Environmental Education and Gender: Voices from India and Brazil

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“Education is what provides wings for girls to fly.”

Malala Yousafzai – Pakistani activist and youngest-ever Nobel prizewinner, article from The Economist, 2015.

“Education does miracles in people's lives.
I am a miracle of education”

Marina Silva - Brazilian environmental activist and politician, presidential debate, 2010.

Abstract

Dramatic changes in the environmental patterns represent a threat to human beings and life on this planet. However, due to differences in the social roles and rights between women and men, a gender perspective is essential to understand how these changes in the environment are affecting individuals in their societies. Even though gender is appointed as a relevant factor when reflecting on the relationship human beings and nature, women’s knowledge, perspectives and needs are being overlooked by the Environmental Education research and theory. This research aims at investigating the relevance of a gender perspective in Environmental Education programs in societies where women are the main responsible for the household and childcare. To this end, the activities of two environmental NGOs – one from India and one from Brazil – have been investigated through the case study methodology. As per the methods applied, semi-structure interviews have been carried out with 10 women from both countries. Through gender lenses the formal and informal forces that influence social roles and power dynamics in the referred societies are analyzed. The empirical findings demonstrate that in both Indian and Brazilian societies women still are the main caretakers of the house and children. Such role implies the responsibility of deciding about energy and water consumption, waste management and other domestic expenditures. Empirical results suggest that when a woman is environmental-aware she has the potential to make more sustainable choices and thus educate other members of the family. However, being the main responsible for the private sphere can deprive women from playing a major role in the public level where key decision about the environment are taken. The present study represents a key contribution to the Environmental Education theory and research as it addresses the poorly explored field of Environmental Education and Gender issues.

Key words: Environmental Education, gender, Ecofeminism, India, Brazil.
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List of abbreviations

BRICS - Brazil, Russia, India, China and South Africa (association of five major emerging national economies)

COP 21 – Conference of Parties

DNA - Deoxyribonucleic Acid

EE – Environmental Education

FPE – Feminist Political Ecology

GAD - Gender and Development

ILO – International Labour Organization

NGO - Non-Governmental Organization

OSCIP - Organização da Sociedade Civil de Interesse Público

SDGs – Sustainable Development Goals

UK – United Kingdom

UMAPAZ - Universidade Aberta do Meio Ambiente e Cultura de Paz

UN – United Nations

UNESCO - United Nations Educational, Scientific and Cultural Organization

UNDP – United Nations Development Program
Chapter 1 - Introduction

1.1 Background: gendered perspectives to environmental issues

The consequences of environmental changes are impacting the society in a disproportional way (Lubchenco 1998). Thinking about the environment from a social perspective means to consider variables such as gender, race, ethnicity, class, socio-economic status, health, age and eco-zones in relation to their place-based contexts (Naturskyddsföreningen; 2015). Because women and men experience the environmental challenges (such as climate change) in a different way, existing researches argue that there is a need to understand this phenomenon as a gendered issue (Kruse; 2014). Gender, understood as “the socially acquired notions of masculinity and femininity” (Momsen; 2004; p.2), cannot be conflated with biological sex. Gender roles and relations are neither global nor coherent; they are socially constructed; therefore vary from case to case. As women and men play distinctive roles in their societies, their relationship to the natural world differs. In many societies, women are the primarily responsible for the household work (*le foyer*), childcare and education. Women’s role in such contexts varies from fetching water and fuels to managing domestic workers. According to UNEP Report “*Gender equality and the environment – A guide to UNEP’s work*” (2015) women have a particular difficulty to adapt to environmental changes due to a series of factors, such as: privation of right to the land and tenure rights, poor access to capital and technology, restricted participation in decision-making and limited access to basic education. The last two elements are the main focus of the present research. Considering education as a powerful tool to empowerment and awareness rise, the perspective of the interviewee women from India and Brazil will be analyzed thru the gender and participatory education lenses.

1.2 Research Problem

Previous researches have explored the gendered differences in attitudes, behaviors and roles towards the environment (Monsen: 2000; Agarwal:1992; Björnberg &Hansson:2013; Alston:2013; Resurrección:2013). Researches have affirmed that citizens’ engagement and participation in public debates about environmental
problems vary according to their levels of education and understanding of the issue (Salehi et al. 2015). Education has been for long time an essential tool for girls and women’s empowerment and gender equality. However, such correlation considering specifically environmental education have not been deeply explored: “the subject of gender remains marginal to the field of environmental education research” (Sakellari & Skanavis; 2013; p.81).

1.3 Research Objective

The present research analyzes the importance of gender sensitiveness for emancipation and empowerment in societies where women are the primary responsible for the private sphere. Private sphere is here understood as the household responsibilities, such as the domestic expenditures, childcare and education of the children. To this end, the activities of two environmental NGOs – one from India and one from Brazil – were investigated through a gender and educational approach. The primarily objective is to understand the importance and the consequences of educating women and girls about the environment as well as how their knowledge is being applied in the Environmental Education programs in these societies. The aim is to learn how gender is being handled in the activities of the two organizations.

1.4 Research Questions

(1) How can Environmental Education (EE) be a tool for empowerment and emancipation?

(2) How is gender being approached in environmental education programs in India and Brazil?

(3) What are the possible consequences of giving a stronger importance to gender dimension in environmental education in the referred societies?

1.5 Research Development

Chapter 2 introduces the methodologies, methods and approach of the present research. In order to carry out this study, qualitative methods were applied to both primary and secondary data. The selected research design was the case study, and the
selected approach was the feminist research. Regarding primary data, I travelled to Mumbai, India and to Sao Paulo, Brazil where I conducted face-to-face interviews with women working with environmental education in both cities. Considering secondary data, I did a literature review of available texts about gender differences in the relationship with nature. Chapter 3 encompasses the theoretical framework of this research: theories and perspectives about women, gender and the environment and previous research about Environmental Education and Critical Pedagogy (participatory approach). In Chapter 4 I briefly introduce the activities of the two selected organizations from India and Brazil. In Chapter 5 I present my findings from the fieldwork. The analysis of the results is done through a gender lens and considers the formal and informal forces of both Brazilian and Indian societies. In the conclusions I emphasize the importance of context-based analysis of gendered environment linkages in order to avoid universal and static statements about women and nature. Additionally, I suggest further research regarding the consequences of strengthening the gender dimension of environmental education in determined societies.

Chapter 2 - Methodology and Methods

2.1 Approach: Feminist Research

“Feminist methodology is a process of adapting and refining a whole range of methods for feminist questions and feminist purposes.”

(Ackerly& Jacqui: 201; p.137).

The present research is considering gender as the category of analysis to investigate the empirical results. To employ the gender lenses means to analyze the structures of power in determined society and how these structures are affecting women and men. In other words, gender is “a lens that bring into focus particular questions” (Creswell: 2007 p.26). The Feminist research approach aims at generating knowledge that can empower women and therefore boost gender equality (Tickner in Baylis et al: 2014). It seeks to be transformative, inclusive and to be respectful with all contributors. The relations of power, domination and submission are central in the feminist research and
so it is in its ethics: “research, which so far has been largely an instrument of
dominance and legitimization of power elites, must be brought to serve the interests
of dominated, exploited and oppressed groups, particularly women” (Shiva & Mies:
1993: p.38). The feminist researcher acknowledges that his/her position as a
researcher characterizes a relation of power per se. Thus, all those connected to the
study cannot be seen as “objects of research” neither as mere “informants”, instead
they ought to be considered “subject-participants” who are agents of their own lives

2.2 Research Design: Case Study

Case study was selected as the most appropriate design to answer the research
problem of this qualitative research. According to Gerring (2007), the case study is
qualitative, entails a holistic approach, utilizes a particular type of evidence,
collection of data that is from a real-life context, the topic connects both case and
context, triangulation is used to strength internal validity and aims to examine a
specific phenomenon. Flick (2009) complements saying that the subject of a case
study can vary: a person, a family, a social community, a single event or an institution
or organization. The type of case study selected for this research is the representative
or typical case, or, as Bryman (2008) prefers to call: the exemplifying case. This kind
of case has not the objective of demonstrating that the selected case (s) is (are) unique
or unusual; Bryman justifies the selection of the exemplifying design “because either
they epitomize a broader category of cases or they will provide a suitable context for
certain research questions to be answered” (P.56). Bryman’s above-mentioned
explanation justifies the selection of the exemplifying case study as the analytical tool
of this research; both NGOs provide the grounds to “examine key social process”
(p.56) regarding environmental education and gender roles in their respective
societies.

2.2.1 Methods

In order to perform the present research project, qualitative research method have
been applied to address both primary and secondary data for its sampling. Concerning
secondary data, a review of the available feminist literature regarding women and the
environment was carried-out. Additionally a study about previous research on
Environmental Education and gender was considered. Regarding primary data, this study is composed by two case studies of local NGOs working with environmental education in schools in Mumbai and Sao Paulo. The choice of the NGOs was based on practical reasons. I was introduced to the Indian organization during an event on climate change organized by a Swedish NGO in Stockholm. The Brazilian NGO was selected due to its activities in my hometown. The aim when selecting the two cases was twofold: to identify the gender approach used by members of both organizations in their various activities and to understand the role gender plays concerning the relationships with the environment in the societies were they are based (Brazilian and Indian). Hence, the primary data of this research is composed by six semi-structured interviews held with 10 women from India and Brazil. The primary data has been collected during a fieldwork conducted in the city of Mumbai in India during the period of July 2015 and in the city of Sao Paulo in Brazil in December 2015.

The face-to-face semi-structured interviews method was selected as it provides more opportunity to respondents to make questions and talk more responsively than quantitative methods, such as self-completion questionnaires. (Williams: 2003). From a feminist point of view, quantitative research is considered conflicting with feminist theory as the respondents and research context are controlled by the researcher(s). The value of control is compared to the male domination over women and the interview process becomes abusive, as it is a one-way exchange of information “in which researchers extract information from the people being studied and give little, or more usually nothing, in return” (Bryman; p.26). Ultimately, according to some feminists, this relation of power and hierarchy between the researcher and the respondent, present mainly by the quantitative research, should not exist when women are interviewing women; and that is because “an impression of exploitation is created, but exploitation of women is precisely what feminist social science seeks to fight against” (Bryman; p. 212).

2.2.2 Interviews

Since the interviews were conducted in a semi-structured manner, the order of the questions, their formulation and the addition of new questions varied depending on the interviewee background (Berg and Lune, 2012). Specifically, the interview guide began with the cover information about a respondent where it was asked about age,
religion, educational level, marital status and occupation. Secondly, the participants were asked to elaborate on their experience working with environmental issues, and lastly the interviewees shared their view on how education can be an important tool to promote gender equality and girls & women’s empowerment (Appendix 1).

The table below summarizes the interviews made during both field works in India and Brazil.

<table>
<thead>
<tr>
<th>NR</th>
<th>Date</th>
<th>Respondent</th>
<th>Place</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>July 9th 2015</td>
<td>Madam SS – Principal of the school</td>
<td>Mumbai, India</td>
<td>00:11:02</td>
</tr>
<tr>
<td>2</td>
<td>July 10th 2015</td>
<td>Madam RN – Science teacher</td>
<td>Mumbai, India</td>
<td>00:09:27</td>
</tr>
<tr>
<td>3</td>
<td>July 10th 2015</td>
<td>Madam PN – Science teacher and activist</td>
<td>Mumbai, India</td>
<td>00:04:55</td>
</tr>
<tr>
<td>4</td>
<td>July 20th 2015</td>
<td>Madam HM – Language teacher</td>
<td>Mumbai, India</td>
<td>00:10:07</td>
</tr>
<tr>
<td>5</td>
<td>July 21st 2015</td>
<td>Madam VP</td>
<td>Mumbai, India</td>
<td>00:08:00</td>
</tr>
<tr>
<td>6</td>
<td>July 21st 2015</td>
<td>Madam K – Mathematics teacher</td>
<td>Mumbai, India</td>
<td>00:08:00</td>
</tr>
<tr>
<td>7</td>
<td>July 21st 2015</td>
<td>Madam SW – Mathematics and Physics teacher</td>
<td>Mumbai, India</td>
<td>00:08:00</td>
</tr>
<tr>
<td>8</td>
<td>July 21st 2015</td>
<td>Madam SK – NGO Member</td>
<td>Mumbai, India</td>
<td>00:06:15</td>
</tr>
<tr>
<td>9</td>
<td>July 21st 2015</td>
<td>Madam JK – NGO Member</td>
<td>Mumbai, India</td>
<td>00:06:15</td>
</tr>
<tr>
<td>10</td>
<td>December 18th 2015</td>
<td>Mrs. MB – NGO Director and pedagogue</td>
<td>Sao Paulo, Brazil</td>
<td>00:53:56</td>
</tr>
</tbody>
</table>

2.3 Reliability and validity in qualitative research

2.3.1 External Validity

The main limitation of the case study approach is its restricted external validity due to its difficulty or even impossibility of generalizing the results (Bryman: 2008). Authors such as Bryman (2008) argue that the findings of a single case cannot be representative neither applied, in general terms, to other cases. Diefenbach (2008) on the other hand says that although many cases just aim at “telling an interesting story” of a particular case in a specific location, there are researchers who try to formulate theories or, as he calls it “empirical-based hypothesis” in an inductive way. Diefenbachh acknowledges the criticism around induction made by important philosopher such as Hume and Popper. Along these lines, Flick (2009) claims that a
series of case studies could solve the generalization problem, so sustains Gerring (2007) that cross-case studies should be preferred when the external validity is to be prioritized. As pointed by Diefenbach, the comparison of similar results of different sites “can be the basis for the identification of emerging patterns, trends, generalizations, and theories as well as their testing” (p.888). Yet the present study does not aim at formulating a theory. It rather aims at presenting two stories that shall contribute to the debate of the gender dimension in Environmental Education programs in societies where women are the primary responsible for the private sphere.

2.3.2 Internal Validity and Limitations

Regarding the validity of my empirical findings, I had several limitations that could potentially affect the quality of my data. First limitation regards the gathering of empirical data. The decision to conduct the fieldwork in India was made independently. Consequently I did not have any formal assistance from a supervisor from my university. A better systematization of the fieldwork plan would have enhanced the quality and reliability of my data (Sartoretto:2015).

The process of selection of my sites of investigation (India and Brazil) was both convenience and purposive sampling (Diefenbach:2008). India and Brazil play a relevant role in the environmental agenda due to the sizes of their population and territory. Regarding the units of investigation (both NGOs), the Brazilian NGO was selected randomly (via Internet research) and the Indian organization was selected conveniently (referred by a Swedish NGO based in Stockholm). I restricted the investigation area to Mumbai and Sao Paulo for practical reasons.

Regarding my sample, I tried to proceed to snowball sampling technique so my respondents would help me to find other respondents. In India, members of the NGO were very supportive and introduced me to the schoolteachers I interviewed. In Brazil, my single respondent indicated and provided me the contact of another Brazilian pedagogue who is the principal of a public school in Sao Paulo. However, this person was on vacation and travelling abroad during the months of December and January (2015 -2016). Thus I acknowledge that the small number of interviews that I carried out cannot be regarded as representative (Diefenbach:2008). On the other hand, the selected respondents succeeded in providing the necessary inputs to reflect
on the importance of gender dimension in Environmental Education programs in their societies.

Language was a limitation too. Even though the majority of the respondents in India could speak English, I had some difficulties to understand their accent and some specific expressions. Sometimes they would talk in Marathi and one of the ladies from the NGO would translate their statements to me. While transcribing the data to text format I realized that the quality of the audio and video records were quite poor and I could not understand all the words and expressions that were said. In Brazil I did not have the language barrier thus the interview went smoothly and took longer; my respondent was very relaxed and we could perfectly understand each other. I have personally made the translation of the transcript extracts from Portuguese to English.

I have also made considerations about my position as a research. Although I am from a former “Third World country”, I was representing a European university when dealing with my respondents from India and Brazil. So I bearded in mind the Feminist critique to Western researchers when approaching “Third World Women”(DeVault and Gross: 2012). Accordingly, the objective of my research was to find women who are active agents of change and empowerment in their surroundings. I wanted them to tell me about their carriers as educators and activists for environmental protection. I consider them as inspiration models in their societies. Secondly, I did my “homework” beforehand and studied the maximum I could about both organizations as well as cultural and historical aspects of both countries. Since I am from Brazil, I spent most of the time learning about India costumes and traditions. When in India, I strictly followed the female Indian dress code (Punjab style), which helped to create a rapport with Indian women. I also noticed that being from Brazil was a positive asset when approaching them. In both cases, I tried to be an attentive and active listener and I made sure that my questions would be pertinent for the success of the research (DeVault and Gross: 2012).

2.3.3 Ethical considerations

All the interviews were conducted with the oral consent of the respondents. I also informed the Indian teachers about the magazine article (Söderut) I was going to write during Autumn 2015, and asked for their permission to use the information provided.
Once the article was published in November 2015, I sent printed copies of the magazine to all of them via ordinary post. Before the interviews started I presented the research’s objectives and myself. The respondents agreed to have the interviews recorded which was done both on audio and video. These recordings will not be disclosed to anyone unless if necessary for the purpose of the research.

As a way to thank my respondents for the conversation and time devoted I symbolically offered some chocolates and informative brochures about Sweden, which were kindly provided by friends who work at the Swedish Institute (SI) in Stockholm. In India, I have also prepared and presented Power Point slides to the students of all schools visited. My presentation was regarding my research, basic facts about Brazil and Sweden and information about the UN Post-2015 Development Agenda (SDGs) and the COP 21 event organized in Paris last December 2015.

Chapter 3 - Theoretical Frameworks

3.1 Ecofeminism

Relevant debates about women and the environment date back to the 1970’s. The French author Francoise d'Eaubonne developed the argument introduced by Simone de Beauvoir two decades before: “women have a particular affinity with the ‘natural world’ due to their common exploitation by men” (Salehi et al; 2015; p.32). D'Eaubonne is considered to have coined the term “Ecofeminism”. According to Heather and Lorentzen (2003) it is possible to define three different approaches to Ecofeminism (or the relation women/nature):

1. Empirical: supported by international organization such as the United Nations, the main claim of this approach is that women – as the poorest of the poor - are more affected by environmental problems than men. This approach also considers the social constructed role of women as the responsible to fetch the water, fuel, wood etc. Along these lines, Björnberg et al. (2013) argue that women are the most vulnerable group to climate threats. The gender inequality in the context of natural disaster is explained by five mechanisms: a) differences in power; b) differences in income and economic resources; c) gender-bound patterns in the division of labor; d) cultural
patterns and social role; e) biological differences. Accordingly, Alston (2013) states that gender is considered a relevant indicator of vulnerability related to environmental problems. Because women have less access to resources (education, information, economic independence and freedom of association), which are essential to disaster preparation, mitigation and rehabilitation, they tend to be more exposed to violence and death in case of extreme weather events. Furthermore, in many cultures, women are viewed essentially as mothers and caregivers thus have no ownership of the land and no financial independence, whereas men are landowners, workers and decision-makers.

2. Conceptual (cultural/symbolic): this essentialist approach suggests that women are “closer” to nature/earth than men because they possess “the traits of caring, community building, nonviolence, and Earth sensitivity” (Heather and Lorentzen; 2003; p.3). The traditional female role of nurturing and caring based on the “process of pregnancy and childbirth” implies that women are more sensitive to environmental issues and have a special relation to the earth (Momsen: 2000).

3. Epistemological: such approach implies that the Scientific Revolution (16th and 17th centuries) has replaced the natural knowledge, which connected human beings to the earth, to a “mechanistic view” that promotes the values of competition and domination seeking the economic growth (Sakellari & Skanavis: 2013). Feminists’ scholars seem to agree that the scientific values spread during the Enlightenment period have reinforced an unequal structure between women and men (Godfrey-Smith; 2003). The scientific thinking has evolved in the Western philosophy in a gender-based association between reason/rationality and maleness in contrast to emotion/intuition/passiveness and femaleness (Godfrey-Smith; 2003). Such hierarchy is understood by way of “God is seen as a man, who stands above Nature: a woman” (Klintman, 2000, p.22). Women, considered to be “second-class citizens”, have been restrained to the domestic responsibilities and therefore denied to take part in the professional and scientific worlds. The patriarchal Western societies have been using over centuries “the logic of domination” to exploit, abuse and oppress women and nature (Corbett, p.46).

3.2 Critiques to the Ecofeminism approach
Feminists have been present in the global environment and development debates since early 1980s (Resurrección 2013). The so-called “traditional approaches” to the question of women and the environment (Krishna 2015) such as ecofeminism, have been pushing for an agenda in which women are portrayed as either virtuous - as they have a special and closer relation to nature - or vulnerable - as they are the “poorest of the poor” and therefore the main victims of climate change (Arora-Jonsson: 2010). Arora-Jonsson (2010) considers that the concept of poor women in the South as vulnerable and the pro-environmental women in the North as virtuous will end up by reinforcing North-South biases and putting the burden of environment responsibility on women. Essentialist assumptions as such have been considered more harmful than supportive vis-à-vis women’s causes as they detract attention from important questions; e.g. the underrepresentation of women in the decision-making process (Arora-Jonsson: 2010).

Scholars like Momsen (2000) criticizes the ecofeminism’s weakness as it does not take into consideration differences of class, race and also of occupation and geographical context. She calls for a “strongly place-based feminist political ecology approach” (Momsen; 2000; p.55) in order to better analyze how women affect and are affected by environmental issues. Resurrección (2013) complements arguing that this “essential feminine subject” is “blurring the possibility of more context-specific subjectivities rooted in class, ethnicity, age, eco-zones.” (p.41). Climate change and gender have complex dimensions that cannot be addressed through political simplification and generalizations such as the frame “one-size fits all” (Resurrección 2013).

Krishna (2015), when analyzing the women’s transformative organizing in India, ponders the various conceptual structures of women and the environment and concludes that the essentialist approaches do “not fit easily with the complex empirical contexts of South Asia” (p.840). According to Krishna (2015) the risk of adopting a “conventional approach” - such as ecofeminism - in the global South (or more specifically across South Asia) is to strength “patriarchal customary practices” of gender division of work and responsibilities (p.840). The author also criticizes the “celebratory approach” to policy making “which valorizes an assumed international “sisterhood of women” across race, nation, ethnicity, class and caste” (p. 849). Along
these lines, she calls transnational feminist movements to engage with grassroots movements, which she names “local side streams of national and global development” (p.850).

3.3 Education as a tool for empowerment and emancipation: The work of Paulo Freire (Previous Research)

Critical pedagogy is a transformative-based approach to education. It has its origin in the tradition of critical theory of the Frankfurt School and the work of the Brazilian expert of pedagogy, Paulo Freire. Its main idea is that education should go beyond the mere transfer of knowledge and training of the future labor force; education should help developing critical consciousness, which leads to transformation of the individual, the learning environment and the society at large (Yacob: 2014).

On his book Pedagogy of Oppressed (1970), Paulo Freire calls for a change in the educational form of instruction in schools: from a “banking” education approach to a more dialogic and participatory one – the Liberatory Education (Howard: 2002).

For Freire, the ultimate goal of education is to raise awareness (conscientizar). This means to get most disadvantaged groups in the society to understand their oppressed situation and act in favor of their own liberation. As said by Freire, in a “banking” approach – or the Traditional Education, teachers assume that students/learners are empty “receptacles” waiting to be filled by deposits of information (Howard: 2002). This structured information is in accordance to the “ruling class” (Howard: 2002), the capitalist values and the “western culture of individualism, competition and self-reliance” (Howard 2002:1130).

The participatory approach of the Liberatory education is about providing the students/learners with the tools to transform their society (Yacob: 2014). The dialogue and exchange of ideas is the opposite of the deposit of information. Education should be an “act of creation” (Wint: 2011); a “collaborative, non-polarizing discourse coalesces multiple voices into a consensual perspective.” (Wint: 2011). Learners are encouraged to play a more active role in the learning process, they are viewed as co-producers of knowledge and their lived experiences are incorporated into the curriculum (Wint: 2011). The main importance of such approach is the opportunity to emancipate and to empower; the opportunity for students/learners to rewrite their own history despite the social environment they are living in (Howard: 2002).
The benefit or the participatory approach in education and research is that it moves away from the traditional worldview that the researcher is an external detached actor. Instead, it integrates the knowledge of other participants as similarly valid and accurate. This empowers people with less social power to explore the way they see reality. In addition, the participatory approach helps to build strong relationships between people of different social levels, creating a path that does not just lead to more knowledge but also to more realistic answers and decisions. During this process, researchers, communities, other stakeholders are presented with an opportunity to grow and develop their own capacities (Wint: 2011).

Freire argues that by making students/learners to perceive themselves as agents of change and action, education becomes “a form of intervention in the world” (Howard: 2002).

3.4 Environmental Education and Gender (Previous Research)

Environmental Education (EE) is a field of research which main goal is to raise knowledge and awareness in order to instill responsible behavior towards the environment. Environmental education programs seek to provide individuals with a critical thinking that enables an active participation in environmental decision-making processes (Sakellari & Skanavis: 2013). Because people’s action is at the center of EE, the bottom-up approach is crucial for the success of its implementation. In this sense, the Environmental Education theory dialogues very well with the participatory/liberatory educational approach defended by Paulo Freire. The table below summarizes the main objectives of the Tbilisi Declaration on Environmental Education (1977) - a cornerstone document in this field:

Table 02 – Categories of environmental education objectives

| **Awareness**—to help social groups and individuals acquire an awareness and sensitivity to the total environment and its allied problems. |
| **Knowledge**—to help social groups and individuals gain a variety of experience in, and acquire a basic understanding of, the environment and its associated problems. |
| **Attitudes**—to help social groups and individuals acquire a set of values and feelings of concern for the environment and the motivation for actively participating in environmental improvement and protection. |

1 The Tbilisi Declaration on Environmental Education. Available at: http://unesdoc.unesco.org/images/0003/000327/032763eo.pdf (access on February 17th, 2016)
**Skills**—to help social groups and individuals acquire the skills for identifying and solving environmental problems.

**Participation**—to provide social groups and individuals with an opportunity to be actively involved at all levels in working toward resolution of environmental problems.

These objectives show the importance given to participation and awareness rise in the Environmental Education area. Nevertheless, when analyzing the Tbilisi Declaration’s content it is possible to notice that the word “gender” does not appear anywhere in the document. The word “women” appears once in Recommendation No 3: “Considering that the environment concerns all men and women in every country (...)” (UNESCO: 1978: p.28). The lack of gender sensitiveness in the environmental education field is one of the main criticisms of scholars who support that women have been overlooked and “subsumed into the notion of universalized people” (Sakellari & Skanavis: 2013: p.81). Although the Tbilisi Declaration contemplates non-formal educational tools, it does not clarify which non-formal environmental knowledge is to be considered in EE programs. It gives rise to previously discussed debate about the feminist view of epistemology. Feminists emphasize the disregard for local, indigenous and female environmental knowledge in favor of the “modern” science concerning “Man” and “His Environment” (Sakellari & Skanavis: 2013: p.81).

Annette Gough (1999) writes:

(...) This absence of women can be seen as being related to the epistemological framework of environmental education being very much that of man-made subject and to the context of the corresponding curriculum and research programmes tending to be determined by male agenda (Gough: 1999: p.143)

The so-called masculinization of science has transformed knowledge into a profitable business with the sole objective of creating more wealth (Mies & Shiva: 1993). Accordingly, Feminist scholars stress that the Environmental Education research should change from a masculinized and traditional worldview towards a broader perspective that encompass multi-identities, different life experiences and marginalized groups, such as women and indigenous people (Sakellari & Skanavis: 2013). Fawcett (2000) argues that the westernized notion of learning tend to divide “the emotional and cognitive, function to limit and control human experience,
particularly knowledge of the “other” (p. 142). Although environmental problems affect women disproportionately (Lubchenco 1998) “their capacity of adaptation is limited by exclusion of their needs and perspectives from climate negotiations” (Sakellari & Skanavis: 2013: p.79).

However, the correlation Gender X Environmental Education has not been deeply explored on previous researches (Gough: 1999). Sakellari & Skanavis (2013) state: “the subject of gender remains marginal to the field of environmental education research” (p.81). The authors argue that gender is being overlooked and call for a gender sensitiveness in environmental education programs.

Along these lines, a recent example of gender sensitiveness to environmental studies is the report entitled “Protecting the environment: Why a gender perspective matters” written by the Swedish Society for Nature Conservation (2015). The report proposes a remarkable analytical framework to examine the gender differences in the interactions with the environment. Its main tool lays on the analyzes of “how the formal and informal humanly designed, constraints affect the division of labor as well as access to and control over resources” (Naturskyddsföreningen: 2015: p.6). Understanding these forces is vital to comprehend, for example, how men and women impact and are impacted by natural hazards depending on the role they play in their societies. This analytical gender framework of formal and informal forces in society will be used as a tool to analyze my empirical results.

Chapter 4 – Case Studies

4.1 Srushtidnyan NGO

Srushtidnyan: Centre for Environment Education, Research & Documentation is a non-profit environmental organization founded in 2001 and located in Mumbai, India. Formed by “a group of young and enthusiast environmentalists and social workers” its main objective is to address environmental degradation in India and its impacts on ecosystem and human beings through conservation, education and awareness. Their mission is to raise knowledge and awareness of climate threats and to work actively with schools and local communities, mainly with young people, as “they are the ones

2 Organization’s informative printed material. Available in the Appendix.
that will lead the future society”. Four local militants compose their small team who works actively with about eight schools in the cities of Mumbai and Devrukh. Currently, Srushtidnyan works with six main activities:

1. **Green School** – composed by interactive and ludic activities in various schools in Mumbai aiming at raising awareness among the students and stimulate them to take small but significant actions to address climate change;

2. **Green teachers and training program** – Environmental courses and monthly workshops to teachers of the partner schools. It provides an opportunity to increase teachers’ scientific and social knowledge regarding environmental studies. Additionally, it offers an open space for interaction, debate and exchange of ideas;

3. **Species Protection & Habitat Conservation** – actions such as protection of the coast for Flamingos and “SaveVulture” Save Nature Campaign;

4. **Conferences and Seminars** – organization of events discussing coastal wetland conservation, amendment in coastal regulation zone legislation, climate change among others. Partnerships with national and local governments, fisher-folk communities, people’s organizations and environmental organizations in Mumbai;

5. **Samadramanthan** Publication;

6. **Climate Ambassadors Mumbai-Stockholm** – Program ruled in partnership with the Swedish NGO *Klimataktion* situated in Stockholm.

According to its facilitators, the project “aims at raising awareness among children and youth about the crisis of global warming & climate change and to enhance their capacities to take actions to mitigate with the carbon emissions”. In May 2015, Srushtidnyan members and students from secondary school Maharshi Dayanand College in Mumbai visited Sweden for exchange of knowledge and good practices. *Klimataktion* and Global College in Stockholm organized the event.

### 4.2 The 5 Elements Institute

*The 5 Elements Institute - Education for Sustainability* – was founded in 1993 by a group of female educators from the city of São Paulo, Brazil. It is considered as a Civil Society Organization of Public Interest (OSCIP) according to Brazilian law. The
5 Elements Institute bases its principles and activities on the *Treaty of Environmental Education for Sustainable Societies and Global Responsibility*, according to the Earth Charter and Agenda 21 dated from 1992. The NGO’s mission is “to foster the dissemination of sustainable practices and debate these practices with society in order to transform people's relationship with nature and the urban environment.”

The 5 Elements Institute has experience in developing and coordinating projects as well as environmental trainings for public and private sectors. Its main objective is to foster the implementation of national, state and municipal environmental educational policies. The main five activities performed by 5 Elements Institute are:

1. **Water** - Support and strengthen the integrated and participatory management of the Hydrological Basin;
2. **Sustainable consumption** - Promote awareness of the impacts of consumption and waste on people and environment;
3. **Educators spaces** - Create environmental educators spaces in order to promote and enhance sustainability principles;
4. **Sustainable cities** - Urban environments to incorporate the appreciation of nature, the use of sustainable technologies and citizen responsibility;
5. **Educational materials** - Production of publications, games, videos, banners to assist the implementation of all institutional programs; such as the "Environmental Atlas Basin of Sorocaba Middle Tiete River" (2015) and the Organic Agriculture platform for the city of São Paulo.

The *Green Thumb at school*, is a program performed in schools in the municipalities of São Paulo and Itapevi, aiming at developing ecological literacy with teachers, students and parents, encouraging healthy eating and caring for all living beings on the planet.

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3 Free translation from the NGO's webpage. Available at: (Access on January 17th 2016) [http://www.5elementos.org.br/site/index.php](http://www.5elementos.org.br/site/index.php)
Chapter 5 - Empirical Findings

5.1 Gender dimension at Srushtidnyan’s activities

Gender matters are not obvious in the organization’s description of work. Except for passage below - presented both in its website and explanatory brochure - there is no explicit mention of how the question of gender is approached in the NGO’s activities:

(...) we believe that even small activities like the slide talks, poster exhibitions, nature walks, environmental games, workshops, field visits and environmental camps can provoke desired emotions and appeal to the conscience of a common man. It was this belief that led us in designing and using these tools to reach out effectively to the children, youth, women, schools, colleges, voluntary organizations. (Srushtidnyan NGO: 2015)

Consequently I had to investigate the issue myself. During the time I stayed in India following the NGO’s activities I visited a total of 8 schools in the cities of Mumbai and Devruk. However, the interviews I hold and presented here are from teachers located in Mumbai only. My main objective was to hear from the teachers how gender was being approached during the environmental education activities and what was their personal opinion about the correlation gender x environment x education.

Madam SS is 58 years old, Hindu, and the Principal of one of the schools I visited in Mumbai. She is also chairperson of the trust that privately runs the school. Madam SS told me about a project the teachers are running with the students regarding the use of plastic bags. This project starts in the classroom but goes further: it involves the parents and the local community and commerce too. The main idea is to raise awareness about the damage caused by plastic in the environment. Accordingly, Madam SS stressed the importance of having both the mother and the father involved in the children’s education. Regarding gender, she mentioned an award project ruled in partnership with the British Council on gender equality and children’s rights where young students from a school in Britain and from her school were supposed to write a list of “girls & boys’ obligations in the house”. Madam explains the results:
(...) children from UK had to write what are things that boys are expected to do and what are things that girls are expected to do. Simple things, you see, so you don’t have to teach them big things. But you have to make them realize the difference. And the Indian girls and boys also wrote about it. So then, when they were talking about this gender equality, and the boys were like “oh the biggest task which is given to us is to walk our pets!” And this is something that our children (here in India) found… “what?” “walking pets?” and our children said “oh, we would love to do the boys role!” because they don’t have pets at home, you know! So, simple things like that. Then, girls doing the cooking and the dish washing done by the boys, she here it was actually, very interesting to see when girls children’s role is that the girls do the cooking and we (boys) do the washing of the dishes. The girls’ question was “why is that so? It should be the other way round, let the boys do the cooking and we do the washing!

(Madam SS: 2015)

My second interview was with Madam RN from a school in the outskirts of Mumbai. Madam RN is Hindu and is 50 years old. She is an award-winning Science teacher from one of the aided schools in the slum area of Mumbai. Her project about a dehydrator oven for vegetables and fruit won a gold medal in a national competition. She also represented India in environmental conferences in New Jersey, the USA, and the Netherlands. When I asked her about how education could boost gender equality and women & girls’ empowerment she stated:

(...) as far as ladies are concerned, we have to play a role on the Earth. As a daughter, then a wife, then a mother and grandmother, between mothers in law. So we have to manage everything. If we are aware of we can protect our Mother Earth, as a mother we can protect our families, as a mother we are always protecting. If we know that Mother Earth is also to be protected, only then this family can survive. For that, everybody should be educated; everybody should come closed to the nature. So our aim is to bring every ladies, every gents in gender equality, in equality, they should be equally working, because a family requires a mother as well as a father. So, to protect Mother Earth all the people on the earth should go together. So school education is very important. (Madam RN: 2015)

Madam RN added that she has the same number of boys and girls in her class (25 plus 25). Even though she acknowledges the importance of educating both girls and boys about environment issues, she finalized saying: “Everybody, but specially the
ladies should have more education on this because they are the mother of the family as well as the Earth. So they can, if they know, they can teach others.”

The majority of my respondents share the idea that women are the center of the house in India. Madam PN, my third respondent, is Hindu and 48 years old. She is also a science teacher who has been an active member of Eco-club in her school since 1997. Regarding the correlation environmental education and gender, she stressed:

(...) education is the first thing. Woman as the main person in the family, if the woman is educated, the family is educated. So that is the first thing. So an educated woman will be able to take care of her family in a better way. Plus, along with that, if she is aware of the environmental issues, she can situate that she is instilling that sort of habit in her children and making them understand that how this should be cleaned, how they should take care of the surroundings, how they should be keeping the surroundings. (Madam PN: 2015)

Madam HM is an English teacher at the Shardashram Vidya Mandir Technical School. She is 37 years old, Hindu and has a background in Languages. We discussed about gender matters and roles, Madam HM said: “My personal opinion is: if a woman, every woman, if she does any work, she does it very seriously. She is very serious towards the work, she is very hard-working, passionate.” Considering the environment, the teacher added: “women they have this peculiar quality that they can manage everything well and the environment is very much related to that.” Turning back to the relation between women and the environment, the teacher added: “In Hindu mythology, woman is mother nature. We call it mother, woman, it is female. Even in Marathi, Hindi, we call nature as a woman, as a mother, because of its capacity of reproduction. So, for me, nature is feminine”. When I asked her about the importance of environmental education for women and girls in India, she argued:

(...) the truth is that that woman, she commands the house. She takes the decision, she manages the water, and she is there to look after the house. So her awareness is more important. Because she is there in the house, all the housework is done by her. But what I think while talking with you, many families they have maids at their house. But these maids they don’t have any knowledge, they don’t have this knowledge about
water conservation. No, no, they don’t have because they are not literate.
(Madam HM: 2015)

Nevertheless, the teacher states that environmental education should not be a matter related to women only; according to her, even tough the burden of housework falls to women; men and boys in the house have to cooperate for a sustainable home too.

During the visit in the last school, I had the chance to have a traditional Indian meal at the principal’s room and meanwhile talk to four other female teachers. One of the teachers, Madam K., specialized in mathematics and science education, started to explain the special relation that Hindu women used to have towards nature. In her words:

(…) women used to go to forests and collect leaves to offer a puja (daily worship ceremony in Hinduism), they used to worship trees too. But many don’t do it anymore. As they get educated, they understand that is not good for the environment to cut leaves. (Madam K: 2015)

Madam VP, teacher at the same school added:

(…) in old times, women stayed very much in the house only. They don’t (didn’t) have the freedom to go outside the house. And there is where theses pujas were put in that time, as madam said. They used to go out in the forest, cut the leaves, and bring it and make the pujas. But nowadays women are not like that, they are working in the offices, schools, colleges; a lot of change is there. So, because of education we got this opportunity of knowing about our nature, the environment, our society also. Before that we were at our room only. But now we are coming out of the room. Going abroad also. Many of our students, many women of our families are going abroad to study. Our vision is now wider. (Madam VP: 2015)

The last teacher complemented: “Education of women and environmental problems are correlated. If the women get educated, the whole family gets educated too. About everything. Including nature conservation.”

The final interview taken in India was with the two women working at Srushtidnyan NGO. Madam SK has a degree in Human Resources. She used to work in a private firm, but when she got pregnant of her only child she decided to get
another job that would provide her more time to spend with her kid. The work at Srushtidnyan sounded perfect, according to her, due to the flexibility and to her personal interest to environmental issues. During our interview she started saying:

(...I think there is a relationship between women and the environment. They are very close, because women have the tendency to hold... they are very sensitive, they can understand, they can feel what are the problems and they are always holding all the things, they are not just letting it go. (Madam SK: 2015)

I asked about her experience in working with environmental education in the schools. She explained:

(...while addressing the water conflicts or regarding the program on water conservation, we conduct a game. Normally that game should be played in two groups where the two roles are made by students and each one is caring a spoon. The first girl or boy, he has a full glass of water and the last boy or girl, she has an empty glass of water. And you have to just pass the water by spoon. It’s like that, the game is like that. And mainly in our schools, even you have watched, there are some boys and girls. So usually two groups are made one group by girls and one group by boys. We have seen this, it is our experience that all the time the girls’ group wins! It is like that, they waste very little water. Boys, they waste a lot of water. And this is, I can say, in all standards, in all the classes, because we conduct our programs in slum areas up to upper classes. But this is the same experience in all the categories, all different age groups also, we conduct this program with women and men also. So the same thing we found. That women, they save water, they won this game all the time. All the time. (Madam SK: 2015)

Madam JK. also working at the NGO has studied Finance and works with the organization’s accountability. She added: “They (women) are good at water management, resource management, they are very much aware about these problems (...).” When I asked why is that so, Madam JK replied: “who is filling the water depositaries is girls. Men are not doing this work. That’s why they (women) are more caring about not wasting this water.”

I then asked about education as a tool to empower women & girls. Madam SK explains:
women as well as small girls, they are not going to school in some areas where there is a scarcity of water. They are not sent to school because they are to fetch the water. If they are not fetching the water they are most of the time collecting woods for the fuel. They are gathering the fuel. So their full time is going over there. If there were a good facility of water everywhere, I think that many girls…(Madam SK: 2015)

Madam JK interrupted adding:

(...) they are not sending girls (to school) because they want to save them to the household work, in rural area, not in Mumbai. But now the government has decided that everybody should go to school. And we have a slogan in Marathi that says “you’ll give education to the girl child, she’ll definitely do something better (to society).” (Madam JK: 2015)

Madam SK added:

(...) and we believe in gender equality. So as I said, just one hand is not sufficient; there should be education to boys also (…) Because (women) should get support from other family members and specially the male partners. They will support, I think. They would work then more. Because most of the time now we can see that the decision making power is to men. Our society is a male dominating society; in most families the man is the financial head of the family so he takes the decision. So that is why awareness should be for everybody. (Madam SK: 2015)

Madam SK finalized our interview saying: “But as per our context (in India) I find that yes, women are closer to nature.”

5.2 Gender dimension at 5 Elements Institute’s activities

Likewise the Indian organization, I could not find any specific information about the gender dimension at 5 Elements webpage. When in São Paulo, I carried out an interview with the founder and managing director of 5 Elements Institute, Mrs. MB.

MB was very enthusiastic to cooperate with this research. She agreed to meet me on a Friday evening at UMAPAZ - Universidade Aberta do Meio Ambiente e Cultura
“de Paz” (Open University of Environment Study and Culture of Peace) where she also works. MB asked me to send the questions via e-mail some days before our meeting, so she could prepare herself. The interview lasted 58 minutes and it was held in Portuguese. Mrs. MB has a background in pedagogy, she is 51 years old, divorced, mother of two boys and defines herself as a “spiritual person”, although she was raised in the catholic religion. Mrs. MB founded the 5 Elements Institute – Education for Sustainability together with other female friends working on the field of education. According to her, the main motivation was to address the main issue regarding the environmental education in Brazil, which is the lack of training for teachers. When I asked about the importance of environmental education to women and girls, she replied:

(...) look, I think we can translate that environmental education is nothing more than caring. Teaching how to care, and caring generates abundance that we can share among all. That's what I understand environmental education is. As it is in women’s DNA to take care, I think the biggest challenge is to help and tech men to also take care. So caring is inside us, it is inside. (Mrs. MB: 2015)

She stated that it is necessary to teach the children – both girls and boys – how to take care of things, animals and plants, while they are very young. Mrs. MB believes that teaching how to take care is still a female responsibility in Brazilian society: “I think there is a lack of the male element in the early childhood, as well as there is a lack of the feminine element in adolescence.” However, she argued that this pattern is changing slowly in Brazil, mainly when compared to other societies in developed countries. She complemented:

(...) in Brazil we have a problem: we have too many servants, domestic workers, maids. So people mess up things because they know there will be someone to clean up their mess. This is a rancid from slavery we had here in Brazil. Because we still have servants. In the day when we will not have it anymore (employees, servants), people will have to learn how to take better care of their homes, and dust less and give more value to care. I

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4 Additional information can be found on the website: [Access on January 17th 2016]
think it's very negative, educationally speaking, the fact we have servants.
It’s very negative, especially for young people. (Mrs. MB: 2015)

I then asked how her organization addresses gender in the environmental education programs held in schools in São Paulo. Mrs. MB replied:

(...) look, as I told you, when I saw your question I stopped to think because we had never thought about this perspective (gender). It is very common for us to work with teachers of Kindergarten and Elementary School where most part of teachers is women! When we work with the High School, which is rare, it is more difficult it is much harder work. Because the areas of knowledge are already all separated, teachers are all separated; it has a more masculine thing at the High School. And I think there is a break in the educational process, from a process of cooperation to a competitive process. I think we can talk then, I do not know if it's frivolous to claim that up to ten years old the school is female and from the age of eleven onwards it becomes male. (Mrs. MB: 2015)

Mrs. MB added spiritualist arguments in regards to the role women play in society: 
“on the issue of spirituality, the woman, because she brings life to the planet, she is a more divine being than man”. I asked her to elaborate a bit more whether she believed or not that there is a special relationship between women and the environment. She replied: “Look, I think the relationship of humans with nature is independent of gender.” And then complemented: “I think that is independent of male and female (gender), it depends much more on the experiences you have in your childhood.” However, she reinforced the previous idea of women being more caring than men: “I think the woman, she tends to take more care of things. Whether it's nature or not, she has this DNA from millions of generations!” And finalized: “But the relationship between human beings and nature, it relies heavily on the opportunity that you have as a child to relate to nature, to have animals of estimation, to take care of plants, to barefoot walking, to be free.”

5.3 Formal and Informal forces of the Indian and Brazilian societies

India and Brazil are often called as “sister nations”. Both have been colonized by Europeans, both countries have huge populations and territorial areas, both are considered developing economies (members of BRICS) and both play a key-role in
sustainable development and natural resources management (Utrikespolitiska instituttet: 2015). Regarding the societal structures, as Brazilian I could notice many similarities between both cultures. Society in Modern India resembles in many aspects the Brazilian society:

a) Both societies are secular – even though fundamentalist groups have a significant power and influence in politics;

b) Both have abolished slavery and caste system – however, there is still “a rancid from slavery” (Mrs. M.B) in Brazilian society and the caste system still plays a role in many regions in India;

c) Both societies have a strong movement fighting patriarchy in the public and private spheres – a “Feminist Spring” is taking place in the Brazilian and Indian societies thanks mainly to the spread of Social Media.

Considering the above-mentioned similarities, respondents from both countries had alike impressions about the role gender plays in their societies and how it influences the relationships with nature. In the two cases, respondents agreed that women and men relate differently to the environment. Formal and informal forces in society were appointed by respondents to explain the gendered-differentiated linkages to nature, as demonstrated in the analytical framework below:

<table>
<thead>
<tr>
<th>Table 03 – Social forces in India and Brazil appointed by the respondents</th>
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</thead>
<tbody>
<tr>
<td><strong>India</strong></td>
</tr>
<tr>
<td><strong>Formal forces</strong></td>
</tr>
<tr>
<td>1. Division of labor</td>
</tr>
<tr>
<td>2. Access to financial resources</td>
</tr>
<tr>
<td><strong>Informal forces</strong></td>
</tr>
<tr>
<td>1. Essentialism (“biological”)</td>
</tr>
<tr>
<td>2. Religion / Spiritual</td>
</tr>
<tr>
<td>3. Traditions</td>
</tr>
<tr>
<td>4. Social norms</td>
</tr>
</tbody>
</table>

5.3.1 Formal forces – labor, income and power

Work force, occupations and wages

As per division of labor and access to financial resources, respondents asserted that in their societies men represent the main financial provider of the house. According to the United Nations Statistics Division (UN Data: 2013) only 27% of the female adults population in India participate in the labor force. In Brazil, 59.4% of women contribute to the formal labor force. On the other hand, in India 79.9% of the male adult population participate in the labor force and in Brazil this percentage is 80.8%. (UN Data: 2013)

Regarding the occupations, respondents stated that men have more opportunities to have well-paid jobs than women. According to the International Labour Organization – ILO, women’s average wages are between 4 to 36 per cent less than men’s. In India, the gender wage gap represented -26.1% in 2012 and in Brazil the gap stood at -24.4% in the same year (ILO: 2015). The wage gap is divided by “explained” reasons such as level of education and work experience, and “unexplained” reasons which suggest gender discrimination. According to the OECD report:

(...) Gender discrimination starts when assessing the skills and knowledge needed for certain job categories. Male dominated positions tend to be rated as more complex and of higher value than skilled female occupations including nurses, teachers and secretaries. Governments need to reassess the qualifications and skills needed for different types of jobs on a gender-neutral scale." (OECD: 2008)

In conformity, participants appointed that there are professions performed mainly by women, such as teachers in the kindergarten and in primary schools: “up to 10 years old the school is feminine. (...) I think there is a lack of the male element in the early childhood”, said Mrs. M.B. According to UNDP (2014), both Indian and Brazilian societies have a high level of gender inequality: India ranks position number 130 while Brazil ranks the 75th position (against countries such as Denmark whose position is number 4 and Sweden ranking the 6th position). In the public life, women are underrepresented at the top management and ministerial level positions. Despite the equality in the level of education, women are the minority in the formal labor

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force and their wages are lower than their male colleagues. Consequently, women’s major contribution is in the private life: they are still expected to shoulder the burden of domestic work and children education. Respondents believe it is important that women have a good understanding about the environment for two main reasons: first, they are “the chief of the house”, which means they are the main consumers and responsible for water, energy and waste management; and secondly, women are the children’s main educators, which means that they are supposed to teach their children about sustainable and ecological matters. Women have also been appointed as active communicators and influencers in their societies, since they go “out there” and spread the word.

**Public Life and Decision Making**

Women from India and Brazil have a minor participation in the public sphere than men. In India, only 13.8% of the total female adult population works as legislators, senior officials and managers. In Brazil, the percentage is 37.5% of the total female adult population (World Bank: 2015). In both countries the proportion of women in ministerial level positions is low: 15.4% of the total female population in Brazil and 22.2% in India (World Bank: 2015).

Nevertheless, respondents claimed that their societies are in transition: “*In old times, women stayed very much in the house only. They don’t (didn’t) have the freedom to go outside the house. (...) But nowadays women are not like that, they are working in the offices, schools, colleges; a lot of change is there.*” said Madam V.P. Concerning the representativeness in politics, Mrs. M.B claimed for a change: “*Look, I support the following idea: I think that all governments should have a couple, not a married couple, but a man and a woman making decisions. Because it is not sustainable to have only men in power anymore.*”

5.3.2 Informal forces – essentialism, religion and traditions

Respondents seem to agree that women have a special affinity with the environment due to their intrinsic tendency of being caring and protective. Spiritual and biological arguments were presented as a way to explain the “feminine essence” that links women to nature, which has been described as female. As pointed out by
Madam H.M: “In Hindu mythology, woman is mother nature. We call it mother, woman, it is female. Even in Marathi, Hindi, we call nature as a woman, as a mother, because of its capacity of reproduction. So, for me, nature is feminine.” Mrs. M.B from the 5 Elements NGO elaborated: “I think we can translate that environmental education is nothing more than caring. (…) That's what I understand environmental education is. And it is in women’s DNA to take care.” However, Mrs. B.M does not agree that gender influences the relationship human beings have to the environment: “I think it is (the relationship with nature) independent of male and female (gender), it depends much more on the experiences you have in your childhood. (…) I think that woman, she tends to take more care of things. Whether it's nature or not, she has this DNA from millions of generations!” it is important to bear in mind that the respondents are considering their own reality, as put by Madam S.K: “But as per our context (in India) I find that “yes”, women are closer to nature.”

An interesting observation is about the respondents’ religions and beliefs. Indian respondents are Hindu. The respondent from Brazil was raised in a Catholic family but considers herself a “spiritualist” who identifies with Buddhism. Both Hinduism and Buddhism are religions; philosophies or ways of living that connect people to nature and to their inner selves. This fact might have influenced the respondents’ answers and statements.

5.3.3 Informal forces – Social norms

Indian and Brazilian respondents mentioned the existence of domestic workers (maids) in some houses. These domestic workers are predominantly females who replace the figure of mother and housewife in situations when women have a job. They usually have poor educational background and have low wages. Their main responsibilities are: to clean, to iron, to cook and to take care of the kids. Therefore women still play the role of the major educator and consumer of the house. In such societies women select which cleaning products are to be bought, what kind of food and eating habits are to be implemented for all the members of the house, and how much water and energy shall be spent in doing the dishes, laundry and other household tasks. This is an interesting phenomenon to be analyzed from an ecological feminist perspective in further researches.
5.4 Women, education and the environment

The access to education and level of instruction of women and men are almost equal in both countries. In fact, in Brazil women tend to be higher educated than men: 50.5% of women have finished the secondary education against 48.5% of men (UNDP: 2013). In India, women are still in disadvantage as 78% of them have completed the secondary school against 80.4% of men (World Bank: 2013).

Environmental education of girls and women seem to play an important role in both Brazilian and Indian societies. As said by one of the teachers from schools in Mumbai: “Education of women and environmental problems are correlated. If the women get educated, the whole family gets educated too. About everything. Including nature conservation.” This is explained by the gender roles and power structures existing in these societies.

The majority of women are housewives and responsible for the childcare and education. Even in situations where women have a paid job, there is a common understanding that they are the primarily responsible for the household anyways. Men seemed to have a very small participation on the domestic issues. As pointed out by Madam H.M: “The truth is that that woman, she commands the house. She takes the decision, she manages the water, and she is there to look after the house. So her awareness is more important.” Therefore women are the children’s major educator. They are responsible to teach the child about everything: from good manners to school lessons, and environmental knowledge is included. As said by Madam P.N: “Education is the first thing. Woman as the main person in the family, if the woman is educated, the family is educated. (...) if she is aware of the environmental issues, she can situate that she is instilling that sort of habit in her children.” Mrs. M.B, as a pedagogue, also emphasized the importance of childhood: “But the relationship between human beings and nature, it relies heavily on the opportunity that you have as a child to relate to nature, to have animals of estimation, to take care of plants, to barefoot walking, to be free.”

Women have also been appointed as important activists for environmental issues. On Madam PN words: “(...) but an educated woman or a woman who is aware of
environmental issue also think about the surroundings. (...) she go out and spread this to her neighbors (...) the women can cause more impression on the society.”

Chapter 6 – Analysis & Discussions

The Brazilian philosopher and pedagogue Paulo Freire revolutionized the concepts of education in Brazil and many other countries around the world. For Freire, education should go beyond the simple transfer of knowledge from the teacher to the students/learners – it should enable people (specially the marginalized groups) to understand their reality in order to be able to act in a critical and active way in the social and political life. The Environmental Education research and theory has as main characteristic the bottom-up and participatory approach as human action is the core of all activities and programs. However, critics affirm that the gender perspective, so important when theorizing about the environmental changes and its consequences, is being overlooked by EE theorists and researchers.

The empirical findings of the present research have shown that gender is key for environmental matters due to the differences and inequalities between men and women concerning the activities they perform, the kind of work they have, the access to financial and natural resources, the levels of formal education and the chances to participate in decision-making discussions (UNEP: 2015). Thus the gender sensitiveness in environmental education could represent a step forward to the inclusion of boarder perspectives derived from tribal communities, indigenous people and other marginalized groups (Sakellari & Skanavis: 2013). If we are to consider Environmental Education as a social movement, the voices of “the others” have to be heard (Fawcett: 2000).

Respondents of the present research affirmed that women and men have differentiated roles in their societies. They sustain that women have a closer relationship with nature, due to factors such as biology, spirituality and the activities they are assigned to perform in society. Participants have also stated that women can positively influence their families and surroundings regarding environmental issues as they are the main educators of children and responsible for the household. However, to agree with the idea that women are the main responsible for the household
(cleaning, childcare and education) and therefore have (or should have) a greater knowledge about the environment can be risky. It can be risky because it reinforces women’s *status quo* and restricts them to the private sphere. Discussing about female proximity to nature and the female vulnerability to natural hazards without presenting a way-out puts women as victims, instead of central actors in environmental discussions. An example is the lack of women in decision-making levels both locally and internationally, such as the climate negotiations. If women are one of the main groups affected by environmental problems, why are they so underrepresented in the high-level panels and discussions? If women do have a special sensitiveness and knowledge about the natural world, why is this knowledge being overlooked? The Environmental Education theory should have a stronger gender approach when applying its participatory programs and activities. Freire claims that the main goal of education is emancipation, is to develop the critical thinking in the most marginalized groups in societies, as women still are in some contexts. Along these lines, the female knowledge and perspective about the environment should not be used for the sake of the family and their community only. It should be included in the formulation of educational programs, national policies and the environmental agenda. In other words, female perspectives and needs have to be lifted to the “public sphere” where decisions are taken.

This study hopes to have contributed to the discussion on how the distinguished female knowledge and perspective about the environment can be used to empower women themselves. Moreover, how this unique perspective and experience can add value to their societies as a whole via education and participation in the public life. As put by Freire, when women perceive themselves as agents of change and action, their education becomes “a form of intervention in the world”.

**Chapter 8 - Conclusion**

The present research has investigated the gender dimension of environmental educational programs as a tool for empowerment and enlightenment. This study had as key theoretical framework the bottom-up and participatory approach to education as proclaimed by scholars such as the Brazilian philosopher Paulo Freire. To this end, the social roles of the Indian and Brazilian societies and the gendered differences to
environmental linkages were examined thru the activities of two non-for-profit environmental organizations. As for the methods applied, five face-to-face semi-structured interviews were held with 9 respondents from India and one face-to-face interview with one respondent from Brazil.

The empirical findings aimed at answering the following research questions:

(1) How can Environmental Education (EE) be a tool for empowerment and emancipation?

(2) How is gender being approached in environmental education programs in India and Brazil?

(3) What are the possible consequences of giving a stronger importance to gender dimension in environmental education in the referred societies

Based on the available data, and after taking into consideration the limitations of this study (discussed on section 2.3.2) it is possible to conclude that:

1) the Environmental Education (EE) theory has, by default, a participatory approach due to the necessity to mobilize social actions for changes in behaviors and attitudes. In this sense, there is much of the Liberatory education (coined by Paulo Freire) in the EE main objectives, namely: a) Awareness; b) Knowledge; c) Attitudes; d) Skills and e) Participation. Although Environmental Education is an important action for all societies in the world, the most vulnerable groups - or the disadvantaged ones, as said by Freire, - are at the center of EE activities. By applying the critical thinking of Freire in the EE activities, the learners shall have the chance to not only have a better understanding of environmental complexities but also to stand up for their rights furthermore protect themselves and those that they love. In this sense, the gender sensitiveness in EE activities and programs is essential to empower and emancipate marginalized groups in certain societies, such as girls and women;
2) Gender sensitiveness in environmental education is considered critical in Indian and Brazilian societies where women are still the main responsible for the private sphere (household and childcare). However, the gender dimension of environmental education has been overlooked in the activities and programs of both organizations (Srushtidnyan and 5 Elements Institute). Such conclusion testifies the hypothesis supported by some academics that gender is being overlooked in the Environmental Education theory.

3) If on one hand being the main responsible for the household provides women with a distinguished knowledge about the environment, on the other hand women in these societies continue to be far from the public sphere where key decisions regarding environmental problems are taken. The distinguished female knowledge and perspective about the environment should be useful to empower women themselves and to contribute to environmental policies in the public level. Nevertheless, the practical consequences of giving a stronger importance to gender in environmental education programs in the referred societies could not be empirically determined in the present study. Future research on this matter will be necessary in order to draw empirical conclusions.

Ultimately, the present research represents a cornerstone contribution to the EE theory and research for addressing the poorly explored correlation between Gender and Environmental Education as a powerful tool for empowerment and emancipation.

References

Books


Edited books


Section in edited books


**Articles**


Gough, Annette (1999) Recognising Women in Environmental Education


Pedagogy and Research: toward an ecofeminist poststructuralist perspective. Environmental Education Research, 5:2, 143-161.


**Reports**


**United Nations Development Program (UNDP)** (2013) *The Rise of the South: Human progress in a diverse world* - Brazil. Available at: 

United Nations Environment Program (UNEP) (2015) Gender equality and the environment: A guide to UNEP’s work – Available at:
file://Users/analicemartins/Downloads/Gender_equality_and_the_environment__A_Guide_to_UNEPs_work-2016Gender_equality_and_the_environment.pdf.pdf


Theses


Sartoretto, Paola (2015) Voices from the margins – People, media and the struggle for land in Brazil. Dissertation. Karlstad University: Faculty of Arts and Social Sciences, Department of Geography, Media and Communication.

Websites

UN Data (2013) Country Profile: India. Available at:

UN Data (2013) Country Profile: Brazil. Available at:

World Bank (2013) Gender Data Portal: Brazil. Available at:
http://datatopics.worldbank.org/gender/country/brazil

World Bank (2013) Gender Data Portal: India. Available at:
http://datatopics.worldbank.org/gender/country/india
Appendices

Appendix 1 – Interview guide for Indian respondents

The three questions below were used as a basis for the interviews. As the conversation evolved, spontaneous comments and questions have been added.

- *Could you please introduce yourself?* (Religion, age, level of education, occupation)
- *Could you please elaborate on your experience in the field of environment?*
- *Thinking about gender equality, how do you think that education, especially environmental education, can promote girls and women empowerment?*

Appendix 2 - Interview guide for the Brazilian respondent:

The four questions below were used as a basis for the interview. As the conversation evolved, spontaneous comments and questions have been added.

- *Você poderia se apresentar? Idade, profissão, nível de educação, religião –* (Could you please introduce yourself? Religion, age, level of education, occupation)
- *Você poderia descrever sua trajetória profissional na área de meio ambiente e educação ambiental? –* (Could you please describe your professional experiences in the field of environmental issues and education?)
- *Pensando em igualdade de gênero, como você acha que a educação, em especial a educação ambiental, pode promover o empoderamento de mulheres e meninas nas comunidades/escolas trabalhadas?* - (Thinking about gender equality, how do you think that education, especially environmental education, can promote girls and women empowerment?)
- *Você poderia me dizer como essa questão de gênero é/poderia ser melhor trabalhada nos projetos ambientais?* - (Could you please elaborate on how gender matters could be better addressed in environmental projects and programs?)
## Appendix 3 – List of interviews

<table>
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<th>NR</th>
<th>Date</th>
<th>Respondent</th>
<th>Place</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>July 9&lt;sup&gt;th&lt;/sup&gt; 2015</td>
<td>Madam SS – Principal of the school</td>
<td>Mumbai, India</td>
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<td>2</td>
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<td>Madam RN – Science teacher</td>
<td>Mumbai, India</td>
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<td>3</td>
<td>July 10&lt;sup&gt;th&lt;/sup&gt; 2015</td>
<td>Madam PN – Science teacher and activist</td>
<td>Mumbai, India</td>
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<td>4</td>
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<td>Madam HM – Language teacher</td>
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<td>Madam VP</td>
<td>Mumbai, India</td>
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<tr>
<td>6</td>
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<td>Madam K – Mathematics teacher</td>
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<tr>
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<td>Madam SK – NGO Member</td>
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</tr>
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<td>10</td>
<td>December 18&lt;sup&gt;th&lt;/sup&gt; 2015</td>
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<td>Sao Paulo, Brazil</td>
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