

Conceptual Landscapes of Global Environmental Conscientization

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1. Abstract

The ongoing debate on the ecological climate³ and the possible courses of action⁴ suggests the need for a global consensus or mitigation⁵ towards an informed pedagogical approach on climate change.⁶ In 2006, a UK government white paper (Stern report) “identified climate change as a current challenge, not a future threat. The influential Stern report also identified three key elements in response to climate change, of which two – technological transfer and behavioural change – have clear implications for education”⁷ Freire argues:

‘When people lack a critical understanding of their reality, apprehending it in fragments which they do not perceive as interacting constituent elements of the whole, they cannot truly know that reality.’⁸

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³The National Academies (2009) *Ecological Impacts of Climate Change Booklet* [Online] Available at: http://oceanservice.noaa.gov/education/pd/climate/teachingclimate/ecological_impacts_of_climate_change.pdf [Accessed: 21 August 2015]

⁴Dessler, Andrew E. Parson, (2010) *The Science and Politics of Global Climate Change: A Guide to the Debate* p.18 Second Edition, Cambridge, Cambridge University Press.

⁵Intergovernmental Panel on Climate Change (2014) *IPCC Fifth Assessment Report Working Group III Report “Climate Change 2014: Mitigation of Climate Change”* [Online] Available at: https://www.ipcc.ch/pdf/assessment-report/ar5/wg3/ipcc_wg3_ar5_summary-for-policymakers.pdf [Accessed: 6 June 2015]

⁶Haslett, Simon K., France, Derek and Gedy, Sharon (2014) *Pedagogy of Climate Change* Chapter 1. York, Higher Education Academy

⁷Bangay, Colin. Blum, Nicole. (2009) *Education Responses to Climate Change and Quality: Two Parts of the Same Agenda?* [Online] International Journal of Educational Development. Available at: <http://eprints.ioe.ac.uk/6281/1/Bangay2010Education359.pdf> [Accessed: 3 August 2015]

⁸Freire, Paulo (1996) *Pedagogy of the Oppressed* London, Penguin Books

The report also pointed to the critical human unawareness of climate change. Conscientization or critical consciousness⁹ of climate change is crucial.¹⁰ Critical consciousness being a moral awareness, Mustakova-Possardt argues, propels individuals to dis-embed from their cultural, social, and political environment, and engage in a responsible critical moral dialogue with it, making active efforts to construct their own place in social reality and to develop internal consistency in their ways of being.¹¹ An informed pedagogical approach to climate change relates to social change and empowerment within communities creating what Freire¹² would identify as ‘praxis’. The critical question posed in this paper is what level of critical consciousness does the population currently possess and are the communities engaged adequately empowered to develop an informed pedagogical approach?

Codification is identified by Freire as a way of gathering information in order to build up a picture (codify) around real situations and real people.¹³ This method has been consciously applied throughout this research. The paper is underpinned by a set of Freire concepts (conscientization, praxis, codification, community engagement) as an intellectual framework to evaluate the field-work findings. Given that Freire’s concepts advocate knowledge, action or practice and reflection, and the ultimate aim of global environmental issues, and this paper, is to instil these concepts on a critical mass scale, it seems more than appropriate to apply these concepts to this study.

⁹Mustakova-Possardt, Elena.(1998) *Critical Consciousness: An Alternative Pathway for Positive Personal and Social Development: Journal of Adult Development* Berlin, Kluwer Academic Publishers

¹⁰Haslett, Simon K., France, Derek and Gedy, Sharon (2014) *Pedagogy of Climate Change* Chapter 1. York, Higher Education Academy

¹¹Mustakova-Possardt, Elena.(1998) *Critical Consciousness: An Alternative Pathway for Positive Personal and Social Development: Journal of Adult Development* Berlin, Kluwer Academic Publishers

¹²Bentley, Lesley (1999) *A Brief Biography of Paulo Freire* [Online] Available at: <http://ptoweb.org/aboutpto/a-brief-biography-of-paulo-freire/> [Accessed: 3 August 2015]

¹³Emmy J. Rugut, Ahmed A. Osman (2013) “*Reflection on Paulo Freire and Classroom Relevance*” *American International Journal of Social Science* Vol. 2 No. 2; March 2013 [Online] Available at: http://www.aijssnet.com/journals/Vol_2_No_2_March_2013/3.pdf [Accessed: 17 June 2015]

This paper, in essence, explores levels of environmental conscientization on an international scale, giving examples from field research and case studies based on active participation and community engagement,¹⁴ and collaboration with three diverse communities. The concern with 'participation' in social change processes builds on the work of participatory approaches to social transformation outlined by Freire. He explains:

“This early work was essentially a form of popular education that saw participation as a means of engaging the excluded and disempowered in processes of learning and social transformation that would enable them to become aware of and able to overcome the structures of oppression that shaped their lives.”¹⁵

In this paper the ability of these different communities to react to social and environmental transformations are evaluated. The pedagogical approaches applied in engaging with these communities and their impact or added value are compared and contrasted. The level of conscientization regarding this subject among the case study groups research is evaluated, and those communities' perceptions of potential social and political change is also explored. The research concludes with theoretical and practical suggestions on how to mobilise social change towards an applied conscientization regarding environmental issues. It considers the implication of such suggestions on local and global communities, and the extent to which applied volunteering¹⁶ can add value and empower people to make a positive impact.

¹⁴Archer, Anita L. Hughes, Charles A. (2012) *Explicit Instruction: Effective and Efficient Teaching* [Online] Available at:

http://www.doe.virginia.gov/instruction/virginia_tiered_system_supports/training/cohort/2012/oct/active_participation_reference_sheet.pdf [Accessed: 29 August 2015]

¹⁵Institute of Development Studies (2010) *Literature Review on Active Participation and Human Rights Research and Advocacy* [Online] Available at:

<https://www.ids.ac.uk/files/dmfile/LiteratureReviewonActiveParticipationandHumanRightsResearchandAdvocacy.pdf> [Accessed: 19 August 2015]

¹⁶Volunteering England (2008) *Volunteering England: Definitions of Volunteering* [Online] Available at:

<http://www.volunteering.org.uk/component/gpb/definitions-of-volunteering&gh=YTo5OntpOjA7czo1OiJsZWdhdhCI7aToxO3M6NzoibGVnYWxseSI7aToyO3M6ODoibGVnYWxp dHkiO2k6MztzOjEwOjJsZWdhdhGI0aWVzljtpOjQ7czo2OjJpc3N1ZXMiO2k6NTtzOjU6ImZlc3VlljtpOjY7czo2OjJpc3 N1ZWQiO2k6NztzOjEwOjJsZWdhdhCBpc3N1ZXMiO30> [Accessed September 2015]

Consequently, this involves moving beyond the ‘banking model of education’ on environmental matters to a more ‘praxis/reflex’ model.

2. Introduction

"Observations throughout the world make it clear that climate change is occurring, and rigorous scientific research demonstrates that the greenhouse gases emitted by human activities are the primary driver."¹⁷

In addition, most of the leading scientific organizations worldwide have issued public statements¹⁸ endorsing this position.¹⁹ This is an alarming observation, and there is an ever-growing amount of evidence supporting the continued anthropological detrimental effect on our planet and its ecosystems. For example, in 2013, the Intergovernmental Panel on Climate Change (IPCC) concluded that:

“Warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia. The atmosphere and ocean have warmed, the amounts of snow and ice have diminished, sea level has risen, and the concentrations of greenhouse gases have increased.”²⁰

The effects of climate change are starting to be seen around the globe, and the IPCC regularly

¹⁷American Association for the Advancement of Science (2009) *Statement on climate change from 18 scientific associations* [Online] Available at:

http://www.aaas.org/sites/default/files/migrate/uploads/1021climate_letter1.pdf [Accessed 2 February 2015]

¹⁸ State of California Governors Office of Planning and Research (2011) *List of Worldwide Scientific Organizations (Scientific Organizations That Hold the Position That Climate Change Has Been Caused by Human Action)* [Online] Available at: http://opr.ca.gov/s_listoforganizations.php [Accessed 15 May 2015]

¹⁹Cook J. et al (2013) *Quantifying the consensus on anthropogenic global warming in the scientific literature*, *Environmental Research Letters Vol. 8 No. 2* Philadelphia, IOP Publishing Ltd

²⁰NASA Earth Observatory (2013) *Key Science Points from the 2013 IPCC Report* [Online] Available at: <http://earthobservatory.nasa.gov/blogs/earthmatters/2013/09/27/key-science-points-from-the-2013-ipcc-report> [Accessed: 4 June 2015]

assesses the impact of energy systems, transport, industry, forestry and agriculture.²¹ The American Geophysical Union argues that "Human-induced climate change requires urgent action. Humanity is the major influence on the global climate change ... Rapid societal responses can significantly lessen negative outcomes"²²

This research, however, concerns the large percentage of the population who do not work for the IPCC or know of their recommendations to policy makers. Further, they are not affiliated with environmental groups nor are they climate scientists. These are the local residents within global communities who are concerned with mundane daily matters. The level of understanding concerning the current plight of the global community is explored; given that the climate and climate change affects all parts of society.

With this in mind, this paper undertakes an investigation into the level of knowledge and understanding of the above issues in three different areas of the world taking evidence from communities domiciled in a city, Jakarta in Indonesia (see 3.1); a town, Burnley in Lancashire in the UK (see 3.2); and a village, Bhimpokhara in Nepal (see 3.3) using Freire concepts to evaluate the enquiry. These three areas were chosen as they provide an insight into different communities in vastly dissimilar areas of the globe; each representing its own level of conscientization and surrounding environmental circumstances. It was anticipated that focusing on a city, a town and a village would provide an indicative insight into the extent that critical knowledge is possessed regarding environmental issues. Further, it would also shed light on expedient methods of community engagement using Freire's concepts as a

²¹Intergovernmental Panel on Climate Change (2007) *Climate Change 2007, Mitigation of Climate Change* [Online] Available at: https://www.ipcc.ch/pdf/assessment-report/ar4/wg3/ar4_wg3_full_report.pdf [Accessed: 14 June 2015]

²²NASA (2015) *Scientific consensus: Earth's climate is warming* [Online] Available at: <http://climate.nasa.gov/scientific-consensus> [Accessed: 17 June 2015]

guide thereby adding value to developing an informed pedagogical approach on addressing climate change.

3. Community Engagement: Case Studies (city, town and village)

3.1 Jakarta, Island of Java, Indonesia – (City)

“Jakarta already faces regular floods, but with the current land subsidence, prognoses are that the whole of North Jakarta will be below sea level by 2050.”²³

According to the Indonesian Netherlands Association and the local population, rivers that run through Jakarta now regularly flood every year. The people living in Jakarta with whom this research engaged with associated this with “continued deforestation which has caused erosion of the land further upriver”²⁴ which they argue is having a detrimental effect on the city and its people. This claim can be partially supported through evidence recorded upriver from Jakarta, detailing the inability of the rivers to handle excess rainfall.²⁵ Furthermore, Jakarta is considered as one of the most vulnerable cities to climate-related disaster, including flooding, sea-level rise, and storm surge.²⁶ In fact,

“Flooding is a dominating environmental problem in Jakarta, where densely populated neighbourhoods referred to as ‘Kampongs’ are often the most prone to inundation. People living in these neighbourhoods are regularly made homeless for

²³The Indonesian Netherlands Association (2012) *Jakarta Flooding; A Public Responsibility or Private Investment?* [Online] Available at: <http://www.ina.or.id/images/stories/magazine/2012Mar/Sustainability-JakartaFlooding.pdf> [Accessed: 24 May 2015]

²⁴ Whalley, B. (2014) *Fieldwork study notes* (not published)

²⁵Sagala S. et al (2013) *The evolution of risk and vulnerability in Greater Jakarta: Contesting Government Policy in dealing with a megacity's exposure to flooding. An academic response to Jakarta floods in January 2013* [Online] Available at: <http://irgsc.org/pubs/wp/IRGSCWP002jakartaflood.pdf> [Accessed: 12 June 2015]

²⁶Firman, Tommy A. (2011) *Potential climate-change related vulnerabilities in Jakarta: Challenges and current status* [Online] Available at: http://www.researchgate.net/profile/Tommy_Firman2/publication/229166022_Potential_climate-change_related_vulnerabilities_in_Jakarta_Challenges_and_current_status/links/02e7e52d108826561d000000.pdf [Accessed: 28 July 2015]

several days, sometimes weeks, and have to deal with disruptions in work during floods, while facing an increased risk of water-related diseases.”²⁷

Applied volunteering and direct consultation and dialogue conducted with Jakarta’s voluntary flood aid rapid response team revealed that the cities and communities living around the rivers are the poorest,²⁸ owning the cheapest real estate in the areas where the flooding hits worst.²⁹ Indonesians use the term Kampong, which literally means ‘village’, to denote a poor neighbourhood of a city.³⁰ The volunteers on the team recollect accounts of residents in Kampongs who hold on until the very last second before they reluctantly agree to being evacuated from their homes.

These communities are repeatedly affected by climate change with dire consequences. Furthermore, while the conscientization of this issue was evident the sense of powerlessness among the population was equally obvious. Thereby, leaving a dilemma regarding the most effective redress for a compounding problem!

3.1.1. The pedagogical approaches of the different groups include direct engagement with the local communities conducted through applied volunteering with the support of the Voluntary Jakarta Flood Aid Rapid Response Team (VJFT). This was a locally effective

²⁷Centre for Development Studies (ZELF) Institute of Geographical Sciences Freire Universität Berlin (2011) *Deconstructing Flood Risks – A Livelihood and Vulnerability Analysis in Jakarta, Indonesia* [Online] Available at: http://www.geo.fu-berlin.de/geog/fachrichtungen/anthrogeog/zelf/Medien/download/Berlin_Geographical_Papers/BGP40_Deco_nstructing-flood-risks.pdf [Accessed 3 June 2015]

²⁸Firman, Tommy A. (2011) *Potential climate-change related vulnerabilities in Jakarta: Challenges and current status* [Online] Available at: http://www.researchgate.net/profile/Tommy_Firman2/publication/229166022_Potential_climate-change_related_vulnerabilities_in_Jakarta_Challenges_and_current_status/links/02e7e52d108826561d000000.pdf [Accessed: 28 July 2015]

²⁹Environment and development in coastal regions and in small islands (1999) *Socio-economic conditions in communities in the Jakarta Bay area and the Seribu Islands* [Online] Available at: <http://www.unesco.org/csi/pub/papers/mega9.htm> [Accessed: 25 July 2015]

³⁰University College London (2003) *Understanding Slums: Case Studies for the Global Report 2003* [Online] Available at: http://www.ucl.ac.uk/dpu-projects/Global_Report/cities/jakarta.htm [Accessed 6 June 2015]

reactionary measure for Jakarta's annual flooding problem, as many people were being successfully evacuated. However, sustained regular flooding suggested a greater need for urgent action. Campaign groups such as Greenpeace Indonesia highlight the effects of issues, like deforestation, and provide an effective media presence helping to raise awareness among communities.³¹ During applied volunteering with Greenpeace Indonesia, consultation and dialogue was initiated with the Indonesian Government by the researcher. It was discovered that plans were already in place for the Great Wall, or Garuda, of Jakarta which included infrastructure work to the canals and rivers that run through Jakarta.³² Direct dialogue was opened with the Ministry for Forestry regarding deforestation in Indonesia. This was in response to the Indonesian Government announcing plans to classify plantations as forests in order to develop further lowland rainforests.³³ This was condemned by Greenpeace and a number of other environmental and civil society organisations.³⁴

In an attempt to redress the issues, the following evidence was collected through one to one interviews and focus group engagement following Freirean principles of dialogue³⁵ or consultation with four parties: people living in affected communities, or Kampung, in Jakarta, Jakarta's Rapid Voluntary Flood Aid Response Team, Greenpeace Indonesia and the Indonesian Government. From accounts collected in the Kampung there was very much a shared belief that only government intervention can provide respite from the flooding.

³¹Greenpeace (2013) *Down to zero* [Online] Available at:

<http://www.greenpeace.org/international/Global/international/publications/forests/2013/Down-To-Zero.pdf> [Accessed: 1 June 2015]

³²Reuters (2014) *The Great Wall of Jakarta* [Online] Available at: <http://uk.reuters.com/article/2014/12/22/us-environment-jakarta-seawall-idUSKBN0K017420141222> [Accessed: 12 April 2015]

³³Greenpeace (2013) *Down to zero* [Online] Available at:

<http://www.greenpeace.org/international/Global/international/publications/forests/2013/Down-To-Zero.pdf> [Accessed: 1 June 2015]

³⁴Greenpeace (2013) *Down to zero* [Online] Available at:

<http://www.greenpeace.org/international/Global/international/publications/forests/2013/Down-To-Zero.pdf> [Accessed: 1 June 2015]

³⁵The Freire Institute (2015) *Concepts used by Paulo Freire* [Online] Available at: <http://www.freire.org/paulo-freire/concepts-used-by-paulo-freire> [Accessed: 4 March 2015]

According to the resident volunteers in Jakarta's Voluntary Flood Aid Rapid Response Team, the Indonesian government had been unconcerned with the flooding issue until it started affecting the roads used by officials to get to and from the government offices.³⁶ Nevertheless, organised groups like Greenpeace Indonesia actively gather research and observations of further climate change throughout the country.³⁷ In response to the flooding the Indonesian government has sanctioned the construction of the Great Wall of Jakarta, however it remains to be seen if this will stop the effects of soil erosion and deforestation upriver.³⁸

The study in Jakarta gave an informed codified view of the social structure at work within the different groups engaged with the study. The process of developing a critical awareness of social reality through reflection and action is utilised by groups of empowered volunteers who risk their lives in the flood aid rapid response team. By being part of a larger organisation like Greenpeace Indonesia, further empowerment to work towards social change by challenging the Indonesian government can be possible but even this seemed a far cry for the communities in Kampongs.

3.2 Burnley, Lancashire, North West, UK – (Town)

³⁶ Whalley, B. (2014) *Fieldwork study notes* (not published)

³⁷ Greenpeace (2013) *Down to zero* [Online] Available at: <http://www.greenpeace.org/international/Global/international/publications/forests/2013/Down-To-Zero.pdf> [Accessed: 1 June 2015]

³⁸ Firman, Tommy A. (2011) *Potential climate-change related vulnerabilities in Jakarta: Challenges and current status* [Online] Available at: http://www.researchgate.net/profile/Tommy_Firman2/publication/229166022_Potential_climate-change_related_vulnerabilities_in_Jakarta_Challenges_and_current_status/links/02e7e52d108826561d00000.pdf [Accessed: 28 July 2015]

The area Hyndburn (where Burnley is situated) according to the 2011 census has approximately 10,000 BME people.³⁹ It was a group of participants from these areas that were engaged with for this research. A group of BME women ranging from 20 to 57 years of age were interested in learning more about the environment demonstrated by their enrolment on a short applied volunteering course called ‘Promoting Sustainable Environments.’

Despite the infrastructure for recycling, environmental education in local schools, and the presence of renewable energy wind-farms, the communities researched in the Burnley area were relatively disengaged and unconcerned with issues of climate change. In a recent study, it was found that people in most developing countries perceived climate change as a much greater threat than people in developed countries.⁴⁰ Recruitment for the short course was difficult, as many people indicated that it was irrelevant to their daily lives. The difficulty in recruiting for the course ‘Promoting Sustainable Environments’ pointed towards a sense of apathy among the local community towards awareness of climate change.

In total 10 people were enrolled on the course. The participants were initially gauged for their understanding of climate change. The discussions suggested that many were surprised by the impact of climate change on human existence.⁴¹ Hence, the importance of making it relevant to daily lives became paramount in engaging with this group. Following introductory lessons about the subject, applied volunteering activities were organised in the local area. These voluntary activities and events included tree planting, coppicing and woodland management, with further active learning sessions on permaculture and food growing.

³⁹Lancashire County Council (2011) *Lancashire's population by ethnicity 2011 Census* [Online] Available at: <http://www3.lancashire.gov.uk/corporate/web/?siteid=6120&pageid=41100> [Accessed: 2 June 2015]

⁴⁰Lee, Tien Ming. Et al (2015) *Predictors of public climate change awareness and risk perception around the world* [Online] Available at: <http://www.nature.com/nclimate/journal/vaop/ncurrent/full/nclimate2728.html> [Accessed: 16 August 2015]

⁴¹ Whalley, B. (2014) *Fieldwork study notes* (not published)

The group demonstrated a keen willingness to apply themselves in all activities and subsequent direct dialogue revealed that local litter pollution was a common concern. But its environmental impact had never been appreciated by the group. Equally, local flooding in nearby Hebden Bridge and Todmorden⁴² also fostered a critical consciousness of global concerns. This facilitated critical reflection based on local relevance on global behaviour.

3.3 Bhimpokhara, Baglung District (Dhawalagiri Zone), West Nepal – (Village)

Bhimpokhara, is located high in the foothills of the Himalayas in Nepal. Communities here live in relative isolation residing in collections of traditional Nepali houses spread throughout the mountainside.⁴³ The majority of the population either go to work in the fields each day, or work for months at a time away in the military or in the construction industry in neighbouring India.⁴⁴ During the research, observations of seasonal rituals and customs to bring about a good harvest were recorded; including religious fasting, buffalo sacrifice and public speeches from the village elders. They are a proud and traditional people that trace their ancestry back hundreds of years and have lived in a sustainable manner with little resources needed to be outsourced.⁴⁵

The environmental issue in this village is essentially litter pollution. Plastic packaged sweets and other goods are brought up from the nearest town of Baglung, a five hour jeep ride up

⁴²BBC (2012) *Mytholmroyd and Hebden Bridge hit by flooding* [Online] Available at: <http://www.bbc.co.uk/news/uk-england-leeds-18768291> [Accessed: 13 August 2015]

⁴³Nations Encyclopedia (2015) *Nepal - Housing* [Online] Available at: <http://www.nationsencyclopedia.com/Asia-and-Oceania/Nepal-HOUSING.html> [Accessed: 15 August 2015]

⁴⁴Rijal, Yashoda. (2013) *Socio-economic and Health Impact of Labour Migration in Nepal* [Online] Available at: <http://www.isa-sociology.org/publ/E-symposium/E-symposium-vol-3-2-2013/EBul-Rijal-Jul2012.pdf> [Accessed 19 July 2015]

⁴⁵ Whalley, B. (2014) *Fieldwork study notes* (not published)

through the mountains along rough terrain. However, given the poor infrastructure of the village, it is unable to deal with waste packaging which collects on the streets, around houses and the water fountain in the centre of the village.⁴⁶ A further noteworthy issue in the village relates to 'economic migration' - many of the young people leave the village in search of employment in the towns and cities. The population that remains in Bhimpokhara is a composition of young children and senior citizens. Consequently, limited human resources are available to plough the land and more importantly, retain the ancestral knowledge of medicinal plants located in surrounding mountains. Nevertheless, this was undertaken by the research team, viewing it as part of the empowerment process and ensuring that future generations would have access to this knowledge.

The process of developing a critical awareness of this social reality is in its formative stages, although there was increasing concern among the village elders about these issues. Historically, local people had eaten crops from their land, perhaps occasionally supplementing this with other locally sourced produce. But, this did not involve plastic packaging. Further, there seemed neither foreseeable solution nor capacity to address local litter concerns. In fact, both fieldwork observations and direct dialogue with villagers suggested a growing sense of powerlessness and despair among villagers.

To address this situation and empower the villagers, dialogue was opened up between the researchers and the village elders regarding their plight and possible solutions. The community seemed keen to participate in discussion, but were unsure as to how best tackle the problem. New products were still being brought up from the nearby town every three or

⁴⁶ <http://holeinthedonut.com/2011/04/11/trash-mentality-around-world/>

four weeks, and there was uncertainty about where this would eventually lead. According to Freire,

‘It is not enough for people to come together in dialogue in order to gain knowledge of their social reality. They must act together upon their environment in order critically to reflect upon their reality and so transform it through further action and critical reflection.’⁴⁷

No doubt, a transformational change was to be witnessed and praxis as a way of reflecting on the litter problem and reacting to it was in its formative stages but there was a lack of infrastructure or support from authorities in Baglung to meaningfully act. So, further dialogue with Resolve International⁴⁸ and the partner NGO in Baglung, Bhimapokhara Yuva Club (BYC) was an essential requisite to progress towards empowerment.

This involved direct dialogue with the residents of Bhimpokhara and surrounding villages. Codification, as a way of gathering information in order to build up a picture (codify) around real situations and real people, was key to understanding the issues in Bhimpokhara. Research was undertaken of the living conditions of people there and shared with the charity Resolve International for further aid work in the area. This mode of interaction swiftly revealed a profound sense of powerlessness. The local community very candidly expressed an absolute lack of knowledge, understanding and experience to secure such transformational change. In fact, the research in the village suggested that villagers were equally concerned the problem would exacerbate. The situation resembled, to the researchers at least, Freire’s criteria of an epoch, one which is,

⁴⁷The Freire Institute (2015) *Concepts used by Paulo Freire* [Online] Available at: <http://www.freire.org/paulo-freire/concepts-used-by-paulo-freire> [Accessed: 4 March 2015]

⁴⁸Resolve International (2011) *Combat child poverty in Nepal* [Online] Available at: <http://www.resolveinternational.org> [Accessed: 2 March 2015]

“... characterized by a complex of ideas, concepts, hopes, doubts, values and challenges in dialectical interaction with their opposites striving towards their fulfilment ...”

However, the aspired transformational change appeared a distant mirage due to the compounding powerlessness among villagers and marked absence of dialogue between them and the authorities. The absence of such core Freire concepts for transformational change suggested that there was a long journey ahead, and to achieve this further educational work was required to contribute to a heightened sense of community empowerment.

4. An Analysis: How does the ‘problem’ provide an opportunity to provide ‘conscientization’ as awareness raising?

The three case studies provide an interesting insight into the extent to which what factors can help or hinder the pathway of ‘powerless’ to ‘powerful’ employing ‘conscientization’ as a stratagem. Upon reflection, the process of developing conscientization of the social realities concerning climate change was found to be relative to the community engaged. The feeling of powerlessness was recorded to be the major factor in limiting action.

On Java, governmental changes have slowly started to appear since the major floods of 2007 which shook the Indonesian government into plans to build ‘the Great Wall of Jakarta.’⁴⁹The passage of time will, no doubt, reveal if the politicisation of this issue could finally prove to be its solution. Whilst changes had started this was very much reactive rather than pro-active. Despite flood measures being put into place annual flooding seems set to continue and members of the communities in Kampongs close to the river continue to suffer. Ironically,

⁴⁹Reeves, Sam (2014) ‘Great wall of Jakarta’ plan to combat floods [Online] Available at: <http://phys.org/news/2014-10-great-wall-jakarta-combat.html> [Accessed: 5 July 2015]

the direct dialogue between these communities and the Indonesian government continues to be minimal. This can only provide very limited empowerment, if any, as Freire suggests,

“Leaders who do not act dialogically, but insist on imposing their decisions, do not organize the people -- they manipulate them. They do not liberate, nor are they liberated: they oppress.”⁵⁰

The research suggests that ongoing grass roots work may help sustain wider behavioural change and a shift from powerlessness to empowerment. In this environment where issues surrounding climate change are politicized, recruitment for large active organised groups can help decrease the feeling of powerlessness. Members of the community are continuously recruited from all over Indonesia to become Greenpeace volunteers, and the continued media presence may further assist to educate the Indonesian population through ‘decodification’. A process, Freire explains,

‘... whereby the people in a group begin to identify with aspects of the situation until they feel themselves to be in the situation and so able to reflect critically upon its various aspects, thus gathering understanding. It is like a photographer bringing a picture into focus.’⁵¹

The engagement and educational work in Bhimpokhara with the partner organisation Resolve International and BYC made it possible to engage many members of the community. Direct dialogue with the local community and village elders brought about continued awareness and an understanding of the issues in the village. Further conscientization and community empowerment can come from continued applied volunteering focused on further dialogue between the communities, NGOs and the local authorities, raising awareness of the

⁵⁰Freire, Paulo (1996) *Pedagogy of the Oppressed* London, Penguin Books

⁵¹The Freire Institute (2015) *Concepts used by Paulo Freire* [Online] Available at: <http://www.freire.org/paulo-freire/concepts-used-by-paulo-freire> [Accessed: 4 March 2015]

environmental issues. Freire argues, “If the structure does not permit dialogue the structure must be changed”,⁵² this is quite applicable in this context.

In Burnley, the short course ‘Promoting Sustainable Environments’ did help increase knowledge and awareness of participants but further applied volunteering to continue conscientization of the people in this area is needed. The local community participants stated that they were more inclined to an attitudinal change in their actions (drive less, recycle, etc.) because a critical consciousness had been fostered. These small behavioural changes can potentially lead on to a more active participation. This research found that the communities engaged in Burnley (see 3.2) were the most disconnected from the issues surrounding climate change, when compared with the other two target groups (see 3.1 and 3.3) engaged. The research suggests that issues like global warming and large scale flooding have been heard of but the causes are not clear and any localised action seems irrelevant. People living in Western countries like the UK arguably have the most scope to act, but apathy towards climate change is a factor of concern in contrast to the other two places.

This describes the praxis model outlined by Freire, referring to the action and reflection that can be the result of experiential learning. The project conducted in Burnley followed this model, and by empowering participants through active volunteering, it aimed to avoid the ‘banking education’ model.⁵³

5. Recommendations and Conclusion

Critical consciousness, or conscientization, is a fundamental aspect of Freire's concept of popular education.⁵⁴ Popular education is grounded in notions of class, political struggle,

⁵²Freire, Paulo (1996) *Pedagogy of the Oppressed* London, Penguin Books

⁵³The Freire Institute (2015) *Concepts used by Paulo Freire* [Online] Available at: <http://www.freire.org/paulo-freire/concepts-used-by-paulo-freire> [Accessed: 4 March 2015]

⁵⁴Freire, Paulo (1996) *Pedagogy of the Oppressed* London, Penguin Books

and social transformation. The designation 'popular' is meant most of all to exclude the upper class and upper middle class. This research is primarily concerned with the 'regular' people within the community, who are currently disengaged by the theoretical and practical suggestions identified in this study. Freire talks of 'a pedagogy of hope' that enables the popular classes to develop their language and the anticipations of their new world. Here further elaborates that language is a route to the 'invention of citizenship'.⁵⁵

The theoretical and practical outcomes of this research suggest that the method of language or engagement was instrumental for the understanding of climate change for these communities. As this research has shown, engaging different audiences requires bespoke approaches. The three groups indicated a similar overarching sense of powerlessness or apathy towards actively seeking and engaging with the idea of social change leading on to, an enhanced applied environmental awareness. This is a common challenge in environmental education.⁵⁶ The increasing politicisation of environmental issues still requires voluntary organisations to empower communities. Giving people something local, positive and active to work towards in order to make an achievable and visible impact is crucial in battling this powerlessness and instigating social and behavioural change, e.g. the Burnley case study (see 3.2). The local element consolidates the relevance of the action to the participants.

This study has equally been underpinned by the concept of notion of 'decodification'. The challenge of discovering how this subject can be made relevant and brought 'into focus' for each community attempting to be engaged is the real key to successfully working towards an enhanced applied environmental awareness. Freire argues

⁵⁵Freire, Paulo (2014) *Pedagogy of Hope* p.31 New York, Bloomsbury

⁵⁶Gov.UK (2011) *Public attitudes to climate change and the impact of transport in 2011* [Online] Available at: <https://www.gov.uk/government/statistics/public-attitudes-to-climate-change-and-the-impact-of-transport-in-2011> [Accessed: 14 August 2015]

“it is not enough for people to come together in dialogue in order to gain knowledge of their social reality. They must act together upon their environment in order critically reflect upon their reality and so transform it through further action and critical reflection.”⁵⁷

Applied volunteering with larger organisations like Resolve International or Greenpeace further empowers communities to act, reflect and transform.

The conceptual landscape this study is underpinned by and its case studies indicate that the notion of powerlessness needs to be fully appreciated. As this research has shown, there are positive actions that can be undertaken by a community to empower itself. Equally, collaborating with larger organisations through applied volunteering opportunities towards community empowerment, mobilisation towards social change and enhanced applied action is also instrumental. It is the social myth of powerlessness that is a real barrier to be overcome. Freire states that “we all acquire social myths which have a dominant tendency, and so learning is a critical process which depends upon uncovering real problems and actual needs.”⁵⁸ Freire underlines the importance of developing a critical awareness or conscientization, of one’s social reality through reflection and then action. Action being fundamental, as it is the process of changing reality and negotiating empowerment.

⁵⁷The Freire Institute (2015) *Concepts used by Paulo Freire* [Online] Available at: <http://www.freire.org/paulo-freire/concepts-used-by-paulo-freire> [Accessed: 4 March 2015]

⁵⁸The Freire Institute (2015) *Concepts used by Paulo Freire* [Online] Available at: <http://www.freire.org/paulo-freire/concepts-used-by-paulo-freire> [Accessed: 4 March 2015]