-described vision and mission statements show, Plan is committed to promoting participation, local ownership, cultural respect, solidarity, and fulfillment of human rights.

Through a 'multi-level approach', Plan simultaneously works at grassroots/community, national, and international levels. Plan has had a particular strength in grassroots level working partnerships with children, their families and community members for a long period of time. It consciously builds trust and solidarity with local communities over time (Plan 2007a).

Plan has recently shifted its organizational approach from a needs based approach

\(^69\) In 2007, 72 percent of income (US 428 million dollars) came from individual donation through child sponsorship. Other funding sources were through grants from bilateral donors and private sectors (Plan 2007a, 2007b).
to a rights based approach. As a conceptual and operational programme framework, it adopted a Child Centred Community Development (CCCD) approach in 2003. This rights based approach is underpinned by the 1989 UN Convention on the Rights of the Child and their initiatives are increasingly framed according to the Convention's four pillars of rights: survival, development, protection and participation. Plan's CCCD approach promotes active participation of children as well as their families and community members in identifying and solving problems by themselves. Plan (2007b) states that "Listening to, and acting on, what children have to say about their needs and concerns are key to its success" (6). It is important to note that the CCCD approach intends to address not only symptoms of problems but also their structural causes, and to reinforce Plan's commitment to building trust, partnerships and networks at community, national and international levels (Plan 2007a, 2007b).

In terms of primary school education, Plan has a framework called the School Improvement Program based on their accumulated experience of basic education in developing countries. The following eight core elements are suggested:

- ensuring teachers are competent and motivated
- promoting active learning methods supported by appropriate teaching and learning aids
- promoting the active participation of children and parents in school governance
- ensuring a safe, sound and effective learning environment
- establishing a relevant curriculum
- ensuring that children are properly prepared for school (which includes ensuring good health and nutrition, access to early childhood care and development [ECCD] and the support of parents)
- ensuring empowered and supportive school leaders
- advocating for supportive supervision (from the government) and an acceptable level of government budget allocation (Plan 2004).

This systematic approach involves the whole school and addresses school governance issues. This approach has already been implemented in more than 20 countries (ibid.).

Plan is also active in development education which aims at helping raise awareness and understanding of various development issues among children and young people in

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60 Ansell (2005) explains that a needs based approach to development is to meet the welfare needs of poor people, women and children and they were treated as passive beneficiaries. NGOs began to take a rights based approach to development during the last decade, emphasizing participation. The UN Convention on the Rights of the Child underpins such an approach.
developed countries and at supporting their actions in developed and developing
countries. One of the recent projects, 'Make the Link, be the Change,' addresses the
issue of climate change. It links 3000 students from 12 countries\textsuperscript{61} to discuss the issue
of climate change and its impact as well as mitigation and adaptation strategies using
shared lesson plans, an interactive website and conference facilities. Artifacts created
through the project will be displayed at climate change international conferences and

The majority of the countries in which Plan works are the world's poorest countries,
which have been affected by the increased number of emergency and disaster
situations in recent decades. Although Plan is not a relief organization, it considers that
"humanitarian response is a key component of Plan's work" (Plan 2007a: 56).

According to the draft Plan's Programme Framework 2009-2013: Promoting Child
Rights to End Child Poverty,\textsuperscript{62}...

...conflicts and environmental disasters, some caused by climate change, are
increasingly resulting in humanitarian emergencies, with children and young
people often finding themselves the most vulnerable in these situations. In the
worst forms of disaster, States may collapse and actors such as International
NGOs may temporarily need to take responsibility for basic service delivery.
Building resilience to mitigate the impact of crises needs to be part of
development programming, and responses should be shaped by these same
principles of rights and accountability. The role of children and young people can
often be very effectively harnessed to increase this resilience (Plan n.d.: 5-6).

Plan (2008b) clarifies its work in relation to emergencies as follows:

Plan works to ensure the right of children to quality education both during non-
emergency situations and \textit{in the context of emergencies - during emergencies as
well as after emergencies}. It recognizes, promotes and supports the growing role
of children to be actively involved in preparing for and preventing emergencies.
Although this usually take place within the school environment and it often closely
connected to lessons within the school, preparedness and prevention activities
that are initiatives within schools often extend beyond the school environment to
out-of-school peers and into communities [italics in original] (4).

In order to mainstream the work related to emergencies, Plan has developed the \textit{Policy
on Disaster Response} (2005b) and \textit{Strategy to Strengthen Plan's Disaster
Management} (2007c). According to the latter, one of the objectives is to "integrate

\textsuperscript{61} They include U.K. and 11 developing countries (Plan 2008a).

\textsuperscript{62} This is a draft internal document, which has not been approved by the Board at the time of writing.
disaster risk reduction practice into all Plan programs" and it states that:

Disaster risk reduction acts as the link between humanitarian disaster response and development. A coherent approach to chronic and predictable crises can decrease vulnerability and empower communities to be resilient to the impact of natural hazards, protect development gains and prevent future development losses, and promote consistent and strategic funding (6).

In the processes of emergency response and disaster preparedness and risk reduction, Plan recognizes that children are not only beneficiaries/ passive victims but also survivors/ valuable actors. One of the key lessons learned in response to the 2004 Asian Tsunami is the importance of "an improvement in the overall quality of emergency response by broadening the consensus on children’s capacity to be valuable actors in emergency relief, thus giving them better control over their lives at times of crises" (Plan 2005a: 7).

6.3. Children and Young People at the Centre of Disaster Risk Reduction Programme

Plan’s Children and Young People at the Centre of Disaster Risk Reduction programme is funded by the UK Department of International Development (DFID) for five years from January 2006 to December 2010. Nick Hall, Project Manager, explains that a few years ago DFID began to be concerned about the increasing number and scale of disaster impacts on development efforts, and they decided to spend 10% of what they spend on disaster responses and on disaster risk reductions at community level. Subsequently, they gave six NGOs (i.e. ActionAid, Christian Aid, Plan UK, Practical Action, Tearfund, the British Red Cross/ International Federation of Red Cross and Red Crescent Societies) a separate grant to conduct their own disaster risk reduction initiative, requesting these NGOs to work together (personal interview 2008).

A goal of the DFID-funded Plan’s disaster risk reduction project is to "reduce immediate and long-term impact of disasters on communities, particularly children and young people" and the purpose of the project is to “strengthen community’s resilience to disasters through the development of robust and replicable practices for managing child-centered community-based disaster risk reduction (DRR) and contributing to
positive changes in international policy and practice" (Plan UK 2005:1). Two outputs of the programme are given below:

Output 1: Increased capacity of communities and partners to manage child-centred DRR processes, integrating children and young people's participation into planning, implementation and evaluation

Output 2: Increased recognition among international and national policymakers and other actors (humanitarian NGOs, academia, media etc) of the importance of children and young people's participation in risk reduction and management of disasters (ibid.).

Nick Hall explains that traditional disaster management is a 'linear' but circular concept as depicted in Figure 7 below:

![Figure 7. Traditional disaster management cycle](image)

Nick Hall explains that this conventional model focuses on the disaster/hazard or physical cause of the event (e.g. earthquake, drought, famine). In contrast, from a disaster risk reduction perspective, a disaster is considered to take place when the hazard hits a vulnerable community. Therefore, the emphasis shifts from hazard to vulnerability and, importantly, disaster risk reduction challenges the status quo by addressing the underlying geopolitical circumstances, an economic model, and the issues of governance. So "it becomes intensely political ultimately...", whereas focusing on emergency response is apolitical, he states (personal interview 2008).

This DFID funded Plan's disaster risk reduction programme initially started in three countries (i.e. the Philippines, El Salvador, Sierra Leone), followed by a further four countries (i.e. Bangladesh, Cambodia, Dominican Republic, Indonesia). The programme intends to include at least 10 countries in total during the funding period.
Plan has been developing a project monitoring framework based on a document called *Characteristics of a Disaster-resilient Community: A Guidance Note* (Twigg 2007). This document corresponds to the five thematic areas identified in the *Hyogo Framework* (see pages 84-85) (i.e. governance; risk assessment; knowledge and education; risk management and vulnerability reduction; disaster preparedness and response).

Within a broad programme framework, each country has developed and implemented various initiatives according to local contexts. Based on the project report (Hall 2007a, 2007b; Hall and Hawrylyshyn 2008a, 2008b; Plan UK 2008), some examples of implemented activities at the community and country levels are as follows:

- Capacity building and training (for children, child leaders, parents, school teachers and principals, local municipal authorities, mayors, Plan staff, other NGOs staff) with topics for training including: disaster/emergency preparedness, hazard and risk assessment, a child rights-based approach, water and sanitation, climate change, child-led disaster risk reduction micro projects, safe school construction;
- Working within school systems and Ministries of Education (MOE) (e.g. developing lesson guides/ teacher training manuals for school teachers on global environmental issues, safe school; giving workshops for MOE officers; having embedded disaster risk reduction elements in school curricula in El Salvador and Indonesia);
- Working with academics (e.g. collaborative research projects on children's role in risk communication);
- Advocacy work (e.g. the Safe School Campaign in the Philippines; a children's awareness raising radio programme on climate change adaptation and food security in Sierra Leone).
The child-led disaster risk reduction micro projects are unique aspect of this programme. They combine risk mapping exercises with a child-led project to reduce disaster risks in a local community by providing children with $500 without any conditions, "except for they spend 5% of the money telling their community what they spent the money on," which "requires them to be transparent and open" (Nick Hall, personal interview 2008). He goes on to say that:

... the accountability is downwards, horizontal to their community, not to us. So the primary purpose of those small grants is to legitimize their voices, to raise their self-confidence and to encourage their community, their parents, their schools, their local government to believe that children can be responsible young citizens.... They do small projects which might actually reduce the risk of a disaster in the future as well. But the primary purpose is to legitimize their voice and to raise their confidence and to make people trust them more. That is the first step (personal interview 2008).

Based on a positive view of children's potentials as change agents, he emphasizes the importance of building children's self-confidence.

6.4. The Children in a Changing Climate Programme

A multi-agency programme called the Children in a Changing Climate Programme (CCC) has its origin in the above-described Plan's disaster risk reduction initiative. CCC aims at:

Securing children's influence in preventing and adapting to climate change at every level – from their families and communities to the United Nations climate change negotiations (CCC n.d.).

Plan's programme partners at the time of writing include:

- ActionAid, U.K. (http://www.actionaid.org.uk/)

An NGO which has worked collaboratively with marginalized communities around the world for more than 30 years, it addresses poverty, underlying injustice and inequality.

Examples of the types of implemented projects include community clearing and garbage disposal, drainage channel, road safety in El Salvador; and safe water, school safety, tree planting, vegetable and cassava production in Sierra Leone.

This initiative is funded by part of the DFID grant allocated to the Children and Young People at the Centre of Disaster Risk Reduction and the grant from UK Economic & Social Research Council (ESRC).
• Footprintfriends, U.K. (http://www.footprintfriends.com/)

Launched in 2007, it aims at raising awareness about climate change and global environmental issues among 11-18 years old using its social networking site.

• Institute for Development Studies (IDS) at the University of Sussex, U.K. (http://www.ids.ac.uk/).

Established in 1966, IDS attracts worldwide recognition for its high quality teaching, innovative research and communication on a range of aspects of international development. Before the CCC partnership, a small number of researchers from the Climate Change and Disaster Group at IDS were involved in the first phase of the disaster-related research projects with Plan. The projects were investigating children's role in disaster risk reduction working closely with Plan's Country officers and local academics in El Salvador and the Philippines (Tom Mitchell, personal interview 2008).

• National Children's Bureau, U.K. (http://www.ncb.org.uk/Page.asp)

Funded in 1963, it is a charitable organization functioning as an umbrella body for organizations working with children and young people in England and Northern Ireland. It helps to promote children's and young people's voices, participation and well-being in all aspects of their lives.

• Risk Frontier at Macquarie University, Australia (http://www.riskfrontiers.com/)

This not-for-profit research organization has international expertise in quantitative natural hazard risk assessment and risk management. Over a decade its research activities have particularly contributed to insurance companies which are under increasing pressure to minimize risks and increase returns.

• Save the Children UK (http://www.savethechildren.net/alliance/index.html).

Save the Children Alliance works in more than 100 countries and it is the world's largest independent children's rights organization celebrating its 90th anniversary in 2009. It addresses issues of education, health, hunger, rights
UNICEF UK (http://www.unicef.org.uk/)

UNICEF UK is one of 36 UNICEF National Committees based in developed countries. Key activities include fund raising for UNICEF's international initiatives, education and advocacy (influencing government policies on behalf of children's rights).

Nick Hall explains that climate change "was mentioned in the [original DFID funded programme] proposal as one of the contextual variables" but he reflects that the issues of climate change became ever more salient as the project unfolded. During the field research for the Children and Young People at the Centre of Disaster Reduction Programme in early 2007 in the Philippines right after a devastating typhoon, researchers were struck by local children's concerns about climate change. When asked the cause of the disaster, small children suddenly associated the heavy typhoon with climate change. He reflects the incident:

...when I got to hear children saying it is climate change that is important, that is very valuable for me from a tactical point of view...When [the rest of the organization] say, 'Why are you interested in climate change? We are not climate change scientists. We do not know anything about climate change,' I would say 'I am doing it because children have told us that we have to.' So I use [this] as part of the strategy to shift the organization along towards a rights based approach (personal interview 2008).

In addition to acting upon the best interests of the children, other factors - the increasing number and intensity of weather-related natural disasters, emerging research findings on children's capacity to be good risk communicators and their good understanding of long-term environmental issues, 65 and the increasing international policy-level concerns around climate change – were the motivations to link the disaster risk reduction initiative and climate change more closely (Nick Hall, personal interview 2008).

Subsequently, in the middle of 2007, Plan and IDS agreed to jointly initiate the CCC programme (Nick Hall, personal interview 2008). Soon after this agreement, greatly

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65 For instance, see Mitchell et al. (2008).
helped by the National Children's Bureau (NCB), the programme helped four children—two from the UK, one from Sweden, one from Indonesia—to participate in the United Nations Framework Convention on Climate Change (UNFCCC) 13th Conference of the Parties (COP 13) in Bali in December 2007. After finalizing CCC’s strategy in February 2008, the programme was formally launched in Bonn in June 2008. Although the CCC initiative is “in its infancy” (Hamish Mackenzie, personal interview 2008) and the programme “still remains a loose collaboration” of partner organizations (Tom Mitchell, personal interview 2008) at the time of writing, CCC keeps growing organically, developing its operational mechanism and facilitating various activities under four themes—research, action, learning, and policy—which will be elaborated below.

Three broad considerations inform the CCC initiative. First, it addresses the urgent challenges of climate change which children around the world are facing. According to one of the programme publications:

For children all over the world, climate change means the future is far from predictable....it is children in least developed countries that are most at risk. They are far more likely to be killed or be severely affected by disasters triggered by increasingly unpredictable and severe weather. They are in more danger of being drawn into conflict over scarce national and natural resources. For millions of today's children climate change signals crisis. For them and the next generations, climate change is a slow burning fuse priming tomorrow's disasters (CCC n.d.:2).

Second, CCC regards children as active agents of change as well as rights-holders, as articulated in the 1989 UN Convention on the Rights of the Child. Third, the CCC programme is collaboratively run by all the partner organizations and no single organization dominates the initiative (CCC n.d.).

The CCC programme consists of four mutually linked strands of activities: research, action, learning, and policy. One or two partner organizations are identified as a lead per strand. The research strand led by IDS aims to conduct “innovative action-research...
that provides the evidence base to enable practitioners, policy makers and children themselves to take action to adapt in a changing climate" (CCC 2008). Ongoing research themes include: voice and participation; perception and knowledge; risk communication; futures; rights and governance; gender (ibid.).

The action strand co-led by NCB and Save the Children UK aims at supporting "children to tell their stories and share experiences, and to gain further knowledge, and skills to adapt to the challenges ahead" (ibid.). This strand helps children to develop global awareness, to take positive initiatives, however small, to address matters which concern them most regarding climate change and sustainable development (ibid.). Jo Butcher, Assistant Director at NCB, explains that the CCC action aims to get "a global dialogue happening between children and young people as well as those that work with and support them" and also facilitates the sharing of examples of good local practices "to encourage other people to do similar things" (personal interview 2008).

The CCC’s learning strand co-led by Plan and ActionAid intends to help children understand global aspects of climate change. Its current focus is to collate and widely disseminate training and learning materials about climate change. One of the unique aspects of the learning initiative includes the use of children’s testimonies on climate change from all over the world, and especially from those who have already been affected by the impacts of climate change (CCC 2008). CCC encourages the use of various forums (e.g. children/youth clubs, radio/arts projects, peer to peer learning, north/south school linking programmes) and creative medium (e.g. arts, photography, website, video) for learning (CCC n.d.).

The CCC policy strand led by Plan aims at supporting children’s active participation in climate change policy negotiations at local, national and international levels. Including children’s voices in the agreement for the UNFCCC COP15 in Copenhagen in December 2009 is one of the key milestones envisaged by CCC. Children’s participation in discussion of national and local plans and actions for climate change are also within the scope of the project (CCC 2008).

Because of present operational constrained, each partner organization tries to
maximize synergies between what each partner has been doing and what CCC intends to do, feeding what each does into CCC activities as much as possible.

6.5. Insights on the Six Holistic and Sustainable Learning Principles

It is important to underline that the purpose of the examination of the proposed principles is not for evaluation of two linked cases. Rather it is to explore opportunities and challenges in applying these principles to them. The examination is based on qualitative data from eight case study participants, published and unpublished/internal programme related documents, and relevant programme websites.

During the personal interviews, case study participants were asked to reflect on the holistic and sustainable learning principles in general, and on their implications for the Children and Young People at the Centre of Disaster Risk Reduction programme and/or the Children in the Changing Climate programme in particular. Participants from Plan International consider the latter programme as an extension of the former. In the sections below, the emerging insights are discussed principle by principle, followed by the emerging issues.

6.5.1. Flexibility

One of the key ideas expressed in the principle on flexibility - not imposing an externally generated quick fix approach - is very much in line with Plan’s core commitment to work collaboratively with stakeholders for a long period of time with cultural sensitivity and local contextual understandings. And child rights based CCC partner organizations have similar characteristics. For instance, according to Nick Hall, reflecting on the Children and Young People at the Centre of Disaster Risk Reduction programme, it is important to consider “different contexts, different cultures, different hazard scenarios, different vulnerabilities” and “to design the project to accommodate those variables.... [but] each one of them has to link together. So you have to be flexible.” He also holds that a child friendly way of working naturally dovetails with a flexible way of working (personal interview 2008).
Avianto Amri, Disaster Management Specialist in Plan International Indonesia, acknowledges the importance of accommodating different paces of learning among teachers and students. Reflecting on one recent emergency situation he states:

Sometimes it is challenging for us to understand the pace of learning. That is why children have to be consulted and the teachers also have to be consulted.... They are both being affected by the emergency.... [Consultation] has to be done regularly, because people's coping capacities are different ...and you also have to be aware and identify which students are progressing better than others and worse than others (personal interview 2008).

Clearly, frequent two-way communications and meeting the emerging needs of teachers and learners are indispensable in incorporating flexible learning paces.

In terms of the CCC initiative, core ideas included in the principle on flexibility – self-determination, local ownership and context sensitivity – are considered to resonate very well with those in climate change adaptation. The common argument in climate change adaptation is that since the impacts of climate change will manifest themselves in a particular manner within different localities, they are best dealt with at a local level (UNDP 2007). The CCC partner organizations commonly advocate locally appropriate and initiated climate change adaptation (see for instance, CCC n.d.; Save the Children 2007b; UNICEF UK 2008). In a similar token, in the words of Jo Butcher at NCB,

When supporting communities to come up with climate change adaptation strategies or think about action that they are going to undertake, it has to be an organic process where they are supported to learn and take control from within their community as opposed to someones else telling them what to do. This is really important (personal interview 2008).

She holds that learning “at the pace of the individuals or the communities engaged” is critical in the organic and autonomous process of climate change adaptation.

Referring to the principle of flexibility as “an entirely sensible approach,” Hamish Mackenzie, School Development and Marketing Officer in Plan international, is convinced that “a big hand out to fix” is hugely problematic and “not sustainable.” He emphasizes that, instantaneous life-saving efforts having been done, it is important to take a flexible and long-term approach using locally available materials and initiating projects by local people themselves. In the countries such as the Philippines and Indonesia which are frequently hit by landslides and floods, he states, “the work you do
should be related to those environmental shocks and help the community develop coping strategies and mechanisms to those environmental shocks. In this sense, local ownership is a key element of flexibility (personal interview 2008).

He also touches upon the issue in communicating the 'global' language of climate change:

... climate change is not a term.... [For local people] it does not really matter what the global process [on climate change] is about ....[What matters most for them is] what is going to happen at a local level; how they can reduce that impact; how they can increase their own sustainability and their own resilience to shocks.... So you go down to programmes [in the field] and you talk to them about climate change and they look at you quite blankly. As they should do really, it is not their problem. They have to respond to the environmental fallout, challenges...(Hamish Mackenzie, personal interview 2008).

His point on making language and concepts meaningful and relevant to a particular local context and of integrating local knowledge in the climate change adaptation process is a critical aspect of flexibility. As discussed earlier (page 164) cultural and contextual sensitivity is the matter of flexibility. A meaning making process through two-way communication helps to validate local knowledge in the climate adaptation process:

[to be effective, knowledge must be presented in a way that relates to local conditions and customs ... Over-reliance on technical experts and one-way communication is ineffective and marginalizes women and other groups... (UN/ISDR 2004: 180).

6.5.2. Balance

By and large, case study participants have expressed the view that ideas captured under the principle of balance (e.g. addressing diverse learning needs, using multiple ways of knowing and expression in a balanced way, incorporating learners' own unique experiences and cultural diversities in learning) are quite relevant to the two linked initiatives. Such a reaction is not surprising in that these elements are in line with the rights based approach which both initiatives are predicated upon. Favouring the principle of balance, Nick Hall states that:

if you are asking children to explain their understanding, you cannot expect them to explain it in your language...you have to create the environment and a new medium for them to express that (personal interview 2008).
Use of radio, arts, poetry, theatre, photography, video, and websites are some of such examples already employed by these initiatives.

In order to support children’s self-expression in an emergency affected situation, Tom Mitchell highlights the importance of small group learning. He says:

...at times in disasters it might be valuable to actually separate children into different sub groups, boys and girls or children with different socio economic [background]. Treating them as a block and being educated in the same room actually might lead to an increased feeling of unease...because there can be a lot of tensions following a disaster. Political groupings. Having access to relief more than other. And it might be a period where you need to bring very small groups of children together. Teaching small groups. And not forcing them to talk about their feelings in wider groupings ...

He further explains the positive effects of the use of small groups:

One thing we found in the Philippines is that children, for example, felt quite uneasy talking about their relationship with their parents at certain times. But if you tease that out and you break it down a little bit, talk about how they talk with their mothers or how they talk with their fathers, that you understood there was actually a feeling of unease within households and abuse gets internalised. The smaller the group that you get, sometimes it is easier to share those feelings. But certainly not in a big group. So I think probably it is just about encouraging teachers and the curriculum in post-disaster situations to be very flexible and allow for experimenting, rather than saying this is quite a step wise process (personal interview 2008).

When emergency affected learning spaces often become chaotic and crowded with insufficient number of teachers, changing the dynamics of the learning environment by mixing individual, peer, a small group and a big group/whole class learning would be one of the critical strategies to enhance learning quality. Regular consultations with learners, as Avianto Amri has emphasized with regard to the principle of flexibility above, become vital to decide upon the appropriate form of learning environment.

6.5.3. Resilience

Resilience is one of the key features in disaster risk reduction and climate change adaptation (e.g. Twigg 2007; UN/ISDR 2004; UNDP 2007) and most of the case study participants have expressed their familiarity with the concept and its significance within their initiatives.

Jo Butcher highlights the importance of developing individual resilience in relation to climate change and learning as follows:
We know from the work we do with children and young people here in the Well-being Department that building their resilience helps them to cope with all sorts of challenges that life will bring including key transitions in their lives. I think resilient individuals in communities are going to be much more able to cope with and think about what they are going to do in relation to climate change (personal interview 2008).

NCB’s programmes recognize that whole person development plays an important role in enhancing individual resilience. Developing holistic understandings of a range of issues and linking these outer issues to the interiority of children/young people themselves are approaches employed in the learning process. Such an approach is similar to the inner/outer journey suggested in Pike and Selby’s four dimensional model of global education (1988) (see page 131). What ‘resilient individuals’ mean would significantly differ depending on the unfolding scenarios of climate change. Examining both programme documents, this question does not seem to be explored in detail. This point will be further considered below.

Reflecting on one of the policy suggestions under this principle (i.e. embed emergency preparedness, adaptation, mitigation, resilience in national and regional educational policies), Tom Mitchell suggests “the language should really be around embedding those things in ideas of development and ideas of well-being and of livelihoods....” He goes on to explain that:

So it doesn’t actually make the way you are teaching around coping specific to any one disaster or around the science behind any one disaster, but you are simply saying, well the way we build resilience to disasters is by improving well-being by diversifying the quality and quantity of livelihood assets, and that education itself is key insurance mechanism for reducing disaster risk. And that we should be moving beyond emergency preparedness to the longer term view of development. And around putting safeguards in place, that means that our communities are better able to cope with lots of different shocks and stresses. Not just disaster in a natural term [but also in a socio/economic term] (personal interview 2008).

As Tom Mitchell highlights, when learning and teaching are targeted around one particular emergency immediately experienced, the approach is ‘reactive’ and contributes to the ‘proliferation of educations’ underpinned by the fragmentationalist worldview (Greig et al. 1987). Responding to issues separately, a fragmented approach, undermines the interconnectedness of structural causes and of collective actions needed. Teaching around coping specific to one disaster is based on the deterministic
and linear view of disaster management as explained earlier (see Figure 7, page 187).

What is missing in this principle, according to Avianto Amri, is the element of active participation by children, and all school community members, including parents, in the planning, implementation and monitoring of any initiative. Referring to the school-based initiatives in Indonesia, he identifies some of the useful tactics, such as: regular consultations with stakeholders using the existing spaces and forums at school; helping them to come up with their own indicators in a participatory way and taking concrete actions to create a safe school; supporting peer-to-peer learning; and actively using extra-curricular spaces. He stresses that "it is a process of learning and it takes time to do this... What we are trying to do is to build culture of safety, that is why [actions] ideally have to come from them" (personal interview 2008). Two-way communications and local ownerships discussed under the principle on flexibility are important themes here as well.

6.5.4. Social Justice

The notion of inclusiveness and non-discrimination, which is stressed in the principle of social justice is another key component in a rights based approach. Hence, the core ideas expressed under this principle (i.e. making sure of inclusiveness especially for those who have become marginalized and vulnerable in the wake of a crisis as well as those who already marginalized are further excluded and discriminated against) resonate well with two linked cases. From a social and global justice point of view, case study participants are commonly concerned about the disproportionate impact of climate change on children who did least to cause the problem.

Some issues in response to this principle have emerged during the interviews. First, Hamish Mackenzie points out practical difficulties in including those who have been marginalized and made vulnerable in the learning process. They are "the hardest people to get to" and they are often invisible so there should be special efforts to ensure their participation. He suggests creating learning opportunities in the community (i.e. outside of the school environment) and long-term involvement as useful strategies.
For the latter, he states, "By having longevity it is possible to understand how and why children are being marginalized and tailor programmes that benefit them" (personal communication 2008). Small group learning mentioned under the principle on flexibility is also helpful to increase the involvement of those who might feel less confident.

According to Avianto Amri, it is critical to create spaces where those who are affected by emergencies are enabled to speak out. One example is Child Friendly Spaces (see pages 104-105 and 210-216), which is a safe and open space where children can play and express their concerns; this has proven to be useful in the aftermath of an emergency. In addition, importantly, this space was also used to embed other Plan's programmes, such as hygiene, education, disaster preparedness (personal interview 2008).

Second, Megh Rai, Emergency Programme Manager in Plan International Timor Leste, points out this principle is not strongly enough articulating the special needs of children traumatized and disabled by conflict. She points out that "the importance of linkage between conflict and climate change is still under-recognized," and goes on to say that:

Most of the countries which will be made vulnerable [by climate change] have been already affected by conflicts, so the impacts of conflicts are very important to take into consideration in any disaster response initiatives. For example, ex-combatant children and orphans need special support, since they do not have social support structures from families and communities, while other children might have those. Educational initiatives to respond to climate change should strongly address the impacts of conflicts on children - child soldiers, disabled children, orphan children (personal interview 2008).

She is concerned that those who are affected by conflicts may remain "invisible." The dynamic relationship between conflict and climate change has been discussed by Smith and Vivekananda (2007) (see page 12). Discussion of the implications of conflicts for the two linked case seems currently to be extremely limited.

Third, the issue of power becomes salient in examination of the principle of social justice. One aspect is addressing power issues between teachers and students.

According to Francis Sathya, Senior Policy Advisor in Plan International, what is

67 Francis Sathya’s views included in this thesis are personal and do not necessarily
called for is:

...a kind of self reflection on the part of the teacher and an awareness about the power that the teacher has and how the teacher uses the power within the classroom and outside the classroom. Is he/she using the power to undermine children and their creativity? Or is he/she empowering children to learn more, to be open minded and to be critical? (personal interview 2008)

Regarding social justice, Tom Mitchell raises critical questions: who sets the rules?; who is the gatekeeper?; how can the tension between group justice and individual justice be resolved?; what would the cultural implications of social justice be? (individual interview 2008). In a similar vein, Francis Sathya asks, "Who shall include who?" and "Into what system are the marginalized people included?" He points out that blind inclusion within the dominant development model is highly problematic in that it is a cause of the problem in the first place rather than a solution. His critical view on development in relation to the suggested principles will be further elaborated in the section below.

6.5.5. Interconnectedness

The principle of interconnectedness is primarily concerned about reconnecting fragmented parts and enhancing relationships at multiple levels. As explained earlier, the two linked initiatives are working at and across the community, national and international levels. Various pedagogical approaches suggested under this principle (i.e. using the various modalities of learning and peer learning) have already been used in both initiatives. One caution expressed concerns the inclusion of pro-social humanistic values in the curriculum, because of values such as peace, justice, equity are not universal and mean different things in different cultures (Hamish Mackenzie, personal interview 2008). What is interesting to point out is that an addressing of value and attitudinal dimensions is almost absent in these programme documents as well as in the testimonies from case study participants, although skills, knowledge, information have been mentioned quite frequently.

In examining the initiatives against Miller's five levels of interconnectedness (see
pages 173-174) it becomes apparent that some of the levels are absent, or not sufficiently articulated, in these programmes. For instance, as against the strong emphasis on the community level by enhancing human relationships, the whole person development component at the personal level is less prominent. Although this element resonates well with NCB’s individual well-being concern as expressed by Jo Butchers, Plan’s disaster risk reduction and CCC documents in general do not explicitly articulate a holistic personal development element to any great extent. In fact, Tom Mitchell comments that the interconnectedness at the individual level is so far less prominent in CCC, compared to its emphasis on solidarity building at community and cross-country levels (personal interview 2008). Considering CRC’s strong emphasis on the individual child’s holistic development needs, more attention in this area is essential in taking forward the child rights based approach which these initiatives employ. It would help to build individual coping capacities for the actual and future crisis as discussed under the principle on resilience. Miller’s planetary level (human/ nature connectivity) and cosmos level (spirituality) do not seem to be actively reflected upon in the two programmes.

Miller’s social level refers to critical awareness of dominant values which underpin the unequal and violent political and economic systems. Cross cultural learning by exchanging children’s personal testimonies of climate change’s impacts on their lives in the global north and the south is one of the approaches which CCC has employed, and cross-cultural learning has triggered their critical awareness of structural injustice (Tom Mitchell, personal interview 2008). Children’s participation at the climate change policy negotiations could be an opportunity for critical learning on unjust systems. It is, however, important to note Nick Hall’s caution:

...one of the biggest problems of this climate change program is there is a big danger that we would take children to a climate conference and children will start speaking NGO language jargon... It is absolutely essential that we do not manipulate that voice at all and whatever they say. Our experiences in Plan is that children can be very powerful advocates for change, but you can’t expect them to speak outside of their own personal experience or personal knowledge. As soon as you try to plant words on them, then they become a parrot for you at which point you are accused of abuse of children.... We have to be so meticulously careful to avoid planting [our perspective] even subconsciously.

He goes on to say that:
So half the job of Children in a Changing Climate is to legitimate their voice over ours....[we] are just facilitating somebody else saying something, children. And that means you have got to work double hard to allow their voice to come through and so on. That is an interesting dimension to it.

In order to avoid the pitfalls of manipulation (Selby 1995) and indoctrination, employing diverse modes of pedagogies so that multiple opinions are expressed and contested notions are discussed becomes critical, as discussed by Fien (1998, 2001) and Jickling (1994), among others.

6.5.6. Anticipation

Similar to the notion of resilience, anticipation is what those who work from disaster risk reduction and climate change adaptation perspectives feel familiar with. Preparing for the future risks based on past experience alone is considered highly limited and dysfunctional, and a more forward looking and creative approach is needed in the face of climate change (Avianto Amri, Nick Hall, personal interviews 2008).

Hamish Mackenzie thinks the community forum – “listening to what people have got to say, their concerns, their worries and acting on those” – is a useful approach to realize what is proposed under this principle. Similarly, Francis Sathya points out the importance of identifying “the existing mechanisms for prevention and preparedness” rather than creating the new ones. Those bottom up and consultative practices are in line with Toffler’s notion of participatory democracy, discussed in Chapter Five (see page 175).

According to Tom Mitchell, pedagogical elements suggested under this principle, such as future scenario building, helping learners translate their visions into action plans, have been already used in the CCC programme, and have proven to be positive. He states:

...we have used a lot of visioning exercises and scenario based exercises with the communities that we have worked with. Because of the climate change issue I think we do that quite a bit. So for example we say well how would you like your community to look in 2030 or 2025 and then we actually work with different stakeholder groups, different groups within that community, even within children’s groups too, develop a shared vision and then say can you step back from that and look at what we need to do now to achieve that? And find that that can be a
very positive technique. And looking back and looking forward and then looking at
the present I have always found as a particularly good and deliberative approach
to decision making. So I think in practice we are using this quite a lot, somewhat
within some of the methodologies of our research we are using this a lot. And we
encourage children and their groups to take those small steps that you mention
here (personal interview 2008).

Being well aware of children’s high emotional concerns regarding the issues of climate
change, Lucy Stone, UNICEF UK, states:

...if you are going to raise their awareness of the issue [of climate change], you
also have to empower them with the tools to be able to feel that they can respond
to it, so that they don’t feel overwhelmed by the issue. I think that is very
important.... I think it is okay to press the urgency and the importance of the
issues. I think how you do that is you bring in the wider picture, for example, the
fact that moving away from an oil based economy towards renewable energy,
which will also be good for health... clean air, energy efficiency, etc. So talking
about the positive share of a low carbon world... is quite interesting and not often
looked at. So it is the dangers and the concerns about climate change and global
warming, but it is also the hope for a future where there is less pollution and it is
healthy...(personal interview 2008).

Tapping into creative visions and actions for futures based on an alternative
development model, and combining personal futures with regional, national and global
futures, is an important strategy to overcome a personal sense of fear and paralysis.

6.6. Issues Arising

Overall, case study participants have commented on the suggested principles
positively. However, it is important to note that some of them have emphasized that
they are not ‘educationalists’ in a more formal sense so they do not feel comfortable to
comment on every detailed curricular and pedagogical aspect of the suggested
principles. Since the proposed learning principles are not limited to the formal school
setting and they offer a much broader conceptualization by including informal, non-
formal and policy elements, the different expertise, backgrounds and perspectives
which each participant has brought have been valuable.

A few participants comment that many elements within the principles are very much
overlapping with what the two initiatives aim at and have been doing. For instance,
when asked the overall combined impact of these six principles taken as a whole to
CCC, Tom Mitchell answers they “captured quite a lot of what [they] have been trying to
do and [their] general approach" (personal interview 2008). Similarly, Nick Hall feels that those principles "validate the approach that [he and his colleagues] think [they] are following anyway." Therefore, in his view, these principles are "empowering" (personal interview 2008). In addition, some of them have pointed out that these principles could be applicable for the wider and more general contexts of educational change. As Jo Bucher mentions: they "could be applied to not just climate change [but also] for all sorts of issues" (personal interview 2008). In the words of Francis Sathya,

A good education is respecting children and being learner-centred and then motivating children to learn, to learn, to learn. So these are very common principles that can be applied to education in emergency situations or preparing children for disasters and disaster-related education. So that can be applied to any kind of activity.

As against these largely accepting comments, there are some issues arising. First, there is the issue of the practicality of the principles. Francis Sathya points out,

I can't find any fault with this but for all these things my concern is the practice, the application.... The application of that theory is the most challenging, particularly in remote and impoverished areas of the world where teachers are ill prepared...(personal interview 2008).

The challenge regarding the practical applications of the principles within the resource and capacity limited contexts of many developing countries and emergency contexts in particular is the point which some of phase one participants mentioned (see page 181). How to preempt and cope with those challenges is indeed important.

Another aspect of the practicality of these holistic and sustainable principles concerns assessment and evaluation, when the funding organizations expect to see measurable outcomes (Hamish Mackenzie, personal interview 2008). This issue is underpinned by a common difficulty of any educational initiatives which take holistic approaches within dominant mechanistic thinking and practice with their emphasis on the measurable, the quantifiable.

Second, the point was raised that transformative intention of the suggested principles could be easily mis-perceived and/or the suggested principles could be used for an unintended purpose. Francis Sathya articulates the issue as follows:

If I look at [those principles] in isolation from the big issue, all these principles are straightforward and I have not disagreement with them. But when I apply the
philosophical framework, it makes me question ... (personal interview 2008).

He goes on to comment that these principles seem to assume "the existing system is okay, [and] what we had to do is [to add] those elements on top of that." When these principles are used as 'add-on' to the existing structure, they become 'apolitical' or 'neutral,' hence status quo confirmative in his view. What has been revealed is the paradoxical nature of the suggested principles. They could be accommodated by both a status quo confirmative agenda and by a transformative agenda. He explains that similar ambiguity commonly exists in international development thinking and practice.

He states:

When it comes to education and social education it is a contrast because most development organisations follow a capitalist model to development and we want to achieve it through socialist principles. You see what I mean? For example, we talk about rights, equality, participation, so these are our socialist principles. On the other hand, in development we want communities to use modern technologies and apply fertiliser, improve their agricultural productivity and families to make more money and they should have more wealth in families and communities. Families should have lots of consumer goods. They should have proper toilets and then they will start using more water. Promoting people to become from poor to lower middle class and lower middle class and then rich. So that is what we are doing in terms of supporting their livelihood. In the economic development programs. But in education and other social service programs we are asking them to share. We are asking them to inform themselves. So it is a kind of contrast. Capitalist economic model and socialist practices. So is it transformative or reformist? It has a mixture of both, I would say (personal interview 2008).

As Figure 6 (see page 161) depicts, responding to an emergency (or underlying issues of unsustainability) could end up with two different development scenarios consciously or unconsciously: one perpetuates the dominant neo-liberal development structure and practice, while another moves towards alternative development models hence contributing to a more resilient socio-economic system. Without critically unpacking terms such as 'participation' 'quality of education' and 'social justice,' the suggested principles could be easily co-opted to serve the interests of the former. Hence they become 'jelly' terms. This seems to be a pertinent issue in the holistic and sustainability proposal, which could be accepted uncritically and applied mechanistically by selecting certain elements without understanding overall cohesions and deeper meanings. Such issues have been observed in education for sustainability discussions as described in
Another important issue is around the transformative potential of the suggested principles in the face of climate change challenges. During the interviews it became apparent that the CCC coalition members have not discussed particular scenarios of climate change collectively. In the words of Tom Mitchell:

...we generally discount those scenarios a little bit and say that we know well that we have already bought into twenty or thirty years of reasonably rapid change because of what we have done historically. Now let's just work on that and say, look you know, we assume that there are going to be changes, we assume that there are going to be negative impact in some places, so let's just get on with doing the best that we can to make sure that the future beyond that is not worse than it is and also to cope with the changes that are coming. So I don't necessarily think we subscribe to any particular vision of what the future is going to hold except do our best with what we already know (personal interview 2008).

When most of the CCC partner organizations are currently finalizing their organizational positions and strategies in relation to climate change, to discuss and agree embracing a particular climate change scenario might not be their priority, other than to agree that poor and marginalized children in least developed countries are most at risk because of the impacts of climate change (CCC n.d.). However, by not discussing further details, especially the potential runaway climate change scenario (Lynas 2007) each might fall into assuming a rather incremental and slow burning scenario of climate change. Hence the approach becomes less than radical. As discussed under the principle on resilience, what resilience means for individuals would differ significantly depending on the assumptions around climate change impacts. Of course, it is not possible for anyone to be absolutely certain about how the future scenario will unfold, as Nick Hall says:

... we do not know any more than anybody else what is going to happen, but we know that something is going to happen. The science is solid, but science is uncertain. When the science says, yes it is happening, it is going to get worse, it does mean changes in lifestyle, it does mean adapting to it, it does mean more disasters, different sorts of disasters, but it doesn’t know exactly where or when or precisely how they are going to manifest themselves (personal interview 2008).

He further highlights the importance of “doing development better,” by helping communities to be more adaptable and “incorporating ideas about uncertainties in the development plan.” This is ‘climate resistant development,’ in other words. This
modified view of development seems to align itself with a more dominant development model rather than critical ones in that it does not fundamentally question a growth orientation. When there are increasing predictions of severer impacts of climate change, what does 'getting on with doing the best' really mean? Should particular elements of the proposed principles be more prominent than others? Would the suggested principles be effective enough for the challenges to come and changes to be made? Do we need a more radical re-conceptualization of development itself? How can we accelerate the behavioural changes so that we can preempt and cope with the challenges better? These are some of the questions to be discussed in the Chapter Eight.

6.7. Conclusion

Examination of the six principles through two linked cases illuminates a number of opportunities and challenges. By and large, the overall ethos of the suggested principles has resonated well with the two linked initiatives predicated on a rights based approach. Clear overlaps include: guaranteeing diverse media of expression for learners: emphasizing the inclusion of those who are marginalized; promoting learners' participation in decision making processes; integrating cultural and contextual sensitivity in learning processes and learning environments. It is noted that flexibility, resilience and anticipation are concepts that are already well used in the climate change adaptation discourse, hence the elements expressed are very much germane to both initiatives.

Examination of the principles has revealed that there are some elements which the two linked cases do not seem to emphasize sufficiently. First, connections between different risks are not well elaborated. These initiatives are predominantly focused upon environmental fallouts and disasters and their links to other risks such as armed conflicts, poverty, HIV/AIDS, are under-articulated. As some of the case study participants have highlighted, enhancing the overall well-being of individuals, communities, and societies will be more effective than reacting to a particular
emergency in isolation. So it is important to conceptualize the risks more holistically.

Also, these initiatives currently lack the emphasis on whole person development although this is a key element within the Convention on the Rights of the Child. Supporting whole person development is likely in turn to enhance their participation and actions at different levels (Pike and Selby 1988). Another blind spot is about critical awareness of existing development structures and practices as well as consumption-oriented life styles. If the initiatives intend to create long lasting impacts and radical changes, those aspects need problematizing. As Lucy Stone points out earlier (see page 204), visions of low-carbon and a healthier future society deserve further discussions in this respect.

As an overall critical reflection on the examination of the six principles in this chapter, it is important to point out that detailed insights into the implementation of these principle as a whole have not been elucidated sufficiently. Since the suggested principles are not held to be universally applicable regardless of contextual differences, how would the usefulness and relevance of the principles change with respect to different places and cases? The following chapter will further explore the practical applicability of the six principles by looking into the issue of contextual variables.
CHAPTER SEVEN

APPLICATION AND EVALUATION OF THE SIX PRINCIPLES: TWO EXAMPLES

What follows is a further critical appraisal of the six principles by applying them to two completed emergency education programs undertaken by Plan International. One responds to an earthquake and another to civil strife. As discussed in the last chapter, the proposed principles are held to be aspirational and indicative, offering an enabling and reflective framework for education policy makers and providers, rather than of universal applicability irrespective of context. The relevance and usefulness of the principles taken together and of the elements within each principle will vary according to particular circumstance. Certain principles and elements will have more or less appropriateness in one particular circumstance than in another. But in what ways, and why? Contextual variables will be examined based on a small number of program specific documents.68

7.1. Child Friendly Space Program within the Yogyakarta Earthquake Response and Recovery Program

A devastating earthquake (6.3 on the Richter scale) hit the city of Yogyakarta in the province of Central Java, Indonesia on 27 May 2006. The densely populated rural areas to the south and east of Yogyakarta were most severely affected. The devastating earthquake caused more than 5,500 deaths, serious destruction and damage to buildings, making approximately 200,000 people homeless, and interrupting the educational activities of about 20,000 school-aged children. The earthquake-affected population was not inclined to migrate and leave land they owned unattended. The very low level of migration helped to maintain previously existing social support networks (Circle Indonesia 2008; Plan 2006).

68 Thanks to Plan International, the following internal documents were shared for purpose of analysis in this section: Plan (2006), Yogyakarta Disaster Response CPO- final; Circle Indonesia (2008), Final Evaluation Report of Yogyakarta Earthquake Response and Recovery Program of Plan Indonesia –Yogyakarta Program Unit; Maclure, R. (2001), Rapid Education for Child War Victims in Sierra Leone: An Evaluation of Plan International’s Rapid Education Pilot Project in Freetown; Gupta, L. (2002), Lessons Learned from Plan International’s Rapid Education Trauma Healing Project in Freetown, Sierra Leone.
Plan Indonesia’s earthquake response and recovery program took place in Bantul District, the most severely affected area to the south of Yogyakarta. The program consisted of two phases: humanitarian emergency relief phase (from June to July 2006) and the rehabilitation and recovery phase (from June 2006 to July 2008). The former primarily focused on distribution of shelters and hygiene kits. The latter embraced three programs: (1) School Improvement Program (with a focus on formal elementary schools, school building reconstruction and facility improvements, and providing support for teachers); (2) Early Childhood Care and Development (ECCD) Program (with a focus of pre-school children, establishment of ECCD centres and training for ECCD facilitators); (3) Child Friendly Space (CFS) Program.

An appraisal of the six principles is made through a close examination of the Child Friendly Space (CFS) Program which aimed at “ensuring 3,500 children’s psycho-social well-being and safety by creating 50 child friendly places [i.e. spaces] and building the capacity of 15 CFS to promote child rights and child participation in community development” (Plan 2006: 3). CFS provided non-formal educational activities in a child friendly and safe place with local facilitators trained by Plan. During the rehabilitation and recovery phase, CFS was also used as a means to promote child rights and child protection in the local community. In two years CFS was established in 30 locations where activities were run four to five times per week for 90 minutes on each occasion. Approximately 1000 people were regularly involved, including 90 local facilitators and 750 children (Circle Indonesia 2008).

Principle 1. Flexibility (i.e. self-determined, flexible and gently-paced learning)

An examination of the application of this principle in the Program shows a mixed picture. Plan has a strong organizational ethos and track record of consultation with stakeholders and their program approach intends to be sensitive to the needs of a particular context (see pages 183-186). However, because of the urgent need to provide support for those severely affected by the earthquake, detailed contextual analysis and stakeholders’ participation during the program planning stage did not
happen. CFS was simply informed by the pre-existing Plan child-centered approach commonly used during the 'normal' development phase (Circle Indonesia 2008).

This externally framed program by no means excluded consideration of contextual needs. During the two years of implementation, local perspectives were fed into the program. For example, there were regular meetings for all beneficiaries consisting of parents, children, and representatives of local NGOs, which helped to adjust the details of the program according to conditions in the field as perceived by local people. There existed good coordination and communication mechanisms among the stakeholders at the community and sub-village levels. Trained local volunteer CFS facilitators working in their own communities also played an active role in motivating local stakeholders and linking different generations in the village for the Project (Circle Indonesia 2008).

**Principle 2. Balance (i.e. learning programs recognizing diversity in learning needs, forms of expression and learner experience and culture)**

This principle was applied within CFS in the sense that CFS employed multiple ways of learning and forms of activity. Examples include familiar daily activities for participating children and youth, such as simply playing and learning together, reading the Qur'an, sports activities (including some locally and culturally specific activities) as well as new initiatives such as story telling, drawing, handicrafts, drama, and participatory video shooting (Circle Indonesia 2008).

However, judging from the program evaluation document (ibid.), it is not clear how much space was allocated for participating children and youth to directly give expression to their psychosocial difficulties as occasioned by the earthquake. On the contrary, there was an avoidance of "materials that will trigger bad memories from the earthquake that may make the children sad" (ibid.: 41). The lack of a more direct addressing of trauma and attendant learner need is also observed in the fact that psychosocial training for CFS facilitators did not take place, as had been originally planned. For reasons not articulated in the documentation, Plan "assumed that there was no longer a need for [psychosocial trainings for the facilitators]" (ibid.:47). Without
more explicit and enacted inclusion of psychosocial needs, the program would not have looked too different from a non-emergency program (ibid.:6).

A further weak application of principle 2 was in the area of creating links between formal and non-formal learning. This was simply not brought within the scope of CFS. Since the three programs during the rehabilitation and recovery phase took place in the Bantul District, linking them, for instance, by exchanging facilitators, participants, ideas, co-developing learning activities, and sharing resources, could have been a practical step in creating synergies between them. To make this functionally happen, a coordination mechanism would need to have been established and resources allocated.

Principle 3. Resilience (i.e. for individuals and communities)

The application of this principle within the CSF Program was mixed. At the individual level, the principle was applied. Through engagement in the activities described immediately above, participating children and youth increased their self-esteem and confidence while developing their creativity, critical thinking and readiness to face challenges (Circle Indonesia 2008). So this program contributed to the enhancement of general individual capacities. The activities relating to child rights and protection campaigns were particularly helpful in developing communication skills feeding into resilience capacity.

In terms of community resilience, the affected communities had strong community and family structures, a mutual support network and culture, a sense of mutual trust. And this social fabric greatly helped to ease the devastating impacts of the earthquake on children (Plan 2006). CFS development was deliberately built upon already existing community structures and practices in the villages, and all the facilitators were from the local community. This approach helped to motivate people to participate in and support the initiative because they felt it relevant (Circle Indonesia 2008).

Looking through the lens of this principle, what was missing from the Program was attention to environmental vulnerabilities and the building of environmental resilience. One of the reasons for this was that the concept of disaster risk reduction was still new,
in Plan during the time of the implementation of the program and those involved in the program coming from a development background had little knowledge and experience of disaster risk reduction (ibid.). Helping participants to understand environmental hazards and vulnerabilities and how to take preemptive actions to minimize them would have been a complementary dimension to enhancing individual and community resilience.

**Principle 4. Social Justice (i.e. ensuring inclusiveness, especially for the marginalized and vulnerable)**

Available CSF documentation makes no specific mention of securing the inclusion and participation of the most vulnerable population groups in the program (e.g. specific ethnic groups, disabled children). Since Plan prioritizes working with most vulnerable children and communities as their normal practice, this point might have been taken for granted as a norm of the organization. In terms of inclusiveness in learning processes, the above-described activities offered multiple avenues through which participating children could express their feelings and opinions freely. Circle Indonesia (2008) points out that the importance of age and gender specific considerations, since older children who did not want to be categorized as children tended to undervalue the activities and boys were inclined to attend only activities they liked.

Through the child rights campaign, participating children and youth developed “minimum knowledge” of the nature and causes of earthquake. They also learned about actions to save lives should a disaster strike again (Circle Indonesia 2008). However, by and large what was missing in CFS was a critical reflection on root causes of the emergency and individual and collective exacerbating factors including those arising from inequalities in wealth and power. An assumption behind the principle is that such an examination would contribute to preempting and mitigating further emergencies and help in addressing the emergency at a more fundamental level. The allocation of more time to examining the cause of the earthquake per se would not necessarily have led to addressing power inequalities and structural issues since the
'root cause' of the earthquake self-evidently had more to do with geological/environmental variables isolated from social variables. Focusing more on the examination of the differentiated impacts of the earthquake on different socio-economic groups, including the marginalized, and its impacts on child rights would have been more relevant educational exercise in this case, particularly after the initial period of trauma.

**Principle 5. Interconnectedness (i.e. at multiple levels)**

The principle of interconnectedness was manifest in CFS at each of the intrapersonal, interpersonal and community levels. This means that CFS activities were primarily focused on children and youth themselves (by expressing themselves) and their interactions with each other (by doing activities together and developing a sense of 'togetherness'), and their engagement with immediate local communities (by initiating child rights and protection campaigns). The connections between learners, their communities and the wider world and nature were not within the scope of the program.

This does not negate the holistic nature of the principle in that an emphasis on the nested levels of interconnectedness does not require dealing with different levels of interconnectedness at one and the same time and all the time (Miller 2000). When the whole person, shocked and even harmed by the earthquake, was nurtured through the CFS activities - emotionally, physically, socially, even spiritually - s/he felt more self-confident, self-reliant, and creative (Circle Indonesia 2008). Such a person was also more ready to expand their horizon for learning and assume more challenges (*ibid*). So especially at the early stage of emergency education response, there is no need to rush to make a connection with the wider, or distant, world until the more immediate, close at hand, intra and inter personal reality has been addressed. While bearing in mind the wider system of connectedness, it is appropriate at key emergency moments to focus in on more intimate and immediate nodal points within the web of interconnectedness.
Principle 6. Anticipation (i.e. clarifying future aspirations and needs and developing pro-
activity towards the future)

The principle of anticipation was not addressed to any degree in this case. The only reference to the future was through child rights related activities. Participants expressed their wishes, feelings, opinions, and threats in their own environment through various creative visual media (e.g. participatory child video project, wall magazine) (Circle Indonesia 2008). From available documentation, it is not clear if local actions were further developed and implemented based on children and youth’s future visions and concerns.

One possible reason why the temporal dimension was not explicit within CFS seems to be the aforementioned fact that disaster risk reduction was new to Plan and the place of anticipatory thinking within risk reduction initiatives was still at the gestation stage. Another reason might be that the program was underpinned by ‘non-emergency’ or development thinking. Circle Indonesia (2008) points out that “in some cases, activities developed did not really grow out of needs to rehabilitate or recover the human, social, psycho-social asset that get damaged as a result of the earthquake” (47). When pursuing ‘business as usual’ development, rather than addressing particular emergency related needs, a continuous linear development path is taken for granted. This would in turn undermine, even negate, having learners anticipate preferable alternative future visions and developing capacities to contribute them.

7.2. The Rapid Education Pilot Project

The rebel invasion of Freetown, capital of Sierra Leone, on 6 January 1999 and the subsequent occupation of the city for three weeks brought about one of the most severe human rights violations in the recent human history. Thousands of innocent civilians were brutally killed, maimed, and/or raped. A significant number of houses, schools, hospitals, government buildings and historical landmarks were systematically destroyed. As a result, more than one million people were displaced and these
displaced survivors suffered tremendously from massive socio-economic destruction and psychological trauma (Gupta 2002).

As a response to this humanitarian crisis, Plan Sierra Leone developed the Rapid Education Project (REP) supported by an education specialist at the UNESCO Institute for Education who had experience and expertise in Rapid Education methodology as previously used in Somalia in 1993, Rwanda in 1994 as well as other war-torn contexts in Africa. The Ministry of Education, the Forum for African Women Educationalists and UNICEF were also brought on board in this new project development. Two immediate objectives of what was an emergency intervention pilot project were to provide basic literacy and numeracy instruction for children in the Internally Displaced People (IDP) camps and to provide structured recreational and reflective activities for trauma healing (Jabry 2002; Maclure 2001). The project was designed as a 24-week non-formal education program open to any children and youth of 5-18 years old. It was implemented from August 1999 to July 2000 for 36 weeks at four IDP camps in and around Freetown. The pilot program was expected to create a 'bridge' back to formal education. For the first four weeks, the program was solely focused on the trauma healing activities. Following that, literacy and numeracy as well as peace education modules were delivered. The program was supported by two teaching kits based upon previous Rapid Education Program experience in Rwanda: the Schools-in-a-Box kit (various school supplies and materials for up to 80 students and their teacher) and the Recreation kit (various types of sports equipment for up to 40 children). IDP camp teachers and volunteers were recruited for the program and given training, with a special emphasis on trauma healing, prior to program implementation (Jabry 2002; Maclure 2001).

Principle 1. Flexibility (i.e. self-determined, flexible and gently-paced learning)

The flexibility principle had but limited application in the project planning and delivery of REP. As briefly explained, this program was developed based on the Rapid Education methodology used in other war-torn countries. The extremely swift program
conceptualization and implementation was justified from the humanitarian perspective of the program providers since severely traumatized children in IDP camps did not have any appropriate learning opportunities. The rapidity of implementation did not allow participatory consultations and collaborations leading to program self-determination by camp inhabitants. The result was a lack of ownership of the program by those for whom the program was intended and a dependency on Plan leadership. Seeing REP as a 'Plan' project, camp inhabitants left problems, decision making and modifications of the project to Plan (Maclure 2001). Maclure (ibid.) points out the dilemma of the project:

While the short-term impact was beneficial, the rapid top-down approach, fueled by a state of urgency, fostered a patron-client relation between donor and recipient (31-32).

This was the (understandable) deficit in creating truly context sensitive approaches for trauma healing and peace education processes.

The lack of the ownership is also a critical issue from a long-term capacity building perspective. Maclure (ibid.) further points out that the critical question to be asked is: how to reconcile the reality of dependency in the wake of rapid outside intervention with the need to ensure sustainable education for displaced children AFTER the rapid education intervention (32). [Italics and capitals in original]

**Principle 2. Balance (i.e. learning programs recognizing diversity in learning needs, forms of expression and learner experience and culture)**

This principle is particularly relevant to the first four weeks of trauma healing intervention in the program. A series of culturally appropriate and purposeful learning and playing activities was implemented in a structured and caring environment. Examples of activities included drama, dance, game, talking, drawing, writing, clay sculpture, story telling, and sports (Gupta, 2000; Maclure 2001). Researchers looked into the impacts of the trauma healing intervention program and identified positive and visible changes in almost all the participants' attitude and behavior. They became much
calmer. Their ability to concentrate was improved. Enhanced academic performance was also reported (Gupta 2000, 2002; Maclure 2001).

After four weeks of intensive trauma healing as the sole component of the program, the focus shifted to basic literacy and numeracy combined with peace education lessons, the latter consisting of various forms of activities for expression individually and collectively. By isolating trauma healing components in peace education lessons, the overall program took on the nature of a more school-like routine (Maclure 2001). This significant reduction, and separation, of trauma healing components within the program after the intensive four weeks serves to illuminate the linear and lock step nature of the program. Understanding the ‘school like routine’ as a traditional transmissive mode of teaching and learning, the literacy and numeracy lessons seemed to have been limited in terms of pedagogical diversity. Comparing the process to Freirien adult literacy programs grounded in the learners’ needs and experiences, Maclure (ibid.) points out that conventional school subjects can also be an integral part of trauma healing and empowerment with creative and participatory pedagogies.

In terms of the content of learning, there were mixed reactions to the literacy and numeracy lessons. While general positive perceptions were expressed, some students and many of their teachers expressed tedium of the singular focus on numeracy and literacy. In retrospect, inclusion of other subject areas, such as health, social studies, environmental studies, and religion were suggested by the teachers (ibid.). Considering the fact that several certified professional teachers introduced other school subjects based on their previous professional experience and capacities (ibid.), disseminating their experience to other teachers – professional and volunteer – was something that could have been done to positive effect, but was not done.

Principle 3. Resilience (i.e. for individuals and communities)

From the perspective of building individual resilience this principle was applied to the project. Emphasizing the healing of individuals through various forms of creative activities contributed to developing individual capacities helping them become more
resilient. The project also helped to enhance participating teachers' resilience. Training for trauma healing and implementation of the project gave teachers "a sense of relief from their own emotional distress and traumatic experience" (Gupta 2002:10). Their capacity and confidence in being able to support children also grew, with the newly empowered teachers playing a new role in supporting other teachers, volunteers, and students in the community (ibid.).

On the other hand, except for these positive spillovers made by some of the participating teachers, developing resilience at community level was not held to be within the scope of this program. In addition to the short and urgent nature of the intervention, there was a contextual difficulty in dealing with community resilience due to the transient nature of life in the camp. Creating a sense of community among the displaced camp inhabitants and developing their sense of ownership for the educational project was extremely challenging in that context (Maclure 2001). Also, self-evidently, the camp community was not the community to which they would return on cessation of danger. Therefore, it seems justifiable that priority was not afforded to this aspect. Another omission was in the areas of environmental resilience. It seems that addressing (natural) environmental vulnerabilities was held to be out of consideration in the context of significant human suffering and continuous survival struggle. Whether such determinations were to miss a rich opportunity for fostering long-term community resilience is a debatable point.

Principle 4. Social Justice (i.e. ensuring inclusiveness, especially for the marginalized and vulnerable)

Multiple pedagogical options used during the trauma healing intervention resonate well with elements within the principle on social justice (e.g. supporting diversifying pedagogies; incorporating cooperative teaching and learning approaches; creating inclusive learning atmosphere). However, other elements are more or less underrepresented (e.g. improving access to education for those who are marginalized; examining the root causes of emergency which learners have experienced; developing
critical thinking skills). For instance, the program was 'open' to any children and youth (5-18 years old) but from available documentation it is not certain if there were deliberate efforts to encourage the participation of particular groups, such as girls and those who were physically disabled. Maclure (2001) points out that there was unintended marginalization of youth. Since the program contents were focused on the primary level and there was limited staff capacity to develop a program for the post-primary level, it inevitably turned out to be difficult to attract teen-age youth participants. This created further marginalization of the out-of-school adolescent group.

There were other contextual obstacles for children's active and productive engagement in learning. One was meeting the displaced children's basic survival physical needs, such as food, in addition to addressing their psychosocial and educational needs. Gupta (2002) suggests that since one organization and program cannot address all needs, an official link up with other agencies such as UN World Food Program would have been beneficial by combining food distribution and learning programs. Other obstacles for meaningful learning were a poor learning physical infrastructure (e.g. no comfortable seating, no partitions between groups, leaking roofs) and a lack of security (e.g. from theft, vandalism) (Maclure 2001).

What this program did not offer was a critical examination of the root societal causes of the emergency. Obviously, in the context of highly volatile political instability and deep levels of trauma, this would have been a hugely sensitive and contentious area to be included. It is understandable that it was not dealt with during a short pilot program. In such a prolonged human-made emergency situation as in Sierra Leone, determining when and how to introduce this highly controversial element requires careful consideration but, in terms of achieving long-term social justice, cannot be swept under the carpet.

Principle 5. Interconnectedness (i.e. at multiple levels)

One of the core objectives of this pilot program was to reduce children's trauma. Survivor children, who had experienced or witnessed horrific incidents as victim,
bystander or a perpetrator, suffered from severe emotional distress and traumatic stress symptoms such as bad dreams, flashbacks of horrific memories, bodily arousals, sleep disturbances, and concentration difficulties (Gupta 2000). From a holistic perspective, reassembling the scattered self and reconstructing the whole being by dealing with emotions, feelings and bodily disturbances is a fundamental part of learning. So an emphasis, as occurred in the first four weeks, on intra and interpersonal interconnectedness during the trauma healing part of the program were vital in this context.

Pointing out trauma healing as a 'fashionable' form of current intervention by the international aid community in war torn contexts, Maclure (2001) warns that:

there is a risk that interested parties may regard "de-traumatization like a washing machine" that will help to 'fix' whole populations and enable them to move easily on towards stability and development (15).

In order to support trauma healing processes, as against 'de-traumatization', it is vital to create a self-sustaining educational and community support mechanism so support continues after the quick intervention by the external agency ends. In this sense, engagement by and interaction with local community members, the next level of nested interconnectedness, is critical, while seemingly 'distant' levels are not of immediate concern.

Principle 6. Anticipation (i.e. clarifying future aspirations and needs and developing proactivity towards the future)

It is very plausible that participating children's future aspirations, visions and needs were expressed to some extent during the trauma healing activities and peace education lessons. However, given what is said in available documentation, the degree of actual inclusion of future aspirations, needs, and visions is unclear. What is obvious is that the program was primarily focused upon children's past and present experiences relating to atrocities they had experienced. Unless close and concrete reality which strongly overwhelms children's whole being is dealt with, considerations of the distant
reality (i.e. the long-term, mid-term and, in times of distress, even imminent future) would not have been of much worth, or, at worse, might have contributed to a 'de-traumatization,' a seemingly quick-fix healing leaving deep-seated trauma to fester. Therefore, the (potential) absence of future perspectives is justifiable. It remains to be gradually introduced after the temporal continuum between the past and present are dealt with in a meaningful and appropriate way.

7.3. Reflections

The two education programs examined in this chapter responded to emergency situations caused by different triggers (an earthquake in one case and civil strife in the other) in different geographical locations (respectively Indonesia and Sierra Leone) and with different implementation durations (respectively 2 years and 36 weeks). There were some commonalities: both were run by the respective country office of Plan International; the educational responses started very quickly after the emergency occurred; mitigating the effects of traumas was one of the key objectives; both were non-formal educational initiatives.

What follows are reflections regarding the applicability of the suggested six principles.

*Principle 1. Flexibility.* In both cases, the exigency of the situations became the barrier to consultations with and self-determination by local stakeholders in planning and management of the programs as well as processes of learning. As seen in the CFS program, with a longer duration for program implementation, opportunities for consultation and self-determination began to emerge.

*Principle 2. Balance.* The two programs employed a smorgasbord of child-friendly approaches resonating well with the principle on balance. In each case, the non-formal education setting seems to have enabled the accommodation of diverse pedagogical approaches, given the absence of strict learning outcomes. A constraint on employing diverse pedagogical approaches crept in when one program introduced the contents of formal school curriculum (i.e. the literacy and numeracy lessons in Rapid Education Program). However, taking the Rapid Education Program as a whole, children were
given the option of multiple pedagogical approaches, albeit less so in the later stages. Maintaining the choice of diverse pedagogies throughout the program would have been the ideal even as formal learning was introduced but such aspirations also have to take into account parental and wider societal pressures.

Principle 3. Resilience. Building individual resilience overlaps with the trauma healing objectives of both programs. Community resilience was indirectly addressed through the empowerment of individual participants, especially trained facilitators and teachers. In enhancing community resilience, more specific approaches could be considered depending on the nature of the community itself. In the Rapid Education Program, there might have been positive spin-offs from developing camp community empowerment in that camp members might have taken newly-acquired skills and dispositions back to their home communities. During and immediately after each emergency, dealing with human or social need was so immediate that environmental resilience was not considered.

Principle 4. Social Justice. Addressing root and exacerbating causes of emergencies presents enormous challenges during and in the immediate aftermath of a disaster. In the case of an earthquake triggered emergency situation, the examination of structural causes and disaster-exacerbating issues of power and socio-economic injustice would not be immediately appropriate and learner receptivity would likely be slight to non-existent. Emergency educators need, however, to plan for their consideration in the middle and long term in the name of both resilience and social justice. Similarly in the case of civil strife in Sierra Leone, it would have been an uphill, probably impossible, task to consider power issues during and in the immediate aftermath of fearful political instability. The case for such consideration remains of mid- and long-term importance.

Principle 5. Interconnectedness. In both contexts where individuals were overwhelmed by physical, environmental and social devastation, emphasizing the immediate reality of learners with a focus of intra- and inter-connectedness was beneficial and more could have perhaps been done with regard to the next nested level,
that of community. Interconnectedness with wider world or distant reality remains to be gradually integrated in learning once individual and close community well-being have been nurtured and recovered.

*Principle 6. Anticipation.* Similar to the principle 5, the focusing on past and present experience of learners (close and concrete reality) was an important first step before beginning to focus on the future (distant reality) at the early stage of the emergency response and trauma healing.

In sum, the examination of two cases reveals that all principles and elements were not equally important, nor practical. The exigencies of each situation posed limitations on what could be done practically in the field. Dealing with the immediate and close reality of children (in terms of time, space, and issues addressed) was the priority in both cases. During the immediacy of the emergency, it is necessary to narrow down and prioritize across and within the six principles according to contextual needs and constraints, while foreshadowing their wider treatment in the mid and long term and determining, at least in a broad-brush way, how they will be then treated. A narrowing down does not then negate the holistic nature of the principles in that, on both spatial, temporal and issues axes, the part conveys the signature of the whole.
CHAPTER EIGHT
LEARNING IN A ‘CLIMATE CONSTRAINED WORLD’: SOME REFLECTIONS

8.1. Introduction

To recapitulate, this thesis has sought to address four research questions (see pages 30-31):

1. What is the current range of renditions and understandings of the concept of emergency education?
2. What is the current range of renditions and understandings of the concept of education for sustainability?
3. What holistic and sustainable principles arise from examining the interface between emergency education and education for sustainability in order to respond to humanitarian crises in a more comprehensive way?
4. What insights arise from applying holistic and sustainable principles to concrete and projected emergency education situations fomented by climate change and other causes?

A central tension in both fields of emergency education and sustainability-related education arises from a tension between the mechanistic worldview and the holistic worldview. Educational manifestations based on the former tend to accommodate and reproduce dominant unsustainable and exploitative structures uncritically. In contrast, manifestations of the latter consciously strive to advance reflective and critical learning processes towards personal and social transformation on behalf of the needs of people and the planet. The six mutually embedded holistic and sustainable principles emerging out of this study - flexibility, balance, resilience, social justice, interconnectedness, and anticipation – are in accordance with the aspirations of the latter. This final chapter ranges far and wide across issues emerging from responses to these research questions as discussed in, respectively, Chapters Three, Four, Five and Six. What follows is a synthesis, pulling themes together while deepening the

69 A phrase used by Tom Mitchell during the personal interview in August 2008.
8.2. Issues Emerging from the Study

1. The ever-swelling confluence of emergencies including, perhaps especially, climate change calls for a radical rethink of the idea of 'development'

The examination of the two fields of emergency education and sustainability-related education has revealed that these two fields predominantly tie themselves to the economic growth oriented development. Alternative renditions of development become critical, since continuous material growth and exploitation of natural resources are not possible given the finite nature of Earth's natural system and with an ever increasing world human population. Also, since the dominant production and consumption pattern is a root cause of the creeping emergency that is climate change, those who are in materially privileged positions need to rethink and change their lifestyles and underlying values which perpetuate the exploitative and destructive modes of current development.

In shifting the dominant approach to development, the embrace of life-affirming values is of critical importance. In the words of Gadotti (2008), "our lives need to be guided by new values: simplicity, quietness, peace, serenity, listening, living together, sharing discoveries and building together" (41). S/he emphasizes that simplicity should be based on people's willingness to change their consumption patterns and also explains that quietness includes attentive listening and learning from each other in order "to create the conditions for many narratives, the ones currently silenced, to come to life" (41). Similarly, according to Selby, what is needed is 'sustainable moderation' (2009) as a long-term value and 'sustainable contraction' (2007a) in the near and mid-term in response to runaway climate change. These values present a stark contrast to mechanistic metaphors of individualism, competition, continuous economic growth, and endless accumulation of material wealth.

Along the same line, Francis Sathya refers to frugality as a key value in considering alternatives to current development. He states:

Frugality is related to conserving and minimising your wants and greed.... [Poor]
people, because of their traditions and because of their economic conditions, they are naturally practicing the frugality principles (personal interview 2008).

Emphasizing that “the poor is not the problem but the solution,” he claims that people in “consumer societies” should learn from them.

Addressing the issue of values is also put forward by the Earth Charter, which states “Fundamental changes are needed in our values, institutions.” The notions of frugality, ‘voluntary simplicity’ or ‘towards a way of life that is outwardly simple, inwardly rich’ (Elgin 1981) are in line with the Charter’s view that “We must realize that when basic needs have been met, human development is primarily about being more, not having more” (Preamble). Abelardo Brenes, one of the key architects of the Charter, affirms that we need to reconceptualize what human satisfaction means:

...the whole idea of living with simplicity, and being able to be happy, being able to have a sense of strong community, to find a balance with nature [are critical]. We need to have an authentic and democratic dialogue where we respect that there are alternative paths for human happiness, and that there are people who can live with dignity, but with a light ecological impact ... (personal interview 2005).

In order to resist the dominant neo-liberal development ideology, learners should be helped to nurture those values by examining their taken-for-granted assumptions and by acting them out in their immediate environment.

Enhancing local capacities and creating new forms of community also become critical in resisting the ‘global treadmill of development,’ especially in the face of the increasing number and intensity of complex emergencies where locals are the ones who need to deal with the consequences long before and after the external interventions. Despite the powerful forces of predatory global disaster capitalism (see pages 8-9), Klein (2007) believes hope for the future can come from the local actions and the values of community.

The universal experience of living through a great shock is the feeling of being completely powerless: in the face of awesome forces, parents lose the ability to save their children, spouses are separated, homes - places of protection - become death traps. The best way to recover from helplessness turns out to be helping - having the right to be part of a communal recovery.... Radical only in their intense practicality, rooted in the communities where they live, those men

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70 A phrase used by Professor David Selby during the tutorial session with the author in February 2009.
and women see themselves as mere repair people, taking what’s there and fixing it, reinforcing it, making it better and more equal. Most of all they are building in resilience – for when the next shock hits (465-466).

2. The field of emergency education needs to embrace more holistic conceptions of ‘risk’ and ‘crisis’

From a holistic perspective, emergencies and crises are considered as ‘presented symptoms’ or a tip of the iceberg, and they cannot be dealt with sufficiently without addressing underlying and interlinked issues and multiple implications as a whole. As Edmund O’ Sullivan’s view below implies, educators need to play an important role in helping learners to critically examine what emergency is:

If you do not show the complete picture – or ... a broader context for why emergency happens – then it is misinformation, and actually it is not telling you what the emergency is about (personal interview 2005).

Given the systemic nature of reality and the interconnectedness of socio-economic and environmental crises underpinned by a crisis of worldviews, it is vital to address ‘symptoms’ of emergencies by linking them with silent and creeping emergencies. Compartmentalized thinking and approaches offer only partial and superficial solutions, and are likely to trigger yet another crisis. This is a pertinent point argued by the holistic thinkers.

The creeping emergency of climate change is highly likely to bring about more complex emergencies consisting of environmental fallout, a decline of livelihood, economic collapse, hunger and malnutrition, infectious diseases, violent tensions among groups, and massive population displacements in specific constellations and intensities. As some of the case study participants highlight, enhancing health and well-being of the individual, community and society as a whole become vital in reducing physical, social, economic and environmental vulnerabilities comprehensively, rather than responding to a symptom individually.

3. Emergency educators are in danger of using human rights codes as 'catechism'
International human rights instruments have been widely used to frame and advocate for emergency education initiatives. The 1989 Convention on the Rights of the Child is the core document which almost all the organizations involved in various stages of emergency education described in this thesis refer to.

One of the issues regarding the rights based approach is an inevitable tension among different rights in their practical application. Although all rights are considered equal, some rights tend to be prioritized more than others. For instance, during the Asian Tsunami response focusing on swift and efficient life saving efforts by external agencies left very little room for local communities and children to exercise their rights to participation in decisions affecting their lives (Plan 2005a). During times of emergency, conflicts among rights can be acute. Anticipating situations of severer emergency, it is highly likely that authorities will intervene to defend some rights more than others.

A more fundamental issue regarding the use of human rights standards is whether they could remain useful and relevant when the impacts of climate change become intensified, and massive socio-economic and environmental disruptions take place. A number of questions come to mind: reflecting upon the historical expansion of the scope of human rights will new rights be encoded, as some rights become redundant and irrelevant? When planetary survival is in danger, should human rights be extended to include the rights of non-human species as a whole? Should addressing the needs of all living things, as deep ecologists claim, be more appropriate than the current anthropocentric rights framework? Will some rights have to be defended and/or trespassed upon by authorities for the common good? Should there be a move back from individual rights to collective rights? These questions must be reflected upon in relation to the formal, informal and non-formal learning of emergency education.

In addition, regarding the Convention on the Rights of the Child which is popularly and somewhat uncritically employed in the field, it is important to remember some of the critiques arising from the assumption that rights are of universal application despite socio-economic and cultural differences; also the related Eurocentric assumption of the
independent and autonomous individual child existing within the predominant western notion of family and society (Ansell 2005). With those limitations in mind, should emergency education address ‘needs’ and rights in a more balanced way, especially in the context of growing socio-economic deprivations and multiple risks? Should ‘needs’ discourse even predominate above ‘rights’ discourse? Some argue that focusing on needs is in line with ecological thought because ‘needs’ tend to be more context specific, more open to empathetic treatment, more intuitive and more inclusive than a rights based approach (Selby 1995:16).

4. **Focusing on education of children in isolation is conceivable as an example of displacement**

The main target age group for emergency education is school-aged children. A critical question to be asked is: how effective is the focus on children in creating meaningful and swift change in the face of imminent and looming emergencies? Considering the fact that approximately half of the world’s population consists of children and youth (Ansell 2005), it is important to empower them by raising their awareness and nurturing their capacity to play an active role in preempting and coping with near-at-hand emergencies. Selby (2007a), however, points out placing children in the ‘pole position’ especially in tackling urgent and serious climate change can be seen as ‘displacement’ or even ‘hand washing’ since children are “members of society hardly best positioned to effect urgent and far-reaching social, economic and cultural change” (256). Ansell (2005) also argues that “there are limits to what children can do alone” (249), adding that “the image of innocent childhood, removed from the adult world, does great disservice to the real lives and real interest of children” (252).

In terms of climate change mitigation efforts, changing production and consumption patterns by cutting down carbon emissions inevitably includes examining the current status quo. Wider public engagement is indeed needed and the current focus on children in relation to ongoing and future emergencies should be redressed by focusing more on youth and adult populations. Adult populations, especially those who are in
more materially privileged positions need to be involved. Learning for children would be more effective when explicitly linked with adult and community learning in tackling anticipated emergencies. In this sense, boundaries between formal, non-formal and informal learning need to become more permeable.

5. The six holistic and sustainable principles elaborated in this thesis become transformative when they are viewed in dynamical, systemic relationship and applied as such to the four facets of education discussed in the thesis (i.e. policy, curriculum, pedagogy, non-formal/community)

Guarantees against having the suggested holistic and sustainable principles appropriated for status quo purposes derive from the holistic treatment of these principles. If the principles are merely treated at a rhetorical level or as discrete from each other, they will have only superficial resonance, but if they are applied in a thoroughgoing systemic way, they take on transformative potential. Not only one particular principle, or an element within a principle, in isolation, but every element at every level needs to be addressed in an integrated and dynamic way. The principles themselves and particular elements falling under each principle may not be unique in isolation, but it is the actualization of their synergistic potential that can make them unique and transformative. In both personal and professional terms a mindset of constantly relating each principle to each other principle will lead stakeholders towards a deeper, more radical, and felt understanding of their potential allied to an enhanced pre-disposition to act upon them in that spirit.

Taking the case of the Children in a Changing Climate Programme, social justice (Principle 4) is one of the important components. Addressing the urgent challenges of climate change which the children in the least developed countries face – those who have contributed to climate change least but will be hit first and hard – is a matter of global social justice. Although this programme is aware of a dynamic relationship between global, national and local levels to some degree, using the various media of learning (Principle 2) and anticipatory perspective (Principle 6), more emphasis on the
interconnectedness of the issues at multiple levels (Principle 5) and balancing the different ways of knowing (Principle 2) are critical if the initiative is to become radically transformative. Lotz-Sisitka (2010) points out that over-contextualized and localized learning and actions for transformation in response to climate change "without giving equal and adequate attention to their global nature, content and origin" become paradoxically status quo conservative, because they fail to address the wider structural injustice. From this perspective, a dynamical interaction between social justice, balance, and interconnectedness becomes indeed critical. Global social justice will also be deepened by integrating intergenerational justice (linking to Principle 6, Anticipation), self-determination and ownership by individuals and groups (linking to Principle 1, Flexibility) and social and environmental well-being (Principle 3, Resilience). When those elements are embedded in multiple nodal points at different layers of policy, curriculum, pedagogy and informal and non-formal learning, so building a dynamical webbed network of those points, their synergetic effects increase abundantly (Fullan 1991; Selby 1997).

What is crucial across the principles and within each principle is a focus on the 'inscape' of learners. Being aware of who they are, what their unique perspectives and values are, what their fears, hopes, and future visions are, how they feel and sense, should be important and integral features of holistic and sustainable learning. Building confidence and self-esteem is a prerequisite for learners to be proactive.

In the practical application of the holistic and sustainable learning principles, one of the common concerns includes extra demands posed on teachers who are often characterized as 'ill trained,' and 'lacking capacities and resources.' Acknowledging the hard realities teachers face, two points should be highlighted. First, the suggested principles do not necessarily require formal training that is dependent on manuals and guidelines. What is fundamental is developing teachers' own capacities for self-reflection and awareness about their own power in the learning environment (Francis Sathya personal interview 2008; Pike and Selby 1999b). Those who are involved in emergency education could play a pivotal role as 'whistle blowers' in helping teachers
increase their self-reflective capacities and gain a new or renewed sense of professionalism. Another point is linked to the nature of the knowledge itself. What does 'lack of capacities' imply? Is there an implicit assumption here that teachers' lived experience is inferior to the theories advanced by external agencies? This point is further discussed in the following section.

6. **Sustainability-related education and emergency education are, for the most part, characterized by a top down approach that projects knowledge of the 'upper' on to the 'lower'**

The dominant sustainability education discourse is strongly underpinned by the economically privileged north and voices of the global south have not been properly represented (Gadotti 2008; Vargas 2000). Likewise, the field of emergency education employs the discourse of the powerful north (including donors and international agencies), and is acted upon by those who are affected by crises. There is a clear power hierarchy in terms of who creates and legitimates knowledge.

What is needed in both fields is a sea change in the direction of flow of knowledge both at theoretical and at practical levels. Those who are engaged in emergency education should be mindful that “people in emergencies are their own experts in their experience” (John Barry, personal interview 2006). “Working more on building up knowledge based on experience in the field” is currently lacking but desperately needed in emergency education (Gonzalo Retamal, personal interview 2007). The new processes of engagement - where local knowledge and experiences are heeded and respected, and acted upon - should be actively promoted. Voices of those who are normally excluded from the decision making - children, women, those who with disabilities, minorities - should be heard through culturally appropriate arenas and channels.

In creating a change in the flow of knowledge, those who are in the ‘upper’ hierarchy equipped with privileges and affluences need to be more self-aware and open to learning. Most importantly, they need to realize that their knowledge is limited (John
Barry, Abelardo Brenes, Edmund O'Sullivan, personal interviews 2005, 2006). Francis Sathya's testimony below highlights the point:

Having come from a poor country and observed poor people's life in many parts of the world, I think poor people are not part of the problem. They are part of the solution. And in fact if you look at their livelihood, it is the most sustainable livelihood the poor people lead. And in fact the developed, the educated, the so-called civilised societies are the consumer societies that consume quite a lot of resources of this Earth. And we tend to tell the poor [to] change. Our current development models and systems are geared towards promoting that ideology that encourages us to view the poor people as problem and who have to actually change. The problem is not with us. It is fundamentally a faulty notion [in] education at all level. This type of ideology somehow has been passed on to the experts coming even from developing countries (personal interview 2008).

A series of questions raised by Chambers (1997) become important reminders for educators positioned at the ‘upper’ end of the hierarchy:

- All powerful uppers think they know
- What's right and real for those below
- At least each upper so believes
- But all are wrong; all power deceives....
- Whose knowledge counts?
- Whose values?
- Whose criteria and preferences?
- Whose appraisal, analysis and planning?
- Whose action?
- Whose monitoring and evaluation?
- Whose learning?
- Whose empowerment?
- Whose reality counts?
- 'Ours' or 'Theirs'? [Italics in original] (ibid.:100-101).

Chambers goes on to ask, “What can and should we, as uppers, do to make our realities count less, and the realities of lowers - the poor, weak and vulnerable - count more?” (101) From this perspective, the above-mentioned issue of ‘lack of capacities’ of teachers would look differently.

7. The onset of ubiquitous rampant and runaway climate change has profound implications for understandings of emergency and emergency education

In the field of emergency education, a linear conceptualization of emergencies by dividing them into different phases is common (e.g. Tawil and Harley 2004; UNESCO 2006a). This is clearly predicated on the mechanistic assumption that emergencies start and end, normality is recovered and development continues. In the bleak future of
a climate constrained world, what would the start and end of an emergency mean when they are everywhere all the time? Emergencies would not be contained within specific space and time. How would the priorities of international agency's interventions be justified when there are continuous demands to respond to emergencies in various locations? Reading the higher end of climate change projections suggested by scientists, such concerns are not a mere brainstorming exercise.

The increasing number and intensity of climate change triggered emergencies have significant implications for those who work in the different aspects and 'phases' of emergencies. A number of UN agencies and NGOs have already started to discuss the implications of climate change for their operations. The challenge remains huge given the uncertainty surrounding the particular manifestations of issues. The traditional coping mechanisms and past experience would be of probably very limited usefulness, and "new ways of working, imaginative solutions" (Save the Children 2007b:13) are urgently needed to cope with the anticipated challenges. The risks of climate change demand not only educators who are presently involved in the different stages of emergencies - disaster risk reduction, emergency, reconstruction and development - but also educators who are currently in non-emergency situations to rethink education policies, provisions, curriculum and pedagogical approaches.

8. The six principles, taken as a whole, will offer an enabling and reflective framework for education policy makers and practitioners in preparing for and mitigating the impacts of the 'creeping emergency' of climate change

As discussed in Chapter One, climate change will present a backcloth of lurching decline in livelihood, ecosystem, health and economy in the front of which will play out abrupt and extreme weather-related disasters marking out climate as an ever more fickle affair. Greater environmental and social stresses are likely to result in intensified survival struggles that may well trigger violent conflict over the diminishing availability of livable land and natural resources. Because of these debilitating conditions, more exposure to the extreme weather events, and intensifying survival struggles, humanity
will inevitably face a frequent sense of loss on multiple fronts at micro, meso and macro levels (for instance, loss of family and friends, loss of home, loss of place-based community, loss of social network, loss of cultural diversity, loss of routines and jobs, loss of individual and collective identity) (Cannovó 2008).

In such contexts, it is increasingly important that learning content, processes, and environment/atmosphere sensitively address learners' diverse needs (and, most crucially psychosocial needs) through incorporating various forms of self-expression (Principle 2, Balance). Since the onset of multiple emergencies and repeated exposure to extreme weather events “may dull the awareness necessary for proactive responses” (Bartlett 2008), learning also needs to be an empowering process by supporting learners to overcome a sense of fatalism, cynicism or passivity and helping them take concrete actions (Principle 6, Anticipation). Anticipating seemingly (but not necessarily) 'distant' emergencies in the temporal dimension, mitigating their potentially negative or even devastating effects as much as possible becomes a vital and urgent task for those who are involved in education. In this sense, not only immediate but also distant levels of spatially and temporally nested interconnectedness need to be addressed simultaneously (Principle 5, Interconnectedness) so as to trigger and accelerate synergetic change effects within multiple nodal points at different levels. Simultaneous treatment of nested temporal levels becomes all the more essential given the fickle nature of climate change with its potential to make the seemingly 'distant' imminent. Also in anticipating the creeping emergencies of climate change, enhancing mutually reinforcing social and environmental resilience (Principle 3, Resilience) becomes vital. Given that we cannot be absolutely certain about what kind of emergencies we might face, preparing for a particular type of emergency/crisis is not likely to prove practicable or effective, so human societies need to address risks and vulnerabilities in a more generic and comprehensive way.

One possible consequence of creeping emergencies will be an increase in frequency of interruption of formal education provision in many parts of the world. The field of emergency education has witnessed that when formal education is interrupted
informal and nonformal education play a complementary role. Hence, it is very likely that in a climate-constrained future society, boundaries between formal and non/formal education will inevitably become permeable. In other words, the foci and leadership of learning need to become much more flexible depending upon changing circumstances. Top-down, externally and expert-driven educational provision and learning processes will simply become obsolete or dysfunctional, and more dispersed and horizontal forms of knowledge creation and educational leadership will become imperative. Considering the fact that even now it is local people who need to deal with the consequences of emergencies long before and after any external intervention (Jabry 2002; Plan 2005a), enhancing local leadership and ownership of learning processes and educational provisions becomes a viable, even essential, future way forward. Therefore, what Principle 1 on flexibility (i.e. self-determined, flexible and gently-paced learning) and Principle 4 on social justice (i.e. ensuring inclusiveness especially for the marginalized and vulnerable) suggest becomes exceedingly relevant.

8.3. Pointers to Further Research

What follows highlights some potential further research areas emerging from this study. First, there is a great need for conducting empirical research into holistic renditions of emergency education initiatives. Holistically oriented initiatives are currently limited and, for the few that exist, empirical evidence as to the particular impact of their self-consciously holistic approach is lacking. Since holistic learning principles can be understood and applied without ensuring their overall coherence, a great challenge remains at the implementation level. Hence, close examinations of the following questions would contribute to the development of the field:

- What are enabling factors for teachers and educational administrators to effectively implement holistic renditions of emergency education?;
- How would holistic renditions of emergency education help learners, teachers, parents and local communities develop crisis resilience and preparedness?
- How are the effectiveness of different pedagogies in relation to whole person
development and empowerment?

Second, theoretical development is needed in terms of embedding insights from the field of emergency education into mainstream educational theory and practice in the 'non-emergency' context. As discussed above, the current boundary between what is emergency and what is non-emergency would become more permeable in the face of climate change and all educators would probably need to deal with emergencies in one way or another in the near future (Selby 2007b). Integrating accumulated knowledge from the field of emergency education into normal educational provisions will help to create a seamless and mutually embedded cycle of emergency preparation, mitigation, response, recovery, and resilience. How this is done as practice unfolds is an important research focus.

Third, forward-looking educational theory and practice considering the runaway nature of climate change needs to be further developed in a more thoroughgoing manner. This study has addressed anticipated emergencies in general. The impacts of both acute onset and slow onset of emergencies are important to examine, and the latter deserves significant attention because of the prolonged hardships that would be the norm around the world, changing traditional notions of planning for 'development.'

Lastly, on a more personal note, building upon this research I would like to continue to develop the theory and practice of holistic and sustainable learning with a specific focus on climate change-induced emergencies. My initial interest in emergency education has grown from armed conflict triggered emergencies to include natural disasters, silent emergencies, and climate change triggered creeping emergencies, which are inevitably complex. I have become more aware of the critical importance of empowering individuals and communities, without failing to address broader structural power inequalities and the deep-seated mechanistic paradigm. Developing and implementing creative learning strategies by integrating local knowledge and experience will be my unfolding journey in these uncertain, yet interesting times.
APPENDIX 1. Semi-structured individual interview guides (phase one)

To educators in the field of emergency education

- Please explain briefly about your involvement in the field of emergency education.

- What are the key issues which emergency education is addressing? What definitions are there of 'emergencies'?

- What models/conceptual frameworks for emergency education have you drawn upon particularly in your work? Which educators and other thinkers have been particularly influential in developing your commitment to and understanding of emergency education?

- Who are the priority target groups and what are the time spans for emergency education initiatives?

- Are the terms 'sustainability' or 'sustainable development' frequently used in the field of emergency education? If so, what do they mean in the field of emergency education? Are they useful terms in your field?

- In your view, what is a relationship between emergency/crises and sustainability/sustainable development? What implications does such a relationship have to educational responses within emergency education?

To educators in the field of education for sustainability

- Please explain briefly about your involvement in the field of education for sustainability.

- What are the key issues which education for sustainability is addressing? What are your definitions of 'sustainable development' and 'sustainability'?

- What models/conceptual frameworks for education for sustainable development/education for sustainability have you particularly drawn upon in your work? Which educators and other thinkers have been particularly influential in developing your commitment to and understanding of education for sustainable development/education for sustainability?
Who are the priority target groups and what are the time spans for education for sustainability initiatives?

Are the terms 'emergencies' or 'crises' frequently used in the field of education for sustainable development/education for sustainability? If so, what do they mean in the field of education for sustainable development/education for sustainability? Are they useful terms in your field?

In your view, what is a relationship between emergency/crisis and sustainability/sustainable development? What implications does such a relationship have to the educational responses?
APPENDIX 2. Summary of first round of individual interviews with emergency educators

A. Synopsis of key issues emerging from interviews with five emergency educators

Emergency and sustainable development/sustainability interface: No overlaps

- Three participants mentioned that sustainability and sustainable development were not the terms and/or concepts commonly used in the field of emergency education, particularly in acute/chronic emergency situations. Two participants preferred “durability” to sustainability as a term/concept to use.
- One participant pointed out that education for sustainable development used very broad and vague language and did not seem to acknowledge sufficiently the context of developing countries. Hence, education for sustainable development was questioned from the perspective of it only being relevant to the context of economically wealthy developed countries.

Tension between emergency education and education for sustainable development

- One participant mentioned that one of the tensions between emergency education and education for sustainable development is that each has different target time spans.
- It seems that at the conceptual levels a long-term or future perspective is accepted in emergency education, but what is challenging is to apply a future perspective to emergency affected contexts at a practical level given the preoccupation with meeting urgent needs.

Questions regarding what to sustain

- Three participants explained ‘sustainability’ in emergency education in terms of sustainability of institutions, initiatives or structures, while one participant raised critical questions regarding fundamental purposes of education and emphasized the importance of understanding sustainability in terms of economic, political, social sustainability.

Responding to psychosocial needs

- With regard to psychosocial needs for emergency affected populations, the
participants hold different views in terms of degrees and ways in which psychosocial needs of learners are addressed in education. One participant strongly emphasized the importance of dealing with trauma of victims through various media of expression. Two participants implied structured activities and/or schooling as a way to deal with trauma. Another participant pointed out a gap between agency perceptions and local people’s perceptions with regard to psychosocial needs.

**Emergency education and issues of power**

- Politics and practices of emergency education are not free from issues of power and the broader context of globalization. In emergency education, how to turn challenges into opportunities remains the challenge.

**B. Detailed version of summary of key issues emerging from Interviews**

**Emergency and sustainable development/sustainability interface: No overlaps**

Three participants mentioned that sustainability and sustainable development were not the terms and/or concepts commonly used in the field of emergency education, particularly in acute/chronic emergency situations. Participant 1 prefers to use “durability” to sustainability meaning that emergency education will have a lasting impact among the children. Similarly, participant 2 highlighted “durable solutions” in the UNHCR constitution. In the context of displacement, participant 2 said, agencies “do not talk about sustainability as a main criterion because they are expecting the people to go home.”

One participant pointed out the vagueness in the concept of sustainable development:  
Personally, I come from the generation that believes sustainable development is about environment. I feel that... by including every aspect of social and economic reform, the term sustainable development becomes almost meaningless. It is every ideal and every problem of the poorer people in the developing countries. Together with the original theme of environment. I think it has become education for development. (Participant 2)

Participant 2 went on to say that education for sustainable development did not sufficiently acknowledge the reality of developing countries:  
... the situation in the third world is still and in many emergency schools is such that there are often no text books whatsoever. In some good situations the teachers have a copy of most of the text books... The children don't have enough writing materials. There are no reading materials. Not even text books. The
classes are often on a shift system so that the time for study is very short. Blackboards are very small and not well maintained. Therefore it is extremely difficult to achieve anything, even a very well trained educator would have to work very hard to do it. But we have people who have maybe only completed primary school, [who have] maybe completed some or all of secondary, [but who] have not ever been trained in modern pedagogy effectively and whose idea of teaching is to write on the board for the children to copy. ... Therefore, these statements [on education for sustainable development] are to my view very appropriate for moving the agenda forward in the richest countries of the world and have very little relevance to developing countries and very little relevance to emergency situations.

**Tension between emergency education and education for sustainable development**

According to Participant 1, "There are a lot of tensions around [sustainability]," because what emergency education does is "one time specific intervention in response to a specific crisis" and agencies are not necessarily hoping that their initiatives will last. Participant 1 thinks that one of the elements which differentiates emergency education and education for sustainable development is the time span on which each initiative focuses:

... education in crisis is on the continuum more about responding to more immediate needs, and really focusing on quite a practical level in terms of trying to prepare people for a future. I feel like education for sustainable development probably is a longer term approach thinking about what are things in this community going to look like even this year or a hundred years and what can we do about it to really have a sustainable development approach. We would probably be looking more at five months to maybe three years or something. Three to five years. This is a long-term picture for the emergency education sector (Participant 1).

Later in the conversation, Participant 1 stated that

I think so much of a humanitarian response is only about immediate needs, of keeping people alive. But if you look at humanitarian principles and if you look at human rights kind of frameworks, there is a strong focus on life with dignity and people's own self-sufficiency and ability. In a way I interpret education as a humanitarian response, as an opportunity for people to create their own future.

Participant 1's comments above could be understood as saying that the importance of having a long-term or future perspective in education seems to be supported at a conceptual level, but at a practical or operational level, it might be difficult to be
prioritized. In the case of Participant 3, a future perspective is a key to inform immediate initiatives:

...you have to approach [education] as a challenge and an opportunity to not only look at the problem, but to look at the future...not simply reconstructing the past. And to be asking good questions about why we are reconstructing, what you are reconstructing.... The basics of education are to draw on - and a lot of those questions that you can't ask because the social consensus that hasn't been developed. But there are so many that you can answer. Nearly always in a post crisis situation there is a quest for greater democracy. Greater participation. I think it is fairly easy to find broad trends of the future and it is usually reaction to what took place in the past. I think it is possible to use certain broad trends and to identify these questions for consensus.... (Participant 3)

According to Participant 4, the issue of long-term and immediate focuses are not either or, and emergency education need to "re-think curriculum in both short-term and long-term."

**Questions regarding what to sustain**

There was not any consensus regarding the meanings of sustainability. For some participants, sustainability in emergency education meant sustaining institutions, initiatives or structures (including financial structures).

... the issue of sustainability comes out particularly when you start building structures. Who are they afterwards? Now if it is inside of the country and they are IDPs, then those are going to be schools or structures [of] youth centre or something for the government generally. But when it is outside of the country, some countries don't want you to build permanent structures, schools and so on. And other countries very much want to...it depends on the country. So that is one way to look at sustainability (Participant 5).

...the salary issue is one of the biggest issues. In emergency education, the funding is sufficient only for very minimal salaries, payments to the teachers. There should be payments, because otherwise the teacher turnover is too great ...

...So from the very beginning there is this concern of the emergency education programme itself to be financially sustainable. (Participant 2)

In contrast, Participant 3 expressed a broader view of sustainability:

I have hardly ever heard people talking about sustainable development [in emergency education]...because people are focused on getting the schooling system back functioning because people have a right to school. A right to
education. And there is not a great deal of talk about why, what purpose of education serve and why. And there is an assumption that education is in itself a good thing and therefore getting kids into school is an important thing to do. But when you raise the issue of sustainability people talk about the sustainability of a system. Are there enough resources to keep the system going? It is only when the debate gets to the topic of reconstruction people start to ask the sustainability questions. What is the education for? How will it sustain the economy? How will it sustain social and political change?

I think that is a mistake. I think that people need to be looking at some dimensions of sustainability from an early stage. And that is part of my early point about—what education is for. It could be rebuilding a system that stands for unsustainable through also unsustainable development which is both politically, economically, socially not sustainable. I think that it is a trap we often fall into, not taking a longer view from an early stage. Now it is understandable for those agencies involved in humanitarian support to focus on the short term and assume education must be a good thing. But it important for agencies ... which [are] more focused on reconstruction [take] the issue of sustainability seriously.

**Responding to psychosocial needs**

Participants hold different views in terms of degrees and ways in which psychosocial needs of learners are addressed in education. For instance, Participant 4 strongly emphasized the importance of dealing with trauma of victims through various media of expression:

There is a psychosocial dimension in the process of education. It is fundamental if you want to provide the quality education for the children who are victims of violence. If you do not do it, you are losing time in a way, because those children are going to fail. They are traumatised and they cannot learn mathematics or languages. So providing them with mathematics and languages without providing them first recreation, expression, dealing with their past, [and] trying to realize what is like the life in the future, ... even if they have text books and trained teachers to teach mathematics and language, it does not work.... (Participant 4)

Participant 4 further explained the contents of expression as follows:

...expressions should be a very important aspect of curriculum. You need to provide instruments for expression. Children can express in other languages, which is not necessarily a written language. Dancing, drawing, talking, re-enacting the horror...playing has to be a part of quality of education. Otherwise, we are just reproducing hate..., the future warlords.

For Participant 1 and Participant 5, offering structured learning opportunities to the
emergency affected populations is a way to deal with trauma experiences:

... the idea behind [psychosocial support] is that just even the structure of a
learning day for children, part of it can be healing .... I guess, to keep them busy.
In a way keep children busy .... And it really is about learning for the future ...
something has happened to you, but you are still here, you can continue on, you
can grow as a person despite what happened. So it is really giving a positive outlet
for children. That is really important. You see so many children that will talk about
the importance of their education and they don't want to lose those opportunities
just because of a conflict or a crisis (Participant 1).

I think the thing that seems to work best in most cases is you try to find – basically
the model is really initiated by parents and students and teachers. Because what
they want after everybody has done, when there is food and shelter are sufficient,
the parents, communities, teachers very much want young children in particular to
get back to school, because usually in their early stages of an emergency, they are
very traurnatised. And getting them back into a school situation is something that
the entire community wants. (Participant 5)

Participant 2 pointed out a gap between agency's perceptions and local people' s
perceptions with regard to psychosocial needs:

Contrary to what happened with Rwandan refugees when all of us were thinking
about psychosocial issues a lot, and we came up with stages which didn't focus on
the school year, now I would say that there is a greater awareness that the first
priority is for the community to understand when the school year will resume, and
to fit any support activities which are unusual around the conventional curriculum
and school year and examinations. That is the immediate emergency.

Emergency education and issues of power

Politics and practices of emergency education are not free from issues of power and a
broader context of globalization. Who has power to decide an agenda of emergency
education? For instance, there is a strong media influence:

... the big question is funding, because nobody knows how much money is going
to go for an emergency. If it becomes a 'CNN emergency,' then there is some more
money... That is a nickname for an emergency that gets a lot of publicity. If it
becomes CNN emergency, then you know they are going to get more money. That
is what it is called (Participant 5)

The challenge of promoting local participation and empowerment in highly complicated
situations of early post-war contests, where local government has very limited capacity,
was touched upon by all the participants. As a way to promote local initiatives, for
instance, Participant 3 stated:

Early planning is about responding to quality initiatives, to try and incorporate what is on the ground into some kind of systemic framework rather than just to sit down and say 'Ok, do we need schools?'. The system is there in the communities and what you need to do is to identify it. And enhance it. And look for balance. Look for the gaps. Some people had the illusion that they are planning a new system.

There is no such thing as new system.

At a global level, Participant 4 recognized a strong influence of politics of globalisation within emergency education. Participant 4 was critical about education which narrowly serves the modern sector of economy and, in so doing, further excludes the poor and the vulnerable. Participant 4 suggests a systematic analysis of emergency education and points out the applicability of the lessons learned in emergency education to 'normal society' with different kinds of trauma situation.

In emergency education, how to turn challenge into opportunities remains the challenge: I think [a relation between emergencies and sustainability] is a problem, a challenge and an opportunity. Crisis often results in collapse or erosion of the system presenting a challenge for education, contributing to sustainable development. Also it is the possibility for change or the acceleration of change. Crisis is often needed in order to bring about change. And movement towards sustainable development requires change... (Participant 3)

My view is that emergency is the window of an opportunity..., because first there is a lot of money coming to the situations of emergency but they have been used very badly in many ways. The problem is that there are dual forces: one with human face, humanitarian, and the other one is only with a face of the "efficiency of economies." The latter is an illusion of efficiency. The view alone is not sustainable.... The basic factor is that we have to put a human face in development, especially when you are dealing with people who are victims of wars, who are not only hungry but angry... You have to deal with anger. If you are not doing it you are excluding them and you are preparing for the next generations for wars... (Participant 4)
APPENDIX 3. Summary of first round of individual interviews with sustainability educators

Mapping themes emerging from the interviews with five educators in the field of education for sustainable development, education for sustainability

A. Key features and elements in education for sustainable development/
sustainability education

A1. Critical awareness

- Sustainable Education is "radical" and it "has to have a critical understanding." It requires 'a recognition that there are deep order issues about the way humans are living in this present period of history, that actually makes the sustenance of life – not only for humans, but the web of life itself – It's putting it in enormous jeopardy.' It is "the learning process that people who live in privileged places...have to get emancipation from privilege."
- "It's everybody's endowment to have a full life. What we're finding out about this period in history is that that top 20%, with all of its technology, science, has developed a manner of living that actually makes two thirds of the world miserable, and for the most part makes them miserable."

A2. Survival/security/well-being

- "There are different qualities of sustainability, and different stages of sustainability...One is survival. So unless you've got survival, you haven't got sustainability, clearly. So that could relate at any level... Beyond that, [what] I think is security. So security could be ecological security, or economic security, or social security...Beyond that, [sustainability] is a quality of life, or well-being.... It seems to me they're the three conditions of sustainability...."

A3. Sustainable development as 'positive peace'

- "...as part of a sustainability agenda is a way of synthesising...the basic areas that the Earth Charter touches on I think are all very, very important. There is ecological integrity, then there's the whole area that has to do with social and economic justice, eradication of poverty...then there's the whole area that has to do with the quality of democracy, forms of governance, non-violence, which would be the more specific approach to peace.... So, reconciling all of these different are... sustainable development."

Education for Sustainable Development is "the ability to learn how to learn.... It is for me about character building. It is about drawing out from people what's within them in terms of allowing them to develop. It is about awakening in them their sense of interdependence on each other and on the planet, as a compassion that everybody has for life. It is [the] properly [which should be] nurtured...So it's character, it's ethics, and it's also learning by example and doing."

"You want to engage people in these questions in a way that's relevant to their every day life - sustainability has to become a daily activity. And that requires reflection, it requires discussion. It also requires accepting that there's no one best way. So you cannot present sustainability and condition people to become sustainable. That's not education, that's training maybe - It's not education."

"I think we've got to make sure that at the heart of any education for sustainable development - just like in Sustainable Development itself - is deep pluralism. I mean there's a certain pluralism we won't accept - fascists, sexists, racists and so on. But beyond that, there must be a multiplicity of ways of life that are in the round, sustainable. But the idea of one size fits all, and that somehow what we're interested in is ecological re-programming people, to me is deeply offensive, flawed and simply won't work. It will end up destroying the democratic, participative, reciprocal character of Sustainable Development. It may be sustainable, but you'd live in a sustainable society that was fascist - there's no particular connection in some ways between a very simplistic understanding of sustainability in terms of ecological sustainability, and you could live in a totalitarian state. So you've got to question, What are we sustaining? We are sustaining ways of life that we value, we are sustaining processes that we value like democracy, and trying to deepen democracy and equality. So it's not just about the environment - it has to be also about socio-economic, political, social justice, equality."

"... the idea that each of us in a sustainable society lives exactly the same, I think, need to [be] challenge[d]. For me, it's rather at the macro level. So long as the overall society isn't unsustainable, there can be variety and differences, and a band of inequality, rather than active and strict egalitarianism."

_A5. Anticipatory education: enhancing resilience_

Education for Sustainability is "in a sense anticipatory and it is trying to create a better future before the future occurs. But, assuming that things do go wrong and can go wrong and crises and emergencies arise, you have to have these ideas, such ideas in place."

"... how we actually design systems so that they are more sustainable, so that
you avoid crises and emergencies as much as possible?"

- "...you've got to come back to resilient, self-organising systems, and that's difficult but it's a matter of anticipating non-sustainable trajectories – whatever field you're talking about – and begin to rethink these things"

- "...what is a viable/healthy/sustainable system? And again, you may be looking at anything – you maybe in a country or location where agriculture is the key activity. How do we actually re-design our cultural systems so they're more sustainable themselves? And then the whole idea of resilience comes in, resilient systems. ...they're less vulnerable to shocks. That's to do with the connectivity within the system..."

B. Issues in education for sustainable development/sustainability education

B1. Vague concepts and language

- "Some people talk about sustainable living, others talk about sustainable development. It is still a very vague concept and I think it is compatible with different interests and political ideologies"

- "Language of Sustainable Development often is meaningless to people in the community... It has to be indigenised, rooted in the local community. Otherwise, it will simply become another benign colonial project of enlightened western – often intellectuals, academics and activists coming in and telling people how to live. That's not what it's about...Those of us who are professionals in this field need to see ourselves as on tap, but not on top. We're here to help and contribute but not to determine."

- "I've always said that good Environmental Education includes the dimensions that are ecological, that contributes to a better understanding of our place in eco-systems, that it includes an understanding of the web of life, of relationships, of inter-dependencies.... So I never saw that need to move to Education for Sustainability because I always thought, "Well, it's already in Environmental Education, so why do we need the sustainability...?"


Global dimension

- "...it's almost a contradiction in the idea of local sustainability, the idea of the local sustainability. It has to be connected. And it's not sustainable if it does affect the lives of others elsewhere in a negative way. Paddling back and forth between local, regional, global is very important. Otherwise, you're blind from sustainability impacts, outside of your local community..."

Emergency/survival dimension

- Emergencies are the conditions where "the immediate aspects of life and death
are much more directly addressed to you in the moment" Sustainable Education “hasn’t actually become able to appreciate the emergency of the situations when you are actually cordoned off from it.”

- “There is no felt emergency particularly among ESD people in a privileged context! ' In other words, this is 'moral exclusion”

*Moral dimension

- “We must realize that when basic needs have been met, human development is primarily being more, not having more. I believe that being more means that you are identified with the suffering of other sentient beings and their wish for happiness. If this becomes the purpose of one’s life, it can foster our fuller development and is the motivation required to work together to bring about the sustainability revolution.”

C. Key features and elements in Emergency Education

C1. Dealing with trauma

- “…probably the strongest discipline to have in an emergency situation is Psychology: how do you deal with that trauma? Everything that you had owned, your biography, your family albums, your pictures – it could all have been disappeared, gone. And that’s deeply dangerous for human beings because we live narrative lives, we like to have lives that can be lived with stories and know where we’ve come from. And then suddenly there’s a massive rupture. So I think, Psychology to me, as I understand it, is about story-telling, re-weaving the reality of your life, the thread of the connections that you have in your life and so on. So certainly for me that’s something I would urge in Emergency Education... It’s almost like when you’re knitting, you lose the stitch, you lose the piece of wool – it’s about re-weaving, how can people re-weave that again? And often together with their communities, or what’s left of their communities...”

C2. Culturally sensitive approach

- “I think anybody who is going in to [emergency education] from the West has to be extremely culturally sensitive, because what is art for you may not be art for me; what is music for you may not be music for me...” There should be “rejuvenation of indigenous knowledge”

- “Any organisation that does this kind of work should have cultural knowledge and build upon the cultural practices of a given community... I think there’s quite a lot of knowledge now about this...like in some communities, if you don’t make peace with your ancestors, if you have clans who are forgiven by the ancestors, no matter how much psychosocial intervention you might use, following Western methods, you won’t get very far. So it’s important to understand the culture if we’re going in. And work with people that are local, that are hopefully the ones
who are going to be the ones in control, and promote and sustain... it could be
part of a longer term democracy building relationship."

**C3. Proactive approach**

- "... maybe a broader view of Emergency Education would be preventative
strategies, community resilience to crises, building a sense of community,
building peace, trust and all those things – that's preventative, that's a broad
view of Emergency Education and ... if there is an emergency, you really try to
re-design, re-create, re-build in a way that is different."
- "And that's one part of it, and the other part of it is that if you are successful in
creating more sustainable communities, they will be better in responding to
crises... So that's another way of being proactive, in two ways: preventing a
crisis, and when they happen you've got communities that are better and able to
respond, because there's a strong, social fabric, so it's more resilient like a
healthy eco-system. It can sustain, it can cope with stress better than an
unhealthy system."

**D. Issues in Emergency Education**

**D1. Definitions of emergency**

- Emergencies are "defined in the West whenever they suit them. But these
emergencies are everyday life for [70%] of people"
- "... when I think about Emergency Education I think it gets that name from the
West, not from the Africa. -- So you've just noticed?! We've been like this for
years! You just came in on one of our worst days!"
- "The concept of 'what is emergency?' is problematic in itself, because it depends
on who is declaring something to be an emergency or not"
- "What is formally declared to be an emergency on the part of some government
or international organization is very relative and often contingent on political
circumstances"

**D2. Not addressing root causes of emergencies**

- "... If you just take a limited views of Emergency Education, it must be reactive
rather than proactive... the concept of emergency seems to me to be time
limited... it's almost contained – it suddenly starts or something, and then it
finishes... [emergency and Emergency Education] are both bounded concepts"

**D3. Power imbalance**

- "... it's almost like the subject of emergency education are not pupils or human
beings, but victims. And that's quite a different dynamic of how you actually
engage in an educative process of victims... it's also the implicit sort of hierarchy.
If you're a victim, you feel sorry for somebody, there's a sense of charity, or in a
negative sense it can become patronising. Victims also feel powerless."
• "So in one way, you can talk about a North-South difference... you might find
more in Africa, more, more than 70% of people are clearly in emergency
conditions... Every single day... Some of these emergencies are not natural
emergencies. This is where the social justice dimension has to come in"
• "Emergency areas are usually people of colour... So racism is a whole other
dimension. We go in there and help 'them'"

E. Interface between education for sustainable development and emergency
education

E1. Education in a wider context
• "...education has become an extension of corporate interest, and it's really a
threat to sustainability and education in general"
• "...education, in and of itself, without other broader social, political, cultural,
economic transformations in the country as a whole, will be of a limited impact..."

E2. Dichotomy between 'reactive and proactive' and 'preventive and remedy'
• "Proliferations with education for change has been problematic since they led
fragmentation.' It is important to look at 'synergies, connections.' Educational
focuses must be permeable"

E3. Emergencies as sustainability issues
• Emergencies are "all symptomatic of something that is much bigger and a
systemic problem that we have in this world"
• "If you adopt a broad sustainability agenda, wars have a lot to do with
domination over natural resources, and so on. So I would say that from that
perspective, emergency education is a sign that there is no sustainability, no
permanent orientation to sustainability in that context"
• "... in one sense emergency crisis is actually the hot point. This is the hot point
of what the sustainability problem really is. These crises are now being
experienced. People live differently all of these different times, but there has
never been such a massive threat to peoples' survival at a global level."

E4. Rethink education/learning
• How do we actually re-think education so it's actually part of the way forward
rather than a problem? What informs educational paradigm?
• "Education in its original Latin meaning of educare' ... really is guiding in to,
facilitating, helping develop and exploration of the self and growth of personal
growth and competence, development — which is really about equipping people
to make sense of the world and make their own judgments. If you don't leave
that in education, and you take that out of education and education becomes an instrument..."

Figure A: Survival, security, well-being: different emphases in education for sustainable development and emergency education

<table>
<thead>
<tr>
<th>Survival</th>
<th>Security</th>
<th>Well-beings</th>
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<tbody>
<tr>
<td></td>
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<td>Education for Sustainable Development</td>
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<td></td>
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<td>[in privileged contexts]</td>
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<td>Emergency Education</td>
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<td>[in less privileged contexts]</td>
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Figure B: Interface between Education for Sustainable Development and Emergency Education

Narrow Focus <---------> Broad Focus <---------> Narrow Focus

Emancipatory
Values
- Social/environmental justice
- Deep pluralism
- Participative

Skills
- Critical awareness
- Reflection, discussion and action

Structure/Community
- Resilience

Future-orientation
- Preventative
- Anticipatory

Instrumental
- Top-down approach

Instrumental
- Top-down/ Western approach
- Limited local participation

Education for Sustainable Development <---------> Emergency Education
APPENDIX 4. Draft holistic and sustainable learning principles

Six holistic and sustainable learning principles emerging from a study of the interface between the fields of emergency education and education for sustainability and their implications for facets of education

**Principle 1. Slowness**

*Slow learning is seen as opposed to an externally imposed quick fix approach for instant measurable results. Learning at a self-determined and slow pace is particularly important in the long run for those who are affected by a crisis.*

<table>
<thead>
<tr>
<th>Policy</th>
<th>Includes various speeds for learning, with particular emphasis on slowness (e.g. secure time for reflection during learning; making the learning needs of the learner a principle determinant of the pace of learning).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curriculum</td>
<td>Focus on enhancing quality of learning and learning experience. Involve local stakeholders in curriculum change and implementation process.</td>
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<tr>
<td>Pedagogy</td>
<td>Include learning outcomes/goals for nurturing self-esteem, joy of learning, enhancing relationships, healing trauma of the learning community.</td>
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<td>Pedagogy</td>
<td>Build in some flexibility in timetable so that different speeds of learning could be accommodated.</td>
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<tr>
<td>Pedagogy</td>
<td>Integrate local and indigenous knowledge.</td>
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<tr>
<td>Pedagogy</td>
<td>Embed relaxation exercises in curriculum.</td>
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<tr>
<td>Pedagogy</td>
<td>Give sufficient time for personal and collaborative reflection and debriefing.</td>
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<tr>
<td>Pedagogy</td>
<td>Teachers to be flexible and sensitive to different paces of learning among learners.</td>
</tr>
<tr>
<td>Pedagogy</td>
<td>Encourage multiple modes of knowing (e.g. the rational, emotional and intuitive).</td>
</tr>
<tr>
<td>Pedagogy</td>
<td>Create a supportive and safe learning environment.</td>
</tr>
</tbody>
</table>

| Non-formal/ Community | Promote local stakeholder's involvement and contribution to planning and implementation of educational initiatives, giving voice to indigenous ways of learning. |

**Principle 2. Balance**

*In order to better meet diverse learning needs in the wake of a crisis, multiple ways of knowing and expression should be incorporated into learning processes in a balanced way. Learners' own unique experiences and cultural diversities should be seen as important assets in learning.*
| Policy | • Legitimize equal use of different learning styles  
|        | • Develop assessment and evaluation mechanisms to validate different learning styles  
|        | • Nurture comprehensive well-being of learners including the physical, mental, emotional and psychological through learning  
| Curriculum | • Develop learners' cultural sensitivity and tolerance  
|          | • Leave some flexibility to adjust learning contents based on learners' learning needs  
| Pedagogy | • Employ diverse teaching and learning approaches by putting more emphasis on the use of arts, story telling, and role play (in order to balance preponderance of transmissive modes of teaching)  
|          | • Create an appropriate balance between cognitive and non-cognitive learning; balance between participatory methods and information inputs  
|          | • Ensure a dynamic balance between theory and practice  
| Non-formal/Community | • Create links and synergies between formal learning and informal/community learning  

**Principle 3. Resilience**

*Enhancing resilience both at individual and community levels is vital for long-term survival for both human beings and the environment*

| Policy | • Protect and enhance ecological and cultural diversities, and indigenous knowledge through educational practices  
|        | • Embed emergency preparedness, adaptation, mitigation, resilience in national and regional educational policies  
| Curriculum | • Understand the interconnectedness between ecological and cultural diversities  
|          | • Develop life skills (e.g. communication; cooperation; conflict management; emotional coping skills with stress, anxiety and uncertainty; risk avoidance; critical thinking)  
|          | • Nurture learners' self-esteem  
|          | • Develop knowledge of self (i.e. critical awareness of own identity, perspectives, values and potentials)  

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| Pedagogy  | Use diverse ways of knowing (e.g. narratives/story telling, play, and future visioning)  
|          | Balance different modes of learning (e.g. individual, peer and group learning)  
| Non-formal/Community | Contribute to create a local community which respects diversities and pluralism, has social support networks and communication, as well as possesses a sense of trust, caring and reciprocity  
|          | Develop learners' livelihood skills (e.g. skills for local economy, agriculture and arts/crafts)  

**Principle 4. Social Justice**

*Social justice needs to be pursued by making sure of inclusiveness especially for those who have become marginalized and vulnerable in the wake of a crisis*

| Policy | Improve access to education especially for those who have been excluded from educational opportunities (e.g. girls, the poor, ethnic minorities)  
|        | Support diversifying pedagogies so that the quality of learning is open, enriched and enlivened for all  
| Curriculum | Examine the root causes of emergencies/crises which learners have experienced  
|           | Develop critical thinking, communication skills, and problem-solving skills as well as pro social values and attitudes  
| Pedagogy    | Incorporate cooperative teaching and learning approaches  
|            | Use personal and group reflections to deepen understanding of social justice aspects of the emergency  
|            | Create an inclusive learning atmosphere where learners can feel a sense of belongings  
|            | Promote a cultural and gender sensitive process of learning  
| Non-formal/Community | Help learners make visible changes in the immediate environment, however small  

**Principle 5. Interconnectedness**

*Helping learners to understand and realize profound interconnectedness at multiple levels*

| Policy | Legitimize whole person development including the intellectual, emotional/affective, physical, social, aesthetic, and spiritual  
| Curriculum | Understand interconnectedness between learners themselves and the wider world, as well as human beings and nature  
|            | Develop moral pro-social values such as compassion, tolerance, peace, justice  

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| Pedagogy | • Use various modalities of learning (e.g. metaphor, story, arts)  
• Use peer, cooperative and group learning so that learners can experience that their own learning depends upon others |
| Non-formal/Community | • Build formal and informal learning links by raising awareness of parents and members of communities |

**Principle 6. Anticipatory**

*In contexts affected by emergencies and crises, learners should be given opportunities to clarify future aspirations and needs individually and collectively, and develop pro-activity and capacities for coping with difficulties, dilemmas and setbacks and to taking positive actions.*

| Policy | • Embed emergency adaptation, prevention, preparedness, mitigation, and resilience into all educational policies |
| Curriculum | • Understand the dynamic relationship between past, present and future  
• Develop a vision for alternative and positive futures  
• Understand long-term consequences of present actions and potential future disasters and risks  
• Develop learner's capacity (skills, knowledge and attitude) to take concrete actions towards envisioned future images, to reduce risks, and to deal with difficult emotions |
| Pedagogy | • Build a scenario (active envisioning) for the preferred futures  
• Translate learner's visions of preferred futures into action plans, and implement the actions |
| Non-formal/Community | • Help learners make a visible change in the immediate environment, however small  
• Communicate potential future risks and take actions with members at community |
APPENDIX 5. Semi-structured individual interview guide (phase two)

- What is your role in Plan's Children and Young People at the Centre of Disaster Risk Reduction initiative and/or a multi-agency initiative on the Children in a Changing Climate (CCC)?

- What are key educational approaches being employed for both these initiatives? Why have those particular approaches been chosen? Do you see an evolution of approach as the two initiatives have unfolded?

- Can you evaluate the successes, setbacks and challenges so far with regard to the Children and Young People at the Centre of Disaster Risk Reduction initiative?

- If you apply my principles to the Children and Young People at the Centre of Disaster Risk Reduction initiative, would the approach have been different in any way? What advantages would they have brought? Would there have been downsides? More specifically, what would have been the learning, cost, operational, logistical, political implications? Please elaborate your views principle by principle, as well as estimating the possible or likely combined impact of the six principles taken as a whole.

- In what way, does the CCC initiative complement and/or advance Children and Young People at the Centre of Disaster Risk Reduction initiative?

- Can you evaluate the success and challenge so far with regard to the CCC initiative?

- What are key achievements you would like to see through the CCC initiative?

- If you apply my principles to the CCC Initiative, would the approach be different from one you currently envisage? What would be the learning, cost, operational, logistical, political implications? Please elaborate your views principle by principle, as well as estimating the possible or likely combined impact of the six principles taken as a whole.

- What sorts of the climate change-induced emergencies and challenges do you envisage globally and locally (within the contexts in which you work)? In your view, how effective is the CCC approach in the face of those challenges?

- Which elements of the principles are helpful or unhelpful, in applying them to the contexts affected by climate change-induced emergencies and challenges? Please elaborate your answer.
Given that climate change scientists are predicting an ever more dire future with ever more certainty, do you think the CCC is appropriate and fit for purpose? Is it built on a 'slow burning' (i.e. incremental, not imminent and stoppable) view of climate change or a 'fast burn' (imminent, likely to be abrupt and runaway) view of climate change? Is the approach reformist or transformative? Would you see the application of my principles as a reformist or transformative step?
APPENDIX 6. Key insights and issues arising from a study of two linked cases (phase two)

Phase two of the research (for PhD Thesis titled 'Navigating holistic and sustainable learning: Challenges and opportunities in ongoing and anticipated emergencies') was conducted to investigate the applicability of and educational practitioners' receptivity to the holistic and sustainable learning principles emerging from the phase one of the research. Two linked ongoing initiatives of the NGO Plan International, Children and Young People at the Centre for Disaster Risk Reduction programme and its organically emerging follow-up multi-agency initiative, Children in a Changing Climate programme were chosen as cases. The former was chosen because of its intention to address root causes of emergencies and identify long-term solutions, and the latter for its anticipatory focus on impacts of climate change, which is a current gap in both the fields of emergency education and sustainability-related education. The analysis is informed by qualitative data emerging from the interactions with eight research participants as well as a review of relevant organizational or programme documentations.

**Principle specific points**

1. Flexibility

   - This principle is considered to resonate well with a rights based approach (e.g. context and cultural sensitivity) and climate change adaptation (e.g. self-determination, local ownership, context sensitivity) which these cases employ

   - Frequent two-way communications between teachers and students are critical in incorporating flexible learning paces. Two-way communications in meaning making processes are also important in coping with current and future impacts of climate change

2. Balance

   - This principle is considered to be in line with the rights based approach which those two cases employ

   - Small group learning should be highlighted more strongly as an effective learning mode in the aftermath of emergencies where tensions often arise among different groups
3. Resilience

- Resilience is a familiar concept for those who work for disaster risk reduction and climate change adaptation.

- Developing individual coping capacities is critical in relation to climate change but what it means seems to differ depending on the assumptions about climate change.

- Enhancing the well-being of communities as a whole is considered more important than 'teaching around coping specific to any one disaster or around the science behind any one disaster'.

- All stakeholders' active participation in planning, implementation, monitoring should be highlighted more strongly as an important aspect of resilience.

4. Social Justice

- The principle of social justice is considered to resonate well with the rights based approach.

- There are practical difficulties in involving those who have been marginalized in learning. Some of the useful strategies include: creating learning opportunities at the community, long term engagement with the community, a small group learning, and Child Friendly Spaces.

- The interface between armed-conflicts and environmental disasters, as well as the interface between conflicts and climate change require more attentions.

- It is important to address the power issue between a teacher and students.

- It is important to problematize the notion of inclusion: who shall include who?; into what system are the marginalized people included?'

5. Interconnectedness

- 'Pro-social values' should be integrated carefully because of their different cultural implications.

- Whole person development is currently less emphasized in these two initiatives.
• The use of cross cultural and peer to peer learning has been effective to raise critical awareness for social injustice

6. Anticipation

• This is a familiar concept for those who work for disaster risk reduction and climate change adaptation

• There is a need for a more future-oriented and creative approach. It is important to build upon what already exists in community

• Visioning exercises are proven to be effective in facilitating individual and collective actions particularly regarding climate change

• Visions of personal future should be connected with regional, national and global futures of a healthier society

General points

• Participating educational practitioners expressed their sense of the relevance of the suggested principles to a considerable degree, including to non-emergency contexts

• There are challenges in applying the suggested principles in the resource and capacity constrained contexts

• There are issues of assessment and evaluation of holistic and sustainable principles within the dominant mechanistic educational thinking and practice

• A paradoxical nature of the holistic principles has become salient. There is the danger of the principles being treated uncritically and applied superficially without ensuring an overall coherence. The suggested principles could be used for both a status-quo confirmative agenda and a transformative agenda
[DATE]

Dear [NAME OF EMERGENCY EDUCATOR]:

I would like to invite you to participate in research I am conducting as part of my doctoral studies in education at the University of Plymouth, U.K. The title of the research is 'Education in response to emergencies: Challenges and possibilities of application of sustainability principles in emergency education.' The study will examine the interface between emergency education and education for sustainable development, including the latter's sister educations such as education for sustainability, education for sustainable futures, and sustainability education, in order to explore more comprehensive educational responses towards emergencies and crises.

So far, I have undertaken research into governmental, academic and professional literature on emergency education, education for sustainable development, and the latter's sister educations. This has enabled me to begin mapping out the field while also raising a lot of questions. My next step is to interview ten key educators in those fields. Following that, my intention is to examine the applications of sustainability principles, which will be identified during the study, to emergency education. The frameworks and/or models will be discussed with six educational officers from one emergency education initiative as a case study.

Through my literature search, you came regularly to my notice as a key thinker in emergency education. Accordingly, I am writing to invite you to participate in the research by being one of the emergency educators interviewed.

Interviews can be undertaken on a person-to-person basis or using video (or telephone) conference or computer conference facilities depending on your availability and convenience. I envisage two interviews in total and I would like to have at least one face-to-face interview. The first interview, if person-to-person, will last 60-90 minutes and will be semi-structured conversation around questions laid out in the attached guides of questions. The aim of the first individual interview is twofold. Firstly, it is to elicit, even extend, your latest thinking of emergency education, which I will not be able to obtain just by reading your publication. Secondly, it is to explore your view on interface between emergency education and education for sustainable development.
The interview will be tape-recorded with your prior permission and be transcribed for analysis. Full transcription of first interview will be sent to you and you will have the opportunity to make amendments, additions and deletions to the script, which I will honour. I will also create an anonymous summary documents of issues emerging from first interview with those who within your own field for your responses to and reflections.

The second interview, a few weeks later, will last 45-60 minutes if person-to-person, and consist of questions in the schedules not addressed in the first interview plus follow-up questions to things said in the first interview as well as your reflection to the brief summary document.

Second individual interview will be also transcribed and it will be sent to you for amendments, additions and/or deletions to what is written. Through interactions with the participants during the first phase and continuous literature review, I will develop frameworks and/or models for sustainability oriented emergency education. The frameworks and/or models will be also sent to you for your reflections and feedback. A model/framework will be finalized with feedback from the participants.

Should the interview be by teleconference or computer conference, we can jointly agree to conduct the interview in smaller sections. If we use computer conferencing, then time involved will depend upon whether you have chat line facilities to hand or whether you prefer to respond to questions using an ongoing exchange of emails

Following ten individual interviews, I am planning to conduct a case study with six educational officers from an emergency education initiative and explore their views on the suggested model/framework and their potential applicability to their own initiative. An anonymous summary document out of six individual interviews will be created and sent to all the research participants for their information.

I do not foresee any significant risk to your participating in the research. As you will see from the attached, the questions are asking nothing about you personally but simply trying to elicit your views on the origins, nature, development, impact of emergency education as well as the interface between emergency education and education for sustainable development. Data will be kept anonymously. You will be given the opportunity to choose a pseudonym and you will also be assigned a code in all computer files and transcriptions. You should be clear, however, that, given the prominent position you occupy in emergency education and given the limited community of emergency education advocates, some people working in the same field may be able to identify you from what you say. Beyond myself, only my supervisory team, Professor David Selby and Professor Brian Chalkley will have access to data emanating from our interviews. Because of your potential significant contribution to theory development, if you prefer, I will use your real name in order to give you academic credit.
All the data will be kept in locked files in my locked room in my residence. After one year of completion of my thesis, interview tapes and a copy of your interview transcripts will be completely destroyed.

I am very grateful for the interest you have showed in participating in this research when we communicated informally via email. Could you now confirm your position by completing the attached form? Please note that absolutely no negative consequences will follow from your refusal to participate or from your decision at any point to withdraw from participating (if you withdraw I will destroy all data collected). If I have not received your form within 14 days I will contact you again to ascertain your position. Thank you very much.

Yours sincerely

Fumiyo Kagawa

Address: Centre for Sustainable Futures
University of Plymouth, Drake Circus, Plymouth PL4 8AA, U.K.
Telephone: (+44)(0)1752 238664
Email: fumiyo.kagawa@plymouth.ac.uk

Director of Studies
Professor David Selby
Email: david.selby@plymouth.ac.uk
Consent Form

[PLEASE CHECK EACH ITEM, SIGN BOTH COPIES, RETURNING ONE]

______ I have read Fumiyo Kagawa's letter, understand the nature of her research project, and understand what is being requested of me.

______ I agree to participate in the two semi-structured conversational interviews as described in the letter.

______ I agree to having the interviews audio-taped.

______ I understand that, although every effort will be made to respect my anonymity, there is some chance of my being recognized given my prominent position within emergency education.

______ I would prefer for the researcher to use my real name in the thesis.

______ I understand that I will be given the opportunity to vet and approve transcriptions of interviews and make amendments, deletions and/or additions as I see fit.

______ I understand that I will be given the opportunity to vet and approve verbatim quotations from the interviews with me that are included in the final version of the thesis.

______ I would like to receive a summary of final results of the study.

Signed:

Date:

Name (in block letters):

Any comment if you wish
[DATE]

Dear [NAME OF SUSTAINABILITY EDUCATOR]

I would like to invite you to participate in research I am conducting as part of my doctoral studies in education at the University of Plymouth, U.K. The title of the research is 'Education in response to emergencies: Challenges and possibilities of application of sustainability principles in emergency education.' The study will examine the interface between emergency education and education for sustainable development, including the latter's sister educations such as education for sustainability, education for sustainable futures, and sustainability education, in order to explore more comprehensive educational responses towards emergencies and crises.

So far, I have undertaken research into governmental, academic and professional literature on emergency education, education for sustainable development, and the latter's sister educations. This has enabled me to begin mapping out the field while also raising a lot of questions. My next step is to interview ten key educators in those fields. Following that, my intention is to examine the applications of sustainability principles, which will be identified during the study, to emergency education. The frameworks and/or models will be discussed with six educational officers from one emergency education initiative as a case study.

Through my literature search, you came regularly to my notice as a key thinker in education for sustainable development. I would also like take an advantage of your participation in the 'think tank on theory and practice of sustainability-oriented education and its implications for higher education' which is jointly hosted by Schumacher College and the Centre for Sustainable Futures from 6-11 November 2005.

The first interview will last 60-90 minutes and will be semi-structured conversation around questions laid out in the attached guides of questions during your visit in Schumacher College. The aim of the first individual interview is twofold. Firstly, it is to elicit, even extend, your latest thinking of education for sustainable development, which I will not be able to obtain just by reading your publication. Secondly, it is to explore your view on the interface between emergency education and education for sustainable development. The interview will be tape-recorded with your prior permission and be
transcribed for analysis. Full transcriptions of interviews will be sent to you and you will have the opportunity to make amendments, additions and deletions to the script, which I will honour. I will also create an anonymous summary documents of issues emerging from first interview with those who within your own field for your responses to and reflections.

The second interview, a few weeks later, can be undertaken on a person-to-person basis or using video (or telephone) conference facilities depending of your availability and convenience. If it is on a person-to-person basis, the interview will last 45-60 minutes and consist of questions in the schedules not addressed in the first interview plus follow-up questions to things said in the first interview as well as your reflection to the brief summary document. Second individual interview will be also transcribed and it will be sent to you for amendments, additions and/or deletions to what is written. If it is difficult to have a second interview on a face-to-face basis, the interview will be conducted by teleconference or computer conference. We can jointly agree to conduct the interview in smaller sections. If we use computer conferencing, then time involved will depend upon whether you have chat line facilities to hand or whether you prefer to respond to questions using an ongoing exchange of emails.

Through interactions with the participants during the first phase, I will develop frameworks and/or models for sustainability-oriented emergency education. The frameworks and/or models will be also sent to you for your reflections and feedback. A model/framework will be finalized with feedback from the participants.

Following ten individual interviews, I am planning to conduct a case study with six educational officers from an emergency education initiative and explore their views on the suggested model/framework and their potential applicability to their own initiative. An anonymous summary document out of six individual interviews will be created and sent to all the research participants for their information.

I do not foresee any significant risk to your participating in the research. As you will see from the attached, the questions are asking nothing about you personally but simply trying to elicit your views on the origins, nature, development, impact of education for sustainable development as well as the interface between emergency education and education for sustainable development. Data will be kept anonymously. You will be given the opportunity to choose a pseudonym and you will also be assigned a code in all computer files and transcriptions. You should be clear, however, that, given the prominent position you occupy in education for sustainable development and given the limited community of education for sustainable development advocates, some people working in the same field may be able to identify you from what you say. Beyond myself, only my supervisory team, Professor David Selby and Professor Brian Chalkley will have access to data emanating from our interviews. Because of your potential significant contribution to theory development, if you prefer, I will use your real name in order to give you academic credit.
All the data will be kept in locked files in my locked room in my residence. After one year of completion of my thesis, interview tapes and a copy of your interview transcripts will be completely destroyed.

I am very grateful for the interest you have showed in participating in this research when we communicated informally via email. Could you now confirm your position by completing the attached form? Please note that absolutely no negative consequences will follow from your refusal to participate or from your decision at any point to withdraw from participating (if you withdraw I will destroy all data collected). Thank you very much.

Yours sincerely

Fumiyo Kagawa

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_____ I understand that I will be given the opportunity to vet and approve verbatim quotations from the interviews with me that are included in the final version of the thesis.

_____ I would like to receive a summary of final results of the study.

Signed:

Date:

Name (in block letters):

Any comment if you wish
[Date]

Dear Colleague:

I would like to invite you to participate in research I am conducting as part of my doctoral studies in education at the University of Plymouth, U.K. The working title of the research is 'Education in response to emergencies: Challenges and possibilities of application of sustainability principles in emergency education.' The study will examine the interface between emergency education and education for sustainability, including the latter's sister educations such as education for sustainable development, education for sustainable futures, and sustainability education, in order to explore more comprehensive educational responses towards emergencies and crises.

So far, I have undertaken research into governmental, academic and professional literature on emergency education, education for sustainable development, and the latter's sister educations. I have then interviewed key thinkers in both fields of emergency education and education for sustainability. From my literature review and interviews, I have come up with the holistic and sustainable principles which could be applicable to the emergency education situations. My next step is to have conversational individual interview with five/six educators within a chosen emergency education initiative in order to examine the applications of principles which I have developed to particular emergency education initiatives.

In my search for a case study initiative, I have learned about Plan's Children and Young People at the Centre of Disaster Risk Reduction and a multi-agency initiative on Children in a Changing Climate. Reflecting upon the increasing importance and urgency for addressing the anticipated and actual climate change triggered crises as well as a current gap in this area in the field, exploring these initiatives as case studies will be very valuable for my research.

As a part of the case study, I would like to conduct a conversational semi-structured individual interview, which has two purposes. First, it aims at eliciting participant's personal narratives in the initiative; Second, it aims at eliciting their views and reflections on the applicability of the suggested principles to the Children and Young People at the Centre of Disaster Risk Reduction and/or Children in a Changing Climate.
initiatives. The interview would take 60-90 minutes in person or via telephone/email
conversation facility according to the convenience of the interview participants. The
interview will be audio-recorded with prior consent for analysis purpose and full
transcription of the interview will be sent to you, so that you can suggest amendments,
additions and/or deletions to what is written. An anonymous summary document out of
five/six interviews will be created and sent to all the research participants for their
information.

I do not foresee any significant risk to your participating in the research. As you will
see from the attached, the questions are simply trying to elicit your views on the origins,
nature, development of the initiative as well as your views on the suggested principles.
Data will be kept anonymously. You will be given the opportunity to choose a
pseudonym and you will also be assigned a code in all computer files and
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the Children and Young People at the Centre of Disaster Risk Reduction and/or
Children in a Changing Climate initiatives, some people working in the same field may
be able to identify you from what you say. Because of your potential significant
contribution to theory development, if you prefer, I will use your real name in order to
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your form within 7 days I will contact you again to ascertain your position. Thank you
very much.

Yours sincerely,

Fumiyo Kagawa

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CONSENT FORM

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_____ I agree to participate in one semi-structured individual interview as described in the letter

_____ I agree to having the interview audio-recorded.

_____ I understand that, although every effort will be made to respect my anonymity, there is some chance of my being recognized given my prominent position within the Children and Young People at the Centre of Disaster Risk Reduction and/or Children in a Changing Climate Initiatives.

_____ I would prefer for Fumiyo Kagawa to use my real name in the thesis.

_____ I understand that I will be given the opportunity to vet and approve transcriptions of interviews and make amendments, deletions and additions as I see fit.

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Signed:

Date:

Name (in block letters):

Any comment if you wish
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