



Università
Ca' Foscari
Venezia

Master's Degree
In Languages, Economics and Institutions of Asia and North Africa
(D.M. 270/2004)

Final Thesis

**Coping with the Anthropocene in China.
The potential of ecofeminism to inform value systems and societal
practices.**

Supervisor

Ch. Prof. Daniele Brombal

Assistant Supervisor

Ch. Prof. Angela Moriggi

Graduand

Giulia Moioli

Matriculation number 868467

Academic Year

2018 / 2019

前言

2000年，保罗·克鲁岑（Paul Crutzen）提出人类世的概念，他与别的科学家认为全球进入了人类世（Anthropocene），换言之他们认为地球已经告别全新世，人类活动改变地球系统并促进人类世这个新的地质时代的起点。人类世给地球系统与生态中带来了不少问题，大家都知道剧烈的人类活动也就是说发展国家的经济模式导致了自然环境的破坏以及自然资源和女性劳动力的开发。考虑到当前的全球危机，包括环境危机与价值危机，本文首先讨论了生态女性主义价值观可以做出的贡献，因为可以生成人们与自然，以及男女之间的新型关系，使其恢复平衡。本论文的目的在于探讨生态女性主义的理论和实践对当今中国的意义。毫无疑问，根据中国的社会政治背景与国内的管理体制，生态女性主义的本土化是一种不太顺利的过程。不过，中国在学术层面和环境行动层面的一些经验与生态女性主义理论和实践具有某些共同点。

本论文分为下面三个章节。

第一章针对人类世对地球环境产生的影响。世界进入了人类世，这就是说，人类活动对于地球造成特别负面的影响。科学家的目标是强调人类在目前的地球与生态中的作用。意大利地质学家安东尼奥·斯托帕尼（Antonio Stoppani）对人类说“一个全新的地球力量，世界将被这种更伟大的能量主宰”，他的意思是人类活动可以与自然界的巨大力量相媲美，可怕的是如今自然环境正在被摧毁。关于人类世的起点，科学家都有不同的观点，但是学者的大多数论定人类世是在18世纪中期开始的。其实，那时候在英国发生了工业革命，在那样的情况下，人类活动从农业转变到工业。自1850年以来，人类活动改变了地球的环境及面貌，它们的影响超过了自然变化的影响。但是，人类世这个新的地球时代具体意味着什么？巨大经济发展，资本主义，全球化与人口的增加导致人类越来越无限制地掠夺自然资源。这给地球带来了危害，比如说人们改变及过度对土地和水资源的利用导致土壤污染与水资源的减少，关于大气方面，也存在很大的问题。毫无疑问，从工业革命起，人类活动开始影响到大气的成分，化石燃料的燃烧导致温室气体浓度的增长以及大气中的二氧化碳浓度的增加（2018年达到410ppm以上）。在这样的情况下，气候变化不再随着自然的过程而变化而受到人类排放的影响。其中人

类世造成的后果，特别明显的有全球气候变暖，生物多样性丧失，空气、水资源、土壤污染，因此目前，整个地球与它的居民面临一个非常巨大的危险，就是灭绝。我们如何在人类世生活？怎么可以告别这个时代并恢复平衡？

这个问题就是**第二章**的重点。本章节的目标是提供摆脱人类世并恢复人与自然之间的平衡的一个选择：本代替方法就是生态女性主义。自20世纪60年代以来，这一概念在西方得到了发展，尤其是在女权主义的环保运动中兴旺起来。

生态女性主义将女权运动与生态结合起来，这种概念从性别角度分析自然环境恶化与社会问题。有些学者认为女性与大自然不获得解放就不会解决地球环境的问题。从生态女性主义来看，女性和弱势群体比如孩子们，穷人，黑人是那些受当前环境变化影响最大的群体。生态女性理论与实践对环境保护与妇女事业有较多的好处。并对其具有积极的影响，学者与活动家认为妇女可以领导一个生态与社会革命，促进男女、人类自然之间的融洽关系。

虽然有许多对这个主义持有不同的立场，但是活动家都有类似的基本共识，如学者与活动家提倡一种**关心哲学**，然后生态女性主义的学者认为妇女与自然有一种密切的联系，有一些原因可以说明这一点，首先老弱妇幼是气候变化的第一受害者，然后妇女的本性离生态运动比男人的近得多，比如说保护和养育方面，还有生物特征使妇女更接近自然比如说生殖能力，最后妇女价值体现了生态意识。另一个值得谈到的方面是女性与自然的联系主要发展在西方国家的二元论背景下，在这样的情况下，科技辩论属于男性世界，它使对女性劳动力和自然资源的持续开发合法化，从而使资本主义积累的逻辑永久化。随着二元论，妇女与自然处于平等位置就是在男性境界与科技领域之外，自然和女性都是**他者**身份。出于这些原因，生态女性主义反对西方的二元论，经济模式就是资本主义以及反对父权制，这些都是对自然资源与弱势群体的征服、统治和侵略与剥削。生态女性主义希望成立新的关系，尊重地球系统和承认女性工作的价值，废除资本主义并采取自给自足的经济/生活经济。在这样的背景下，妇女可以扮演最重要的角色因为她们总是是环保运动的主人公。

第三章针对生态女性主义在中华人民共和国的本土化。中国的社会政治背景限制生态女性主义的发展，尤其有三个妨碍的因素：第一个是中国的管理体制，第

二个是经济增长模式，第三个是科学文化意识形态。可以说，在中国生态女性主义的理论与实践严重脱节。即使存在上述的因素，但根据文献可以发现在中国也有一些与生态女性主义分享同样的道德准则。从学术的角度看，道教与生态女性主义有共同点，比如说两个都没有二元论的观点，男与女是互补的以及人们与大自然应该有融洽的关系且互相尊重。在道德经中，也可以用生态女性的观点来理解一些道德经的章节，比如说 XXVIII 章说知其雄，守其雌，这句话可以被解释为承认力量的重要性，但最终要重视母性的美德原则。从中国民族的角度，在云南还有一个民族叫摩梭。摩梭人的特殊体系是在他们社会经济管理存在一个母系制度。探索这个由妇女统治的制度可以发现与生态女性主义有特别多的共同点，最重要的是拒绝宗法制度，人与自然和谐相处，性别平衡，整体观，母性崇拜和集体主义。最后的部分研究两位中国女性环境活动家的工作，一个是汪永晨，另外一个柴静。最近三十年她们都开始关注环境问题，两位女性都出生在改革开放政策执行之前，这意味着她们经历了中国的巨大经济发展和现代化进程。虽然改革开放给人们带来好处，比如说减少贫困，但是也带来了不少负面影响，快速的城市化、行业发展、大量煤炭的利用等因素导致中国环境的破坏与巨大的社会变迁。

2019 年，污染对中国和世界各地都是一个严重的威胁，为了解决这个问题需要国家政府，国际机构，非政府组织和人们的合作和努力。环境活动家可以起到很大的作用，她们是政府与公民之间的桥梁，通过她们的工作，她们向人们尽量传授环境知识和意识。本论文探索柴静的纪录片即穹顶之下，她针对中国的污染和雾霾对所有人尤其是对儿童的负面影响，引人注意的是柴静在向公众揭露问题的同时表现出了一种母性态度，这个方面与生态女性主义的理论很有共同性，这也是本论文分析她的对话的原因，同样，汪永晨也表现对环境破坏的关注，尤其是对中国河流的保护。不但她反对水坝的建设而且她成立了绿家园志愿者民间环保群体，1996 年她获得了中国的地球奖。

为了解决目前的国际危机，包括环境破坏与社会危机，应该改变价值体系和经济模式，我们自己与政府和国际机构应该尽量试着保证一种可持续发展态度，为的是建设一个可持续未来以及社会平等。关于中国的情况，在查阅了西方和中国文学之后，最终的考虑是，中国与西方国家之间存在许多差异，因此生态女性主

义的理论 and 实践在中国的发展不可能与西方国家的发展一样。最后，即使建设有中国特色的生态女性主义并不容易，但也并非不可能，因为已经有一些中国妇女取得了显著的成就。

TABLE OF CONTENTS

前言.....	1
List of figures.....	7
List of tables.....	7
Introduction.....	8
1. Life in the Anthropocene.....	11
1.1 Moving from the Holocene: a radical shift in geological epochs.....	12
1.2 The time of the Anthropocene.....	13
1.3 Living in the Anthropocene: human drivers of change.....	15
1.3.1 Industry.....	16
1.3.2 Energy and transport.....	17
1.3.3 Food supply.....	17
1.3.4 Tourism industry.....	18
1.4 Evidences of the Anthropocene.....	20
1.4.1 Climate change.....	20
1.4.2 Air quality.....	23
1.4.3 Water resources.....	25
1.4.4 Soil and land use.....	26
1.4.5 Loss of biological diversity.....	29
1.5 Human perception of global change.....	31
1.6 Towards sustainability.....	34
1.6.1 Weak sustainability approaches: technology, geo-engineering and green economy.....	35
1.6.2 Strong sustainability approaches: institutions (values and norms) as leverage points.....	37
2. The Ecofeminist proposition.....	41
2.1 The main tenets of Ecofeminism.....	41
2.1.1 Origins in brief.....	42
2.1.2 Why the environment should be a female concern.....	44
2.1.3 The conceptual conflicts with pure feminism.....	50
2.2 Unity in diversity: some ecofeminist traditions.....	53

2.2.1	Cultural ecofeminism.....	53
2.2.2	Radical ecofeminism.....	54
2.2.3	Liberal ecofeminism.....	55
2.2.4	Post-colonial ecofeminism.....	55
2.2.5	Marxist ecofeminism.....	58
2.3	Ecofeminism to keep the Anthropocene layer thinner.....	61
2.3.1	Ecofeminism and environmental justice.....	62
2.3.2	Ecofeminism and conservation.....	65
2.3.3	Ecofeminist political economy: redefining relations through daily practices and environmental activism.....	68
3.	Ecofeminism with Chinese characteristics.....	73
3.1	The introduction of ecofeminism in the People’s Republic of China.....	73
3.2	The development of ecofeminist literary criticism among Chinese scholars.....	75
3.3	The limits of the ecofeminist literary criticism in the Chinese academia.....	77
3.4	Challenges for cross-cultural ecofeminism: the practice of ecofeminism in the Chinese context.....	79
3.5	Possible constructions of ecofeminism with Chinese roots.....	83
3.5.1	The intersections with Daoism.....	83
3.5.2	Ecofeminism in China’s ethnic minorities: the case of the Mosuo 摩梭.....	89
3.5.3	Ecofeminist insights in Chinese female activists: Wang Yongchen and Chai Jing.....	96
	Conclusions.....	103
	Bibliography.....	105

List of Figures

Figure (2.1) The main tenets of ecofeminism.....	42
Figure (3.1) Women working the land in Yunnan Province, 2017.....	90
Figure (3.2) The Mosuo matrilineal system: intersections with ecofeminism.....	95
Figure (3.3) Shore of the Mekong River in Phnom Penh, Cambodia 2017.....	97
Figure (3.4) Screen capture of the interview carried out by Chai Jing in her documentary <i>qiongdìng zhixia</i> , 穹顶之下, (Under The Dome), 2015.....	101

List of Tables

Table (2.2) Western Dualisms (Twine 2001, Plumwood 1993, Gaard 1997).....	46
Table (2.3) Summary table of the main ecofeminist traditions.....	61

Introduction

We live in a world with finite resources and a delicate equilibrium yet the pursue of economic growth and the myth of progress keep on playing a central role in human societies. However, this pattern of development has contributed to the exploitation of nature and the marginalization of women and weak categories, catalysing the process of environment depletion and exerting major environmental pressures. In this context, the concept of Anthropocene arises, it is a term first coined by biologist Eugene F. Stoermer in the Eighties and then adopted by Nobel Prize-winning Paul J. Crutzen in 2000. It defines a new geological epoch in which human activities are overwhelming to the extent that they leave massive impact on Earth's eco-systems and Earth's geology. Considering the current environmental crisis, and being value crisis a feature of the latter, this dissertation endorses the idea of Institutions as leverage points¹ on which to intervene. The means explored in this context to inform new values and norms and foster new relations among Nature, human and more-than-human entities is Ecofeminism. Specifically, the purpose of this thesis is to analyse the relevance of the theory and practice of ecofeminism for today's China.

This work is divided into three main chapters. The first chapter draws from the theory of Anthropocene to frame current civilization challenges. As briefly aforementioned, the Anthropocene is the new geological epoch characterized by massive human influence on the Earth, it is underpinned by the idea of dominance. But, from an environmental standpoint, what does really mean living in the Anthropocene? The chapter goes through some of the most distinct anthropogenic environmental issues such as: climate change, water shortage, soil and water pollution and loss of biodiversity. It then moves on analysing the Anthropocene in social terms, which is the human perception of global change? Which are the implications of the Anthropocene for human societies? A joint commitment of governments, NGOs, institutions and individuals towards sustainability is what we deem necessary to restore a balance among humans and more-than-human entities. What the thesis stresses is the importance of institutions as leverage points, that entails an intervention on the values and norms that underpin our society. The development model endorsed would no longer be profit-oriented but rather life-oriented,

¹ The concept of Leverage Points is introduced by Donella Meadows in her essay *Leverage Points: Places to intervene in a system* (1999) and refers to places, points, positions or situations in a complex system where a small change can trigger a bigger one.

a model that respects the environment and give equal value to all the world's categories. Scientific literacy is fundamental in the process of transformation but it has to be combined with transdisciplinary science, embedding indigenous knowledge, cultural and biological diversity.

The second chapter focuses on Ecofeminism as a means to inform current value systems and social practices. Ecofeminism is a wide-ranging movement that combines feminism with an environmental perspective. What has feminism to do with ecology? When ecofeminism started developing around the Seventies in the US, its ideas were rather groundbreaking. However, the origins of ecofeminism are to be found in the movements of women, first in the US, then in the UK and throughout the world. Women have always been at the forefront of environmental activism, in 1961 in the US for the suspension of nuclear tests, in India with the *Chipko* movement, the Greenham common in the UK, the Green Belt Movement in Kenya and many others, the greatest movements have originated from women's concern for their children and the harmful effects of human activities on the environment. The maternal instinct is what have catalysed mass actions throughout the years. Ecofeminism fosters a system based on care for the vulnerable, respect, equality between humans and more-than-humans, its aim is a fair co-existence and the recognition of women and nature's services. Why the environment is a female concern? To what extent women actively participate in environmental protection and conservation? Why is ecofeminism important to cope with the Anthropocene? These are some of the questions the chapter will try to answer encompassing different levels from a conceptual framework to a more practical sphere.

After having analysed the challenges humankind faces in present time and the alternative proposed by the ecofeminist movement, this dissertation moves on to explore the relevance of the ecofeminist concept and practice in the People's Republic of China (PRC). The chapter is divided into two main bodies, the first describes the introduction in China of the ecofeminist theory after 1978 and the Chinese efforts in developing an ecofeminist literary criticism with its limits, it then moves on to analyse the challenges that the practice of ecofeminism encounters in the Chinese context outside the academia. Throughout the years, not only the western domination of the concept has probably prevented the Chinese from elaborating a national version of ecofeminism rooted into the Chinese culture, but also the PRC's system has hindered the ecofeminist discourse and

its diffusion. Considering China's socio-political constraints, the final part of the chapter gathers a few insights about possible Chinese constructions of ecofeminism: firstly, it analyses the connections between Daoism and ecofeminism, then it studies the matrilineal system of the Mosuo ethnic group and lastly, it explores the work of two major Chinese female environmental activists from an ecofeminist standpoint.

To carry out this research, scientific papers, academic journals and official websites were mainly used together with primary sources such as interviews, articles and documentaries. The consultation of authors' books, grey literature and encyclopaedias were also fundamental to shed light over topics that were rather obscure to me. We mainly used western sources, however, in the last chapter, the consultation of Chinese sources was necessary as the only western sources were not exhaustive on the subject.

The final part of the thesis attempts to draw conclusions on the pathway for ecofeminism in China based on the literature review carried out in recent months.

1. Life in the Anthropocene

Humankind is facing the most dangerous global crisis it has ever experienced. In the light of our Planet's downfall, the future of humanity is at stake, the risk is: there could be no future at all. Life on Earth as we know it will endure the climate change?

In 1893, the Italian geologist Antonio Stoppani defines mankind as "*una nuova forza tellurica con potenza e universalità comparabile con le grandi forze del pianeta*" (a new telluric force with power and universality comparable with the great forces of the planet) (Michielin 2017:webservice).

Anthropocene, from the Greek *Anthropos*, human being, is the term first coined by biologist Eugene F. Stoermer in the Eighties and then adopted by Nobel Prize-winning Paul J. Crutzen in 2000. It labels a new geological epoch in which humankind plays a central role: massive human activities rival the great forces of the Nature leading to dramatic ecological disasters and social changes. The Earth is facing the Anthropos' impact on its natural processes, global warming and loss of biodiversity are just some of the evidences. As we all understand, Anthropocene represents a threat for the Earth system and jeopardizes human survival (Angus 2015).

When discussing the topic of the Anthropocene, there are two different approaches, one is the climatological approach and the other is the stratigraphic approach. Regarding the first, we can find tracks of human activities in the atmosphere, therefore in the huge increase of greenhouse gases, while regarding the latter approach the results of human influence on the planet can be found directly in the earth itself (Missiroli 2016). Nevertheless, the two approaches are indissolubly linked. Italian Biologist Davide Michielin describes the epoch we are living in with this sentence: *(...) skies full of carbon dioxide from the combustion of coal and oil, while steel, concrete and plastic could characterize our geological layers (...)* (Michielin 2017:webservice).

The aim of this chapter is to give a general overview of the Anthropocene and to assess the impact of the human activities on the earth ecosystems, the last part of the chapter focuses on the human perception of global downfall and discusses the different pathways and approaches toward sustainability. The main sources of reference used are the major work *Global Change and the Earth System* (Steffen et al. 2004) and published articles written by Paul J. Crutzen. Going through a literary review of the major authors and

analysing scientific data, it is possible to demonstrate the rise of new trends that characterize our epoch and contribute to the devastation of the natural environment. It is impossible to ignore the massive ecological and social change that this specific epoch embeds, therefore the last part of this chapter focuses on two possible ways to face changes of this magnitude, the first one gives emphasis to technology and geo-engineering, the second and actually the one we will further analyse, stresses on changes in institutions as values and norms in societies and consequently changes in human behaviour to tackle the current degradation.

1.1 Moving from the Holocene: a radical shift in geological epochs

The international scientific community has been divided the word's history in eras, periods and epoch since the formation of the Earth. We currently live in the Cenozoic era, in the Quaternary period and unofficially in the Anthropocene epoch.

The term Anthropocene was unknown 20 years ago, it has been spreading over these past few years. It appears in academic journals, websites, books and magazines leading to a general and public acceptance of the scientific term (Angus 2015) and there has been a lot of debate in the scientific community about it.

One thing the scientists all agree on, is the fact that the Earth and its inhabitants have left the Holocene epoch, also known as Recent Epoch, to enter in the Anthropocene. According to the Encyclopaedia Britannica the Holocene covers 11,700 years of the world's history, it is the second epoch of the Quaternary period and it is important to know that the Holocene is the epoch interested by the human development. However, many scientists believe that *the time characterized by the rise of humanity should be separated from the time characterized by humanity's domination over the planet's ecological systems and biogeochemical cycles* (Agenbroad, Fairbridge 2018:webservice), for this reason the scientific community agrees on the fact that the last part of the Holocene should be considered as a new epoch characterized by the impact of human activities on natural processes, labelled with the name Anthropocene. Nevertheless, the Holocene remains the chronological framework for human history. In fact, differently from the former epoch Pleistocene, the Holocene shown a climate stability that fostered the development of humankind: the dawn of the agriculture was a direct consequence of the new living conditions, it was followed by the building of the first villages and creation

of more complex civilizations, facilitating the evolution of new animal and vegetal species. Biodiversity has always been a factor of major importance, the more the species and ecosystems, the more are the possibility of adaptation to changes (MA 2005), therefore climate stability and biodiversity are necessary conditions to maintain the Earth system's balance. The new Anthropocene epoch is characterized by dramatic loss of these two main indicators, the Earth overheats and it is facing massive loss of animal and vegetal species. These events and specifically the extinction of many species is directly linked to the leaving of the Holocene epoch (Choudhury 2018).

1.2 The time of the Anthropocene

One of the main questions the scientific community has discussed is: when did the Anthropocene begin?

There have been many debates among the scientific community about the beginning of this human-dominated epoch, in fact, according to the different “golden spikes” or traces in the atmosphere that scientists take as evidences of change, there are different positions and hypothesis. A golden spike has been described as a geologic marker that carries global change in geology, this indicator marks a change in geological time division. Therefore, the question which the researchers are trying to answer is the triggering event that marked the transition from Holocene to Anthropocene.

As already mentioned, there are a few lines of thought:

1. According to the article “Geology of mankind” published by Nobel prize-winning Paul J. Crutzen in *Nature*, and “The Anthropocene: conceptual and historical perspectives” written by both Steffen and Crutzen, the beginning of Anthropocene dated back to the second half of 1700 when the Industrial Revolution occurred in Great Britain. This period marked the Holocene-Anthropocene transition, the consequences of the first Industrial Revolution are to be considered the events that fostered the change of epoch. There was a shift in human activities, agriculture wasn't the centre of human life anymore, the discovery of fossil fuels and their widespread use allowed people to engage in new activities and develop the old ones; the direct result of this exploitation was the huge development of human enterprise and thus the beginning of our impact on Earth. This impact was also evident in the atmosphere, in 1784, James Watt patented the steam engine, laying

the foundation for the massive emissions of carbon dioxide (CO₂) and methane (CH₄) that still haven't stop. As a matter of fact, Crutzen wrote: *analyses of air trapped in polar ice showed the beginning of growing global concentrations of carbon dioxide and methane* (Crutzen 2002:211). By 1850, the Industrial Revolution changed England and spread around Europe and America, meaning that the influence of this transformation had a revolutionary impact on the people and their activities and this was when the human imprints on the environment started being identified. The Intergovernmental Panel on Climate Change partially agrees with this view, stating that the beginning of this human-epoch was around 1750 in the pre-industrial revolution period, from this year on, the human imprints on Earth increased progressively.

2. Others believe that the beginning of Anthropocene shouldn't be when the emissions started, but when they started having a strong impact on the environment instead. During 1800, the increase of atmosphere CH₄ and CO₂ was slow (Ruddiman 2003) and had not such an impact. The human imprints on the environment started being well recognized in the year 1945 that is considered thus a turning point in human and Earth's history: in 1945 in Alamogordo, New Mexico, US, the first nuclear bomb test was carried out in the middle of the Jornada Del Muerto's desert. From that experiment on, more than 2,421 other nuclear tests were conducted, causing the release in the atmosphere of huge quantities of isotopes not existing in nature (Michielin 2017). Therefore, this year marks the beginning of the "Great Acceleration" (IGBP, 2015), that has been leading the CO₂ concentration to dramatic peaks, from 300 ppm (parts per million) to more than 400 ppm (Steffen, Grinevall, Crutzen, McNeill 2011).
3. According to the palaeoclimatologist William Ruddiman's hypothesis Early Anthropocene, he strongly believes that this epoch has begun during the Neolithic age, there are evidences proving that back then human already started altering the atmosphere composition with CO₂ and CH₄ emissions (Ruddiman 2003).

As we can understand from the different hypothesis, the core of the debate about the beginning of the Anthropocene is fueled by valid and scientific demonstrable truths, what differs from author to author is the point of view from which they are considering the same topic. In this specific case, Crutzen and Steffen are not denying Ruddiman's thesis, it is true that humans are responsible for CO₂ emissions back in the Neolithic, what the

two researchers believe is that back then, the humans didn't have the power to exceed the CO₂ concentration limits that were typical of the Holocene (260-285 ppm), instead, they take in consideration the period in which mankind started having an actual and dangerous influence on the environment, in other words, the moment human-caused emissions exceeded the CO₂ concentration limits.

1.3 Living in the Anthropocene: human drivers of change

In the past half century we've created a world in which people on average live two decades longer than they did before, in which they cross oceans in a day with barely a thought, in which they communicate instantaneously and globally for barely a penny and carry libraries in the palm of their hand. Fossil fuels helped make it possible. (Kunzig 2015:websource)

The relationship between human and nature has changed during the years. It can be stated that at the beginning of the history, humans were completely dependent on Nature, but the Industrial Revolution strongly weaken this connection as humans were not dependent on Nature anymore, industry took its place instead. The human's alienation from Nature has been worsening with the advent of technology (Kaplan 1992). We used to be part of the Nature, formerly man was involved in a dependant and obeisance relation, now the relationship is just about exploitation. This situation has now reached dangerous points, humankind became so powerful that can rival the great forces of Nature, we are so influential that we can be compared to a *global geological force*, we are changing the Earth's climate through massive emission of carbon dioxide, we can deviate the flow of the rivers, we are altering some element cycles as nitrogen, phosphorus and sulphur, we are responsible for species extinction and other human-driven disasters (Steffen et al. 2011).

The Earth is now dominated by human activities, these activities have the power to alter the biosphere and all the environmental systems from land, to waters, to atmosphere; the human impact on the environment is not just limited to the increase in greenhouse gases, but it affects every system of the planet and processes.

The aim of this section is to try to gather the major human-driven changes that during the years have transformed both the relation between humans and Nature and the interpersonal relationship as well.

1.3.1 Industry

In the second half of the 18th century, the Industrial Revolution completely changed the world we used to live in, breaking the interconnection that once linked the human world with its mother Earth. We shifted from an agriculture-based system to an industrial one, thus leading the world through a huge economic development, technological innovation and socio-cultural change. Despite the undeniable growth, there has been also long-lasting bad outcomes: the increase in the use of energy has dramatically damaged the Earth's environment, the burning of fossil fuels has been used to power new industries and transport, thus leading to air and water pollution; cities have been growing faster and faster due to the huge migrations from the villages to the urban areas of the whole world, the world population also skyrocketed. Public health has suffered from this situation and the growing population also affected the increase in the need of natural resources (McLamb 2011).

According to the United Nation (UN), currently the global population is more than seven billion people and around two hundred years ago we were less than 1 billion, in fact over the last decades the rate of population growth has increased every year up to 2.1% (Roser, Ospina 2017). Most of the population live in urban areas, scientists and researchers stated that by 2050 the cities will be bursting with more than half of the world's population and they already account for 76% of CO₂ emissions (Kunzig 2015). The rise of population is of major concern for the present and the future of the environment, as the population increases also the need of resources does, not only basic needs like food, water, shelter...but also other needs like employment, self-satisfaction, health...here the role of society is fundamental, the way in which the society tries to meet these needs is crucial and determinates the outcomes on the environment. Unfortunately, we can say that in the developed countries, society and governments together create the desire in the individual in order to foster economic growth and pursue their goals (Rofel 2007), who pays the price is our planet and clearly, its inhabitants, but clearly not everyone. New industries and businesses find breeding ground in uncontrolled consumption and inducted desires.

On one hand, the development of sectors such as transportation and communication and the cheap fuel available have led to an astonishing economic growth, on the other hand they constantly release in the atmosphere toxic substances. According to data,

currently, more than 100,000 chemicals from industry are in use, among them chlorofluorocarbons and heavy metals (Steffen et al. 2004).

According to Pure Earth, the most polluting industries in the world are: Used Lead-Acid Batteries (ULAB), Mining and Ore Processing, Lead Smelting, Tanneries and Industrial Dumpsites (Worldatlas 2018).

For all these reasons, we can easily estimate the violence of the impact of the Industry, a pillar of our modern society, on the environment.

1.3.2 Energy and transport

As regard the dimension of the energy consumption, it can be stated that it is primary linked to the combustion of fossil fuels. Many years ago, the debate and the concerns of the people were focusing on the possible lack of resources for the next generations of coal and oil, for instance. Today, the debate has shifted its core to the problems deriving from the increase in the use of energy. This increase has direct effects on the air quality and on climate change (Steffen et al. 2004). The world's energy is mainly consumed by transports or transport-related facilities and as a matter of fact, over the last few years the increase in the purchase of transports has worsen the emission of pollutants and the drawbacks for the environment. When discussing about transport, we are taking into consideration private mobility and infrastructure. The impact can be direct, for example, noise and carbon monoxide emissions; indirect, for example, health problems connected to the circulatory and respiratory system and cumulative impact such as climate change (Rodrigue 2017). It is important to point out that despite the general upward trend in energy consumption over the last decades, the per capita consumption has decreased, the main reason of this downward trend can be connected to the spread of technological improvements in energy efficiency.

As any other human enterprises, also the transport sector has contributed to enhance people's lives, cut the costs and reduce the distances, but once again is the Earth systems that keep on suffering from the uncontrolled development.

1.3.3 Food supply

Over the last decades, the demand and the need for food has been growing along with the growth of world's population. Therefore, rice, maize and wheat production has

skyrocketed to keep up the pace, the means to reach these results lay in the intensification of agricultural production rather than in the expansion of croplands (Steffen et al. 2004). Moreover, the demand of meat and fish has been seeing an upward trend as well. The rising of the need for food is another of the human-driven changes that carries with it several consequences, among them, the spread of the agriculture trade and the consequent fall of the prices had an impact on the developing countries that have been forced to put more effort on the exports to guarantee the income; another consequence linked to the intensification of the agriculture, is the increase in the use of fertiliser and in the use of pesticides. Concerning the topic of pesticide application, it is relevant to make a connection with the well-known book of Rachel Carson, *Silent Spring*, precisely because, in this book written in 1961 we can find the roots of the environmental discourse. *Silent Spring* addresses the wide use of pesticides as the cause of terrible environmental problems, Carson took a step against the chemical industry accusing them to spread disinformation. According to the chemical industry, the chemical pesticides were dangerous just for crop insects and bugs, and not for humans, but they were, in the end, the main cause of liver tumor and cancer. Besides, the natural ecosystem has been suffering from the use of DDT and other synthetic pesticides, used to maximise the production by killing crop and forest insects, the widespread use has led to pest resistance to pesticides, to side effects on humans and to damage to wildlife, agricultural and domestic animals. Back in the 1960s, this book was a call for the use of non-chemical pesticides.

Carson's work has been inspiring the modern environmental movement and at the time she exposed herself to many criticisms because she thought that the core of the problem was laying in the modern society, in the governments and in the industries, thinking that what really was needed was a social revolution. She saw that the society we were (and we are) living in has been responsible for the separation between humans and nature making men conquer and master the nature and leaving behind an equal relation between the two subjects (Carson 1961). *Silent Spring* is an important pillar of the twentieth century, forecasting issue of major impact on ecology and life on earth consequently.

1.3.3 Tourism Industry

Nowadays, the tourism industry is one the fastest growing industries: at the beginning of the twentieth century it was a very small industry and by the years it has become one

of the biggest: it accounts for around 12% of the world's GDP and around 10% of the world's total employment (Steffen et al. 2004). For the fast-paced growth of magnitude, it can be stated that the effects on the environment are unavoidable, particularly in most occasions in which the number of tourists exceed the environment capacity to deal with it. The demand for natural resources increases causing negative outcomes on many earth's systems like water, land and air, mostly concerning air pollution, littering, land degradation and local resources depletion.

The world is changing according to tourism requests, for instance, over the last few years Italy and China have been promoting activities and signing agreements in order to foster tourism, cultural and business exchanges between the two countries, among the most recent, in March 2019, Trenitalia has signed a trade agreement with Ctrip Group, the Chinese online travel agency, allowing the purchase of Trenitalia tickets on the Chinese platform, or the agreement signed between Sicily and the China International Travel Service (Citis), the biggest tour operator in China, to promote the region in the Italian Top Destination. Citis' forecasts will see an annual increase of 10% of Chinese tourists in Sicily (Sicilia Network 2019). The increase in the arrivals means a reconstruction and reorganization of the local offer and services, thus Italy has been preparing to cope with the huge number of Chinese visitors by adjusting its offer to an Asian target. These are just examples of the many steps taken worldwide in order to develop the travel industry but in most cases, even if the development creates new jobs and opportunity that enhance the economic growth, there are many aspects in real danger, one of all is the local culture, along with the provision of resources and as mentioned before, the environment degradation.

To sum up, these sectors we have just seen are some of the countless human enterprises that convey direct impacts on the environment, each of them is responsible for different issues affecting various earth's system in different ways. In this section, we have seen how it is like the life in the Anthropocene: despite the overwhelming economic growth and the technological development, the Nature and the weaker groups of the society are paying the price of the human greediness. In the next paragraph, some of the negative consequences of the human-dominated world are further investigated in order to demonstrate the seriousness of the current situation.

1.4. Evidences of the Anthropocene

As already mentioned before, we live in this particular geologic epoch whose main actor is the humankind, this means that the human activities are overwhelming to the point of putting in real danger the earth's systems and the next generations, risking a no-coming-back point. In this paragraph, some of the most astonishing evidence of this peculiar epoch are described.

1.4.1. Climate Change

How do we know climate change is really happening? This is one the question many people are asking themselves. The answer is quite simple, there are lots of evidences to prove that this phenomenon is real.

The climate of the Earth has been changing through the centuries, about 7,000 years ago the world had been through the last ice age, stating the beginning of a new modern climate era and thus the beginning of the human society. The change in the climate our Planet is experiencing is due to the increase in the quantity of solar energy that it gets (NASA 2019).

For many scientists, climate change is what exactly determines the beginning of the Anthropocene, that is when the humans started having the power to influence the atmosphere. What does this mean? The increase in CO₂ emissions that comes from human activities and specifically in the burning of fossil fuels, is held responsible for the warming trend since the middle of the twentieth century. The CO₂ concentration has reached the highest peak in 20,000,000 years, however, climate change is not likely to end the life on Earth, rather it can led to the end of the life as we know it (Haywood et al. 2011).

As we all may know, the Earth is a planet and it has a cold surface, thanks to the solar energy, it can keep an average temperature of 15°C. The atmosphere is a kind of “gaseous shell” that covers the Earth's surface and without it, the life on earth wouldn't be possible. Why the atmosphere is so important for our Planet and for us? Because it creates the “greenhouse effect”, it is not necessarily bad, in fact, it is fundamental to keep part of the heat of the sun rays in the atmosphere. Without it, the temperature on the Earth would be unbearable and not suitable for most of the living things, it would reach an average of -18°C. The greenhouse gases account for the 1% of the atmosphere composition, the rest

is mostly nitrogen (78%) and oxygen (20%). The principal greenhouse gas is, undoubtedly, carbon dioxide and since the Industrial Revolution, humankind has been responsible for the massive increase in CO₂ concentration that now recorded an increase of 40%.

One of the first evidence of climate change is, therefore, the anthropogenic global warming. What has been happening is that the rise in greenhouse gases concentration has caused the Earth to warm up: the gases trap the sun heat that the Earth is not absorbing and release it again in the atmosphere (Royal Society 2011). According to NOAA/NCEI annual global analysis for 2018:

Overall, the global annual temperature has increased at an average rate of 0.07°C (0.13°F) per decade since 1880 and at an average rate of 0.17°C (0.31°F) per decade since 1970. (NOAA/NCEI global analysis for 2018:webservice)

Under these circumstances, there is another factor that contributes to the worsening of the global warming: deforestation. Forests are considered the Planet's lungs because through the process of photosynthesis they turn the carbon dioxide into oxygen to be released in the atmosphere. According to the World Bank and an article released by the National Geographic, between 1990 and 2016 the Earth lost 1.3 million square km of forests, an area almost equal to the South Africa's surface. However, world's forests still cover the 30% of the total surface. As mentioned before, not only trees are of major importance for human survival because they can absorb carbon dioxide that is currently dramatically warming up our Planet (Nunez 2019), but they are also of primary importance for reducing soil erosion and they are necessary in the global water cycle.

The rise in global temperature is affecting most of the Earth's systems:

Since 1960, the temperature of oceans has been increasing by 0.13°C per decade along with the increase in oceans acidification (decrease in oceans pH) caused by the rise in the concentration of carbon dioxide from the burning of fossil fuels. The oceans, in fact, are absorbing the unnecessary heat from greenhouse gasses and if the water is warmer, it takes more space leading to the rise of sea level. By the end of the century the level may increase up to 30 cm (Tutton 2019) leading to catastrophic events: many cities that are not even 30 cm above the level of the sea are at risk, besides, the increasing sea level can have devastating outcomes on coastal areas around the globe as well, not to mention that the heat of the water affects the survival of marine species and eco-systems because of

the decline of favourable environment condition. The mortality risk for mammals, seabirds and fishes has increased along with the bleaching of coral reefs and the loss of breeding grounds. The rising temperature of the oceans jeopardizes also the life for humans with regards to food security and transmissible diseases from marine species (FAO 2012).

The warming trend has also caused the massive loss of Antarctic ice shelves that are melting at a fast pace adding about 5 billion tons of ice every year from 1992 to 2017 (Fox 2019). This area of the Earth is warming faster than any other and keeping this melting pace, scientists have forecasted the disappearance of the summer sea ice by the end of the current century.

Glacial retreat is another of the consequences of the climate change. From the Alps, to the Himalayas, to the Rocky Mountains, since 1950 the glacial retreat hasn't stop and has incremented its pace worldwide, some of the glaciers already disappeared, others are threatened. Many civilizations around the world depend on seasonal glacier melting for crop's irrigation, drinking supplies and hydropower (Global Greenhouse Warming 2019).

Indeed, the extreme weather events are directly linked to climate change. Hurricanes, tornadoes, drought, earthquakes, violent rainfalls and Tsunamis frequently hit our Planet claiming lives and causing massive damage to urban areas, wildlife and natural systems. According to John Nielsen-Gammon, an American climatologist, the force behind these critical events is the global warming and its consequences. The excessive heat in some part of the world is, indeed, responsible for wildfires and droughts damaging the crops around the globe, furthermore, the oceans with warmer water evaporate more moisture in the atmosphere, hence it is the cause of violent rainfalls and floods (Miller 2012). An international study in *Lancet* says that throughout this and the next century many more people will be exposed to extreme events, specifically vulnerable communities in coastal areas and mountains.

Climate change is not just about the environment and the change in weather conditions, it is also about people's well-being and health, it is a matter of equity and democracy, it is about personal consumption and awareness and countries' governments choices, because in most cases the victims of climate change are those who haven't contributed to

its creation. If we want to preserve our life on Earth and restore a balance among living things, it is necessary to take some actions to tackle the collapse of the world we know.

1.4.2 Air quality

The quality of the air is taken as another proof of human influence on the atmosphere. Clearly, it is not possible to talk separately about all the evidences of the Anthropocene because they are all connected to each other, indeed, the quality of the air goes hand in hand with global warming, catastrophic events etc. However, in this paragraph some data concerning the pollution of the air will be given together with an analysis of the drawbacks on human and more-than-human entities.

A good quality of the air is important to ensure people and animals' health and to protect vegetation, it goes without saying that if the air is polluted, it will, undoubtedly, have harmful effects on everyone and everything. The main sources of pollution come from industrial processes, individual consumption, transports, waste disposal (EEA 2016). As already mentioned before, not only the release of greenhouse gases in the atmosphere overheats the Earth, but also pollutes the air, what is alarming when taking into account the problem of the air quality is that the pollutant released in a particular area can spread and travel around the world; for instance, Beijing's pollution in the high peak can reach Los Angeles. This circumstance makes air quality not a local issue as it was seen before, but a regional and global one, for which every country needs to reduce the release of pollutants. As written in *Global Change and the Earth system, a Planet under pressure* in 2004:

The emissions from intense point sources, such as megacities, have ramifications well beyond their own urban airsheds. As megacities grow through the first half of the twenty-first century, air quality is set to become a trans-boundary pollution issue of increasing scale. It has become a global change issue in its own right (Steffen et al. 2004:228).

The impact of changing air quality is felt by humans and by the environment as well. The two most threatening pollutants are:

1. particulate matter. According to the United States Environmental Protection Agency:

Particulate matter, also known as particle pollution or PM, is a complex mixture of extremely small particles and liquid droplets. Particle pollution is made up of a number of components, including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles (EPA 2017:webservice).

With regards to the consequences of pollution on humankind, it can be stated that the inhalation of particulate matter has direct consequences on the respiratory system causing problems such as asthma, skin and eye irritation; what really matters when inhaling aerosol particles is not their chemical nature, but rather the quantity and the mass of the particles (Steffen et al. 2004). Besides, the particles that are up to 10 micrometers in diameter can pass through the nose, go down the throat and easily reach the heart and the lungs causing fatal infections (EPA 2017). The exposition aerosol particles can be due to fires, industries and power plant.

2. ground-level ozone. With ground-level ozone, also known as tropospheric ozone, we refer to the ozone in the lower layer of the atmosphere and thus in contact with the Earth surface. Differently from the Stratospheric ozone that protect us from ultraviolet radiation, Tropospheric ozone is extremely harmful for humans and animals' health, even if the exposure is short (Steffen et al. 2004). The formation of the ground-level ozone happens mostly in summer, because it is triggered by a *chemical reaction between oxides of nitrogen (NOx) and volatile organic compounds (VOC)* (EEA 2016) plus heat and sunlight. The main source of oxides of nitrogen and volatile organic compounds are the emissions of pollutants from cars, industrial facilities, chemical and power plants. The Tropospheric ozone concentration is higher in the Northern hemisphere due to massive anthropogenic emissions (EPA 2018).

As already mentioned before, the bad air quality represents a threat not only for human-being but also for food supply. Specifically, increase in particulate matter and ground-level ozone have a great negative impact on agriculture; crop production is suffering from the level of pollution. For instance, a study revealed that one of the most agricultural productive area of China was affected by the local haze that hindered up to 30% of solar irradiance. The percentage represents the solar energy that couldn't reach the crops anymore, this phenomenon is happening not only in China but in many places around the world, East Asia is one of the most affected areas. The result of this situation is a significant decrease in wheat and rice yields (Chameides et al. 1999).

Nonetheless, it is also true that some crops may benefit from the global change in climate as the warmer climate in many places around the world has extended the growing season (US Climate Change Assessment 2002). However, there are many factors to take into consideration and it is not possible to make an exact forecast for the future. In fact, climate change can have positive and negative side effects but the outcomes on the crops

are always unpredictable because as climate changes so does the Planet reactions to it, natural disasters, for instance, have negatively affected agricultural production.

One thing is certain, the growth of population demands more resources, if the population to be fed increases, the efforts to boost the agriculture productivity also need to be greater (Steffen et al. 2004).

1.4.3 Water resources

The aim of this paragraph is to analyse another of the Earth's resources and how it has been affected by the anthropogenic influence.

Water is the most important fluid for humans and for the Earth, unfortunately, many communities around the world suffer from water stress, in other words, the demand for water exceeds the supply. There is a significant imbalance between countries and the human influence on water has been considered as one of the most severe, there are two main fields of research we can classify: the impact of climate change on water quantity and the quality of the water itself. Water is fundamental not only for human well-being and survival but it is also fundamental for the Earth system, this intersection makes the water challenge an urgent matter.

Humankind activities have impacts on hydrological cycle that is fundamental to balance the Earth system. The hydrological cycle distributes the water to oceans, lakes, rivers, soil and atmosphere in an endless lifecycle, but climate change is modifying the level of steam in the air (EEA 2019), this anthropogenic change goes well beyond the availability of freshwater resources but instead affect the quantity and the quality of the water, as mentioned before (Steffen et al. 2004). As regard the quantity, it can be stated that, over the last few decades, the precipitation has increased: this phenomenon is mostly touching the mid and high latitudes in the northern hemisphere. Other parts of the world have experienced different situations, for instance the northern sub-tropics are affected by a countertrend in rainfall. The side effect of increase and decrease in precipitation is the rise of extreme weather events, for example, for the areas subjected to copious rain the risk of floods and hurricanes is more frequent, while in the other case the risks of droughts and wildfires is already threatening some part of the world such as Texas and California in the US and South Asia. This is a direct consequence of the global warming as it leads to an increase in the evaporation and a more active hydrological cycle, besides extreme events represent a threat for hydrological building such as dams. The quantity of

particulate matter in the atmosphere is also responsible for the changes in intensity of the rainfalls, in fact, the hydrological cycle has been experiencing a change in the number and size of clouds condensation nuclei and in the quantity of solar energy that can effectively manage to reach the land (Steffen et al. 2004).

With regards to the quality of the water, the main problems are the industrial and urban pollutants on freshwater (Steffen et al. 2004). Water has many uses, among them, agricultural, industrial, household and recreational use plays a crucial role: water resources are strictly connected to food production and agriculture is the main source of damage for the quality of the water due to the use of chemicals, pesticides and fertilisers.

To conclude, water is already lacking in few areas, the amount of freshwater used for agriculture is significant and it may vary according to the country and the climate condition, the forecasts for the future in terms of water supplies are not so positive, in fact according to an IPCC research: *several hundred million to a few billion people are expected to suffer a reduction of water supply by 10% or greater by 2050 (IPCC 2001b)*, the worst thing is that the provision of water will be harder in those countries already suffering from this lack.

1.4.4 Soil and Land Use

Soil is a fundamental connection between man and ecosystems, it is the interface among water, land and air, its composition is made by minerals, water, living organisms and air. The soil guarantees many vital functions for example the transformation of substance like carbon and nitrogen, food production, storage and filtration. Humankind depends on soil for living and its activities are undermining the potential of this key resource, the problem is that soil is a non-renewable resource (European Commission 2016).

In this paragraph the responses of the environment to changes in land-cover are investigated. The quality of our life relies on the quality of the soil, this is a fact we should all be aware of and since the humans have settled on the Earth, the soil has been subjected to many changes in use, it has gone through many conversions, and it has been contaminated with various substances, indeed, in this scenario, agriculture again has been playing a crucial role.

The first topic this paragraph analyse is the influence of the conversion of the land for agriculture and its drawbacks. When the soil is converted for agriculture use, the first step

of the process is the burning of the biomass and the following exposure to hydrological cycle and atmosphere (slash and burn agriculture). The outcome of this process is the increase in the atmosphere of gases and particles, the most significant gas is CO₂, as discussed earlier, the emission of CO₂ from fossil fuel consumption and biomass burning have severe effect on the global climate. Apart from CO₂, during the conversion of the land, also emissions of NO and N₂O and aerosol particles increase, and these gases contribute to alter the composition of the atmosphere and the deterioration of soil nutrients that lead to decrease in productivity. In fact, a direct consequence of soil conversion is the loss of organic matter:

Soil organic matter plays an important role in ecosystems, providing the organic substrate for nutrient release, aiding the maintenance of soil structure and water holding capacity and providing protection against erosion. With conversion to permanent agriculture, up to 50% decreases in soil carbon have been reported (Steffen et al. 2004:171).

The soil erosion is a problematic matter as it has reverberations through the Earth System by altering the global carbon cycle and the sedimentation that can have an impact on the coastal areas.

Of course, the consequences of the land-cover changes don't end just with the process of conversion but go well beyond, in fact, the change in the land use indirectly modifies the soil roughness, affects climate change and the atmospheric circulation and it represents a problem for biodiversity because of habitat alteration or destruction. Besides, the changes in the structure of the ecosystem often trigger a *change in the patterns of water and energy exchange between the land surface and the atmosphere* (Steffen et al. 2004).

Clearly, the different land-use are not just due to agriculture. We define "soil consumption" as the incremental artificial coverage of the land for the construction of buildings or infrastructure, therefore, the future of the soil as a vital resource is also connected to the expansion of urban and industrial areas. The implementation of these projects implies a waterproofing effect on the soil because in order to build the new plant they require the direct use of concrete and asphalt on the land. Under this circumstance, the soil loses its transpiration and absorbing functions, this contributes to climate change as the land becomes more vulnerable to floods, moreover, it contributes to the loss of biodiversity and natural landscapes due to the fragmentation of the habitats (Planet 2018).

Another important topic to discuss is the soil contamination. According to the *European Soil Data Centre (ESDAC)*, soil contamination is described as:

The occurrence of pollutants in soil above a certain level causing a deterioration or loss of one or more soil functions. Also, Soil Contamination can be considered as the presence of man-made chemicals or other alteration in the natural soil environment. (...) The occurrence of this phenomenon is correlated with the degree of industrialization and intensity of chemical usage (ESDAC 2019:webservice).

The economic growth and the fast urbanization have made the soil a primary issue for governments, for environmental degradation and humans well-being. The soil has become a matter of concern relatively late, in fact the first survey on soil contamination was carried out the last decade, the findings have denoted traces of consistent soil contamination from DDT, metals cadmium and nickel, arsenic and polycyclic aromatic hydrocarbons (Brombal et al. 2015). It goes without saying that soils are the exposure point for vegetations, mammals, birds and soil invertebrates, therefore their contamination can easily start the pollution of the whole food chain. The pollution is a threat for the global food safety, for the water resource quality and thus for the health of Earth's inhabitants, because it weakens plant metabolism and hence, on one hand reduces crop yields and on the other hand makes them unsafe for consumption. Besides, the significant use of pesticides and fertilizer directly harms soil organism and water (FAO 2018). What is the main source of soil pollution? Again, the evidence that we are living in a man-dominated world is right before our eyes: anthropogenic activities are responsible for soil contamination. According to a *FAO's report of 2018* what mainly causes soil contamination are:

Industrial activities including mining, smelting and manufacturing; domestic, livestock and municipal wastes; pesticides, herbicides, fertilizers used in agriculture; petroleum-derived products that are released into or break-down in the environment; fumes generated by transportation — all contribute to the problem. So-called "emerging pollutants" are also a growing concern. These include pharmaceuticals, endocrine disruptors, hormones and biological pollutants; "e-waste" from old electronics; and the plastics that are nowadays used in almost every human endeavour (FAO 2018:webservice).

Obviously, polluted soils are on the agenda of policymakers as they represent a pressing concern. Each country has its own situation and management program. For instance, according to a report of the European Environmental agency, in Western Europe there are more than 3 million potentially polluted sites and China accounts for more than 16% of polluted soils.

To sum up, we are facing two main issues, one is the deterioration of the soil and one is the possible lack of it, both problems have drawbacks on the global situation and threaten humans and more-than-humans survival on the Earth.

1.4.5 Loss of biological diversity

The last evidence of the Anthropocene taken into consideration is the loss of biodiversity, *the total variety of life on Earth* (Pimm 2019:webservice).

As we all may know, extinction is part of a natural process, the Earth has gone through six main extinctions, the difference among the previous and today's extinction is the cause. As a matter of fact, the past extinctions were due to violent natural events such as glaciations or volcanic explosions, the recent one, instead, has been caused by the humankind, what is worst is that the current rate of extinction is far greater than the natural extinction rate (Pimm et al. 1995). According to a WWF article, if there are 100,000,000 species on Earth, at least 10,000 species go extinct every year, therefore the extinction rate accounts for 0.1%/year (WWF 2019). Mammals, marine species, reptiles, birds and vegetations, they are all at risks, for examples, big mammals are always endangered because of hunting reasons, same for fishes because of fishing and whaling. Once again, it is the human influence on the Planet that harms the survival of animals, insects, vegetations and organisms. As already discussed previously, one of the principal causes of extinction is the change in land-cover, specifically, this change of ecosystem entails a fragmentation of the natural habitat or in some cases, its destruction. On the other side, the human exploitation of the coast areas and the water resources, has triggered the massive loss of marine biodiversity. One for all, the construction of huge dams and other water-control plants affects the natural flow of the rivers, change the temperature of the waters, causes runoff of nutrients and other issues, hence, it conveys change in the ecosystem that leads to great losses in marine species. In this case, one of the most significant examples can be the coral reefs, one of the richest ecosystems on Earth is now struggling for survival (Tuxill 1998).

Another issue to take into consideration, is the fact that many species, even if they are not at risk of extinction, they are poor in number so they are considered *ecologically extinct*, this means that the specific species still exists and it is likely to survive in future, but the abundance is so low that it is no longer able to interact with other species (Estes

et al. 1989). One example is the northern white-cheeked gibbon in China (Fan et al. 2013). Besides ecological extinction, also the introduction of non-native species in a different ecosystem can have inauspicious effects, the rate of the biological invasion in certain area is quite high, it accounts for more than 50% of the total species, for example, on many islands (Rejmanek and Randall, 1994). Many things can happen under this “transplants”, the new species can kill most of the flora and fauna of the place, as for the brown tree snake introduced to Guam from New Guinea (Baskin 2002).

Besides the aforementioned arguments, there is another threat to biodiversity conservation, that are biodiversity and gene patents and GMOs: the power of multinationals looms over flourishing biodiversity, small farmers, subsistence and natural economies, community villages and traditional knowledge. Multinational enterprises in the agribusiness claim the patents over great variety of seeds and living beings, they argue that the introduction of patents can foster the innovation, enhance the product quality and increase the production also in hostile lands. On the other hand, this represents the core problem for local producers and ordinary people, because the patents on seeds determine an increase in the costs by paying the license rights to multinationals and the prohibition to use and re-use the seeds (Shiva 2005). From an ecological point of view, there are also tremendous effects, the monopoly of multinationals determines a shift in agricultural practices, specifically a shift from a rotation of crops to monocultures. Monocultures break the principle of diversity at the basis of every ecosystem, the heavy cultivation damages the soil that loses its fertility because it absorbs always the same nutrients and they represent a threat to families in rural areas and a detachment from nature and indigenous knowledge. Globally, over the last few years the loss of biodiversity has reached an average of 75% (Allegro 2013).

Lastly, climate never stop changing, but which species will be able to adapt? The Earth warms and some animals suffer and will suffer from this change, others may prosper. An article on National Geographic of November 2015 reports a list of species with their survival possibility. According to it, for instance, the *Woodland Caribou*, already pressured by habitat loss, will face a food shortage; *more snow and freezing rain (a result of warmer temperatures adding moisture to dry, Artic Air) crust over lichen, caribou's winter diet, making it hard to access. In summer, increasing droughts bring fires that kill the slow-growing lichen* (Holland 2015:136); while the bird species *Greater Yellowleg* is

likely to make it through climate change thanks to its adaptive capacity. It won't be the same for the Bengala Tiger, the Artic Fox and other precious species. According to Jennifer S. Holland, a minority will be able to survive and readapt as the climate changes because of more food from longer spring and avoidance of migrations, but at the same time:

Which do poorly? Those already battling for survival. Small and fragmented populations, or those hemmed in by unsupportive landscapes. Animals competing with humans. Groups lacking genetic diversity. High-elevation species, island dwellers, and many coral-dependent animals. Those needing ice to survive (Holland 2015:142).

The Anthropocene has been changing the world, climate change is unstoppable, what we can do it try to slow it down, reduce our influence on the Earth and care for what is left because biodiversity is the key to our future. To do so, the first step to accomplish is awareness.

1.5 Human perceptions of global change

The relation between humankind and the environment is a vast field of research that involves philosophy, ecology, sociology, psychology, geology and religion as well. The term *environment* is related to the term *environ* (surrounding area) and the term *nature* comes from the latin *nasci*, (to be born) (Cooper, Carling 1999). Humankind cannot therefore exist outside of its environment, even though the interconnection is deep and intrinsic, since the first civilization, humans have tried to break this connection and have alienated themselves from their natural habitat. As the centuries pass by, human activities have been harming every ecosystem and every living-thing on the Earth, for instance, hunting has led to the extinction of part of the fauna and agricultural practices have resulted in desertification, and this represents the co-evolution of human social systems and natural systems (Marten 2001). Humankind is now facing the most dangerous crisis, but to what extend are we aware of the situation? The environmental problems we are dealing with, affect not only ecology, economy and people's well-being, but they have a psychological impact on people as well (Steffen et al. 2004). For example, climate change has a negative effect on the tourism industry because of the sea-level rise and the acidification of the oceans, this may lead to changes in the coastal areas, in people's lifestyle and community's income, indeed these kinds of changes and variation of the activities affect also the psychological dimension of the inhabitants, or in Southeast China, the extensive use of insecticides and intensive farming have caused the disappearance of

the wild bees that are vital ecosystem services. For this reason, the Chinese have no choice but hand-pollinate the orchards (Goulson 2012). The vision of men and women hand-pollinating the trees is kind of shocking and it is likely to move people's feelings. It is clear that the effects of climate change go well beyond economy loss but touch ethical and moral issues (Steffen et al. 2004).

Therefore, psychological and social dimensions play a crucial role when discussing the perception of climate change: it can be stated that humans are aware of climate and global change, however the perception differs from community to community because it is strongly rooted in psycho-social beliefs and values, and in the place in which the community sees humankind in relation to the environment. Generally, there are two main perceptions of global change: the first one holds that humans are not powerful enough to influence the Earth system and that mankind can solve any problems; the second one holds that there are certain natural thresholds that humankind cannot cross, otherwise it can cause some severe or irreversible damage on the Earth system. This second view is now popular in the sense that the focus on the consequences of climate change has created concerns in people around the globe (Steffen et al. 2004). Over the last few months, protests and strikes for climate change are boosting in the main cities of the world, the 16 years old climate activist from Sweden Greta Thunberg has been classified by the *TIME* as the most influential teen, she is in fact leading the climate protests by the students around the world. The world bottom-up movements for environment protection are more and more as the situation gets worse and no actions are taken; Fridays For Future is the worldwide students movement that came from Greta's activism and now it has become a world-shaking strike held in many cities around the world by students and activists to ask governments for concrete actions to save the planet and guarantee a future for the next generations. The movement is drawing a lot of attention, according to data collected by FFF, during the month of March there were strikes in all the continents, in over 125 countries for a total amount of 1,6 million strikers (FFF 2019).

On the other side, top-down initiatives are important as well to raise awareness. Awareness of the impacts of climate change and of the implications for the future is necessary to encourage people's engagement and willingness to change individual behaviour to foster a sustainable future. To effectively attain a general awareness is essential to consider rules, norms and beliefs (Whitmarsh, L.). Understanding the

relationship between attitudes, perceptions and behaviours is fundamental for policy-makers and researchers to effectively address and engage the public in order to take actions. As the environment is at stake, the promotion of environmental awareness is indispensable to achieve the environmental protection (Du, Yi et al. 2018). A definition of environmental awareness can be found in the paper *Changes in Environmental Awareness and Its Connection to Local Environmental Management in Water Conservation Zones: The Case of Beijing, China* (2018) that states:

Environmental awareness can be defined as the ability of an individual to understand the connection existing between: (a) human activities, (b) the current status of environmental quality, and (c) his/her willingness to take part in environment activities. Based on such an understanding, some studies have divided environmental awareness into three components: environmental knowledge, attitude, and concern. It may be affected by a number of variables, including cognitive attitudes, life experiences, demographics, behavioral motivations, and intentions (Du, Yi et al. 2018:webservice).

Thus, the perception itself is part of the environmental awareness and entails personal knowledge about the environment and its understanding. The dimension of environmental awareness that has the power to generate actions for the environmental protection is the attitude of the people, that is described as the emotional response of people to environmental problems and it is affected by the institutions. Authorities all around the world are aware of the environmental situation and on the outcomes on the communities, for these reasons, over the last few years, some actions have been taken to tackle not only environmental issues, but also justice and equity issues: the process for environmental protection has fasten along with the formulation of new policies, spread of information and public participation, both at local and global level. An example of global level plan is the 2030 Agenda For Sustainable Development adopted in 2015 by the member states of the United Nations. This is a large-scale plan that over the next 11 years will try to foster actions for a sustainable future encompassing three dimensions of sustainable development: the environmental, the social and the economic dimension. There are 16 goals to reach by 2030 that hopefully will guarantee peace, prosperity, sustainable consumption and production for environmental protection, but also will ensure the eradication of poverty and hunger around the world and will foster women empowerment. Some of them are: no poverty, zero hunger, clean water and sanitation, gender equality, affordable and clean energy, climate action and environmental protection. This is a wide global plan that requires all countries' commitment, as we can see, it doesn't focus just on environmental protection because the bigger picture is a global and inclusive

sustainable development, in doing so the eradication of injustice and the healing of our planet are fundamental prerequisites to achieve it (UN 2015).

Although people perceptions are different according to our set of values, norms and beliefs, environmental understanding and awareness can be fostered through dialogues, story telling and a certain type of language.

In a nutshell, the people's perception of global change is shaped by different factors such as the psychological dimension of the change, the efforts made by governments and organizations to enhance the engagement of the local and international community and of course by the personal attitude. Bottom-up and top-down initiatives need to cooperate and combine in synergetic actions to foster a new way of living, an inclusive and thoughtful approach towards diversity. It can be stated that nowadays progress has been made in the promotion of the environmental awareness and people's engagement, however, the results reached so far in terms of carbon emission reduction are not so satisfying. The path to sustainability is still long and winding.

1.6 Towards sustainability

Following the last paragraph's considerations, people's awareness and engagement are necessary to build the foundation of a sustainable future. The concept of sustainability is wide and it has to be considered in the complexity of its sphere of influence: the work for sustainability is growing, we have sustainable economies, sustainable development, sustainable tourism, sustainable agriculture etc., and under this trend many projects have been designed mostly by newborn alliances, organizations and extensive network. In the wake of the current global degradation, new importance has been granted to this umbrella term as it constitutes a means to repair (partially) the damages, the pathway to sustainable development is a necessary transformation to ensure the future of the Earth and its inhabitants. The Brundtland Commission gives a definition of sustainable development that gives us the idea of a long-term commitment: *development that meets the needs of the present without compromising the ability of future generations to meet their own needs* (WCED 1987).

The concept of sustainable development entails the idea of recovery from massive stress and over the last few decades, there has been a shift from a mere ecological dimension of sustainability to a more holistic one that embeds environment protection,

social justice and economy. How it is possible to achieve the change to sustainability? According to Scoones (2016), transformation to sustainability requires transformation of the system, the system we are referring to is the one that demand the constant seeking of opportunities to satisfy the need for growth and consumption. It can be stated that the actors playing a role in this scenario are multiple, the commitment to sustainability involves states, citizens, organizations and markets and has to be analysed in the current framework of political economies. The right intervention of these actors is crucial to face the global challenge and to attain a sustainable and fair development, the point is how to intervene. In this respect, sustainability has more than one version, some of them just focus on the environmental dimension, others combine together the social, the environmental and the economic dimension, others focus on green economy and geo-engineering etc., the aim of this chapter's last section is to go through different approaches to sustainability and try to evaluate the strong and the weak processes to attain it. However, despite the difference of approaches, it is certainly true that the transformation to sustainable development requires a joined commitment: citizens, states, markets and technology need to combine their influence and actions in different political frameworks, they are not separated entities, they converge instead to meet worldwide goals (Scoones 2016). Besides, as stated in the paper of Donella Meadows: *Leverage Points: Places to Intervene in a System, 1999*, the intervention in a system can only be effective if pushing in the right directions, the meaning is, there are points of leverage in our system, described as places in a complex environment or system, (everything can apply: a body, a city, the economy, a company, a particular ecosystem), where a slight change can trigger a much bigger one that has the power to transform every aspects of the system at hand and effectively intervene. Giving these considerations, the subsequent paragraphs take up different sustainability approaches in view of these leverage points.

1.6.1 Weak sustainability approaches: Technology, geo-engineering and green economy

In this first paragraph, technology, geo-engineering and green economy are analysed as weak sustainability approaches for a number of reasons we will briefly discuss. Undoubtedly, technology and geo-engineering have changed our life throughout the years, consequently, in the current modernist view, part of the scientific community believes that these means are the solution to the current environmental problems and they can free

us from the natural limits of our Planet. Geo-engineering is described as *deliberate large-scale interventions in the planetary environment that are designed to counteract climate change* (Faura 2015:30), people endorsing these measures have an anthropogenic view of the Earth system, that is, the human capacity is boundless, there are no environmental thresholds humankind can't cross, thus the invasive geo-engineering interventions are necessary to tackle the climate issue. There are two main techniques to hack the planet, one is to try to block the sun rays at some point in the atmosphere to let the Earth cooling faster, the other one is to try to increase the capacity of the Earth to absorb carbon dioxide (Kintisch 2010). For instance, one among the most more geo-engineering proposal is the space sunshade: these thin disks could be launched into orbit kilometres away from the Earth surface to reflect the sunlight, the problem is that they are tremendously expensive and they take lots of time because in 10 years, around 800,000 disks would have to be launched every five minutes (Faura 2015). This is just an example of geo-engineering the Planet, the point is, through these kinds of interferences on the geophysical processes we are hacking the Planet and we are not sure whether and how it can react, the risks are unknown, these measures have also the potential to help some countries while making things worse in others. In her book *Planet Earth: The Newest Weapon of War*, 2000, Rosalie Bertell, analysing the wars of the last century, assesses the madness, the violence and the destruction that science, technology and geo-engineering caused to our Planet, she claims the urgency of a different approach that eliminate the armies and the nuclear tests. For instance, during the years of the Vietnam War, a project was implemented to create an ozone hole right over the Vietnamese surface to exacerbate the climate change; this is just an example of climate alteration carried out by military forces, Bertell strongly endorses the dismantle of the dominant system sustained by the patriarchal society and embrace changes in people's choices and attitude. For this array of reasons, technology and geoengineering may not be the solution to the global challenge, they are just another means to prove humankind sovereignty over the Nature and its processes.

However, technology has not to be demonized, in fact, it has to be used for human development respecting the natural thresholds and in a context released from the capitalistic values of production and accumulation. As in Scoones, 2016, *The Politics of Sustainability and Development*, technology is necessary to achieve a transformation of the system, but there are some conditions, that are, technology has to be small-scale and appropriate, the people endorsing this kind of technology believe that in order to be

sustainable, technology has to be democratized, hence a grassroots approach to technology transformation is fundamental. In this view:

Alternative lifestyles and livelihoods are promoted, marking an alternative social and technological vision that is rooted in different production-consumption relations with alternative economic values and a new politics (Scoones, I. 2016:299).

With regards to the green economy, it is as well not to be considered a strong leverage point. Even if the concept of green economy is still rather undefined, the United Nations Environment Programme gives a clear definition: *green economy [is] one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities* (UNEP 2011:webservice). The concept can refer to policies, sectors, principles etc., and its realization is related to the fulfilment of two main pillars, one is the preservation of the ecosystem and the other is the reduction in the use of resources for consumption and production. However, what really matters is the final goal of the green economy, whatever paths it chooses, the focus remains on new opportunities for economic growth, obviously with a decrease in their environmental impact and resource preservation (EEA 2016). The point is this: is ceaseless economic growth the right direction for the transformation to sustainability? It seems the history that repeats itself, some people think that this economy could be just a duplicate of the neoliberal economy with the risk of reinforcing *existing extractive, exploitative neoliberal capitalist relations and fail to deliver sustainability* (Scoones 2016:294-309). Besides, growth has for long been regarded as a fundamental leverage point, we have fostered population and economic growth, pushing it forward blindly. However, we always have two sides of the same coin, along with the positive outcomes of the growth, in this pattern massive drawbacks are detectable, for instance, hunger, poverty and environmental degradation. Keep pushing for growth, even though through green economy would be a “sustainable growth”, may not be the right path because at some point what the world needs is no growth at all (Meadows 1999).

1.6.2 Strong sustainability approaches: institutions (values and norms) as leverage points

As already mentioned in the above sections, according to Donella Meadows, leverage points are sensible situations to push to efficiently intervene in the system that we would like to change, these are *points of power* because a slight change can trigger a transformation in the whole system. However, it is not easy to understand the right

direction, as a matter of fact, the hardest part is to firstly find these leverage points (Meadows 1999). The basic assumption is that there is an exploitative system that we now want to change to achieve a sustainable development and restore a social and ecological balance, to do so what can really represent a valid leverage point are the institutions. The concept of *Institution* is quite complex and touches different disciplines from sociology to economics. According to Jonathan Turner, institutions are:

a complex of positions, roles, norms and values lodged in particular types of social structures and organising relatively stable patterns of human activity with respect to fundamental problems in producing life-sustaining resources, in reproducing individuals, and in sustaining viable societal structures within a given environment (Turner 1997:6).

In this scenario, norms indicate behaviours accepted by the society, what is seen as “normal”, whilst, values are what matter for the individual. Some sociologists believe that all the members of a society are introduced to certain values and norms and later socialized into them. A first socialisation begins with the family and then continues through other institutions like the media and then through the education system. For this reason, not only a society’s institutions are the reflection of the values and the norms shared by the community of the society itself, but also the human behaviour of the members of the society is influenced by those values and norms. Institutions create expectations, ideas and actions by establishing patterns and forms for individuals (Hodgson 2006). A transformation in institutions can therefore generate a change in the society as a whole; with regards to this dissertation’s purpose, the change can trigger a realignment in socio-ecological systems.

Nevertheless, changes in institution are very hard because they imply a replacement of the dominant logic and the consequent adoption of a new pattern by all the members and organizations, the change actually occurs when the common logic becomes precarious and the existing arrangements are removed (Greenwood et al. 2013). According to Battilana, Leca and Boxenbaum (2009:webservice), *logic is a field’s shared understanding of the goals to be pursued and how they are to be pursued.*

Besides, behind institutions there is indeed politics, therefore, there cannot be just one path for sustainability because each nation has its own governance and priorities. The mechanisms behind the institutional changes are sustained by political interests as well, this means that often political interests have the reasons and the power to resist the transformation (Greenwood et al. 2013). In the capitalistic system, the profit-oriented

society has left some people and Nature behind and it is one of the main causes of the climate change, for these reasons a degrowth with redistribution of resources is what is needed to tackle the climate crisis. However, the slow trend of degrowth is rather difficult to implement under a capitalistic system. There is an urgent need of re-establish relationship between markets, society, resources and states and rebuild knowledge about environment and social justice. A focus on how resources are allocated is fundamental to rebuild these relations, indeed a lack of resources for some nations or for some people, is abundance for others; the question of the resource access and the issue of the environment are discourses embedded in these political, economic and social relationship, and therefore they vary from nation to nation. Political economies and historical background define the pathway to follow for each state, in fact, the meaning of sustainability may differ according to people living in different contexts (Scoones 2016).

Here, the concept of social justice comes into play restructuring our understanding of sustainability. Concepts of gender, social classes, ethnicity and geography occupy a central position in the sustainability and environmental protection debate because the privileges of the capitalist elite reverberate globally, while the weak categories remain the more affected by the climate change (Scoones 2016).

The change in the institutions of societies is rather slow but significant: even though institutions are, in most of the cases, drivers of change and reforms, they can also obstruct the way to positive transformations. Institutional change is slow because societies tend to resist but it is the most effective. Besides, for the idea of sustainability is wide, it has the power to affect every actors and behaviours of our society, from companies to household and individuals and of course policy-makers. It is necessary to leave behind all the binarism such as human-nature, man-woman, society-nature, production-accumulation etc. and start looking at the world as a whole if we want to save our planet and our future from extinction and degradation; it is fundamental to detach ourselves from the beliefs that underpin the society and from the values like the pursue of material well-being at any cost and the technology as the solution to all the problems that are the sources of our system (Meadows 1999).

To sum up, it is necessary to understand these concepts in the light of the different political and social contexts mindful that there is not just one direction toward a sustainable future. However, this change requires a transformation of the system, the

strong leverage points are the institutions, a transformation of the values and norms embedded in the societies. A sustainable pattern of development is not possible in a capitalistic system, the development model we need to endorse is no longer profit-oriented but rather life-oriented, a model that respects the environment and the weak categories of our societies, the priority must be a degrowth with redistribution in an anti-capitalistic key along with institutional changes. Scientific literacy is fundamental in the process of transformation but it has to be combined with transdisciplinary science, embedding indigenous knowledge, cultural and biological diversity. We are living in the Anthropocene, an epoch underpinned by the idea of dominance, what can be done is to try to make this epoch lasts as short as possible, the current value system needs to be replaced with a system that stresses the importance of care, love, equity and justice with the eradication of the patriarchal society.

2. The Ecofeminist Proposition

This second chapter focuses on Ecofeminism. The aim of this section is to propose the Ecofeminist thinking and practice as a way to deal with the current global crisis; in the subsequent paragraphs the topic will be analysed firstly from a conceptual framework and then Ecofeminism will be discussed in connection with the Anthropocene, specifically why its practices can be helpful to keep this epoch as short as possible and realign social-ecological systems.

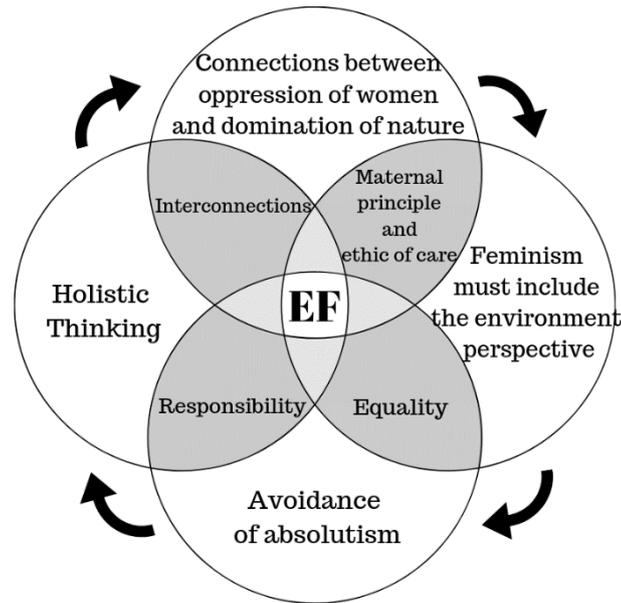
2.1 The main tenets of Ecofeminism

It is rather arduous to give an exact definition of Ecofeminism because Ecofeminism is a lot of things: it is a movement, a thinking, a way of living, it is practice, it is ethic, it is feminism, it is ecology, for some it is contradiction, in some countries the concept didn't even exist, in others it lays on different foundations. There is not just one ecofeminism but it is possible to identify a common ground and some general tenets.

It can be stated that Ecofeminism is branch of feminism that embeds an environmental perspective, it is also known as Ecological Feminism. The movement sees a connection between women and Nature as both subjects of domination by the patriarchal capitalist society. The oppression on women and the exploitation of Nature are taken as evidence of the madness and devastation carried out in a male-centred socio-economic system. Ecofeminist thinkers do not limit this discussion to women, in fact women and nature are seen as part of a bigger group of subordinated categories that include women, indigenous groups, children, poor people and the non-human world including animals and eco-systems, the so-called *feminized* categories (Miles 2018). Only when anthropogenic/androgenic oppression over marginalized groups and Nature stops, a reestablishment of the social-ecological balance will be possible. As Warren (1994) states:

Ciò che rende l'ecofemminismo multiculturale è il fatto che esso include nella sua analisi della connessione donne-natura, l'inestricabile interconnessione di tutti i sistemi sociali di dominio, per esempio, il razzismo, il classismo, l'etnocentrismo, l'imperialismo, il colonialismo e le discriminazioni rispetto all'età, alle preferenze affettive, e così via. Tiene in considerazione le diverse culture (Warren 1994:2).

Ecofeminism embeds an holistic and inclusive approach that emphasizes the interconnection among all life forms with an ethic focused on the values of care, compassion, preservation of life and motherhood, considering carefully the vulnerability of each category (Pulcini 2009; Bianchi 2012).



In figure (2.1) the main tenets of ecofeminism are summarized, the harrows represent a continuum among principles, the interdependency of all the relations.

2.1.1 Origins in brief

The name of this movement was first introduced by a French feminist named Françoise d'Eaubonne in her book *Le Féminisme ou la Mort* in 1974, she claims that the patriarchal system from the West, with its pattern of development built on dominance and exploitation, is the cause of the huge environmental deterioration. In the following statement, Camille Badoux summarizes d'Eaubonne's point of view over the role of the feminists that must not be confined to women's rights but must engage with environmental protection and demography:

Elle préconise un nouvel humanisme qui devrait naître avec la fin de la société classique. En effet, ce sont les hommes, les « phalocrates » qui ont amené la terre à cette situation où la menace de mort est des plus imminentes. (...) Le rôle des féministes semble donc dépasser une conquête des droits de la femme, il doit être la création d'un nouvel humanisme, cet écoféminisme qui s'occupera avant tout des problèmes de démographie, de pollution, de destruction des richesses naturelles. Bref, de toute une mutation nécessaire et urgente. Car la «révolte des femmes va dans l'intérêt le plus immédiat de l'humanité». (Badoux 2015:66-67)

The book of Françoise d'Eaubonne was followed by other significant publications, among them Susan Griffin's *Women and Nature: The Roaring inside her* (1978) and Carolyn Merchant's *The Death of Nature - Women, Ecology and the Scientific Revolution* (1980), even though these texts were still not to be called "ecofeminist", they certainly helped opening the door to this new wave of feminism. However, it was Rachel Carson's *Silent Spring* (1962) with the criticisms over insecticides and their harmful effect on

humans, animals and Earth that laid the groundwork for the environmental movements and brought forward some tenets of Ecofeminism. Therefore, ecofeminism is a concept developed in the West, the origins lay in the union of feminist academic works and in the movements for the environment during the 70s and the 80s, first in the US and then around the world.

It is improper to say that ecofeminism is just an academic movement because even if ecofeminist literature has proliferated, it can be said that this movement came out from a necessity, a need, an urgency that was the need of the mothers to protect their children from harmful human activities (Bianchi 2012). The origins are thus to be detected in the movements that characterized the US and the UK from the 70s to the 90s that were underpinned by women's concern for the damage on the environment and the consequent effects on their children. This awareness made sure that women were the first to protests and take actions for the Nature and for themselves: health and vulnerability were major concerns, especially in the US were the protests against the nuclear and the war started to spread massively from the 1961 movement: *Women strike for peace*. In this occasion, women asked the suspension of the nuclear tests to protect their children's health (Encyclopaedia Britannica 2015). Starting from the 70s, a series of conferences and workshop were held by academics and professional women in the US, to discuss the interconnection between feminism and the green movement, among them in 1974 there was a convention in Berkeley, *Woman and Environment* organized by Sandra Marburg e Lisa Watkins, followed by *Women and Life on Earth* in 1980 held in Massachusetts, in this occasion all the world representatives of the movements for the environment took part. What came out from these meetings was a number of commonly held assumptions about similarities between women and nature that lead to their oppression. The academic world led the construction of the concept of ecofeminism alongside with female activists from the environmental, the anti-nuclear and the lesbian-feminist movements. Among the most significative protests there was from the 1977 the creation of the Women Of All Red Nations (WARN), it was a movement in which the women present themselves as a guidance for the community, they were against the abuse of power over the Native Americans in the US, especially, the forced sterilisation of the women, the confiscation of their land and the placement of polluting industries in their territories. Toxic waste was again the topic of the protests in 1978 in Love Canal, New York, that promoted other 4 initiatives against pesticides and toxic waste around the US (Mellor 1997). In 1981, in the

UK there was the Greenham common protest at the missile base (Bianchi 2012), and then in 1980 in the US there were the *Women's Pentagon Action*, a march of 2,000 women to protest against the Pentagon's action, from the Unity Statement it is possible to read a rather emblematic incipit:

We are gathering at the Pentagon on November 17 because we fear for our lives. We fear for the life of this planet, our Earth, and the life of our children who are our human future. (Unity Statement of the Women's Pentagon Action, 1980:websource)

Not just in the US, this wave of female movements for the environment spread all around the world spontaneously: in Himalaya, there was the *chipko* movement (tree-hugging) to protect the forests and to support the pattern of development based on a subsistence economy; in Kenya, in 1977 Wangari Maathai encouraged the plantation of trees to facilitate women's daily works and highlight their independence from men, before women were forced to travel long distance to gather some woods for cooking. The biggest presence of female activists and academics was in US, Canada, India, Australia and Northwest Europe (Twine 2011). In all the movements of those years the women have always had a leading role, their concern for the destruction of our Planet and the personal safety of the loved ones made women see themselves as care-giver, closer to Nature and supporters of a new model of social and ecological development.

2.1.2 Why the environment should be a female concern

In chapter one, evidences of the Anthropocene have been analysed from a mere environmental perspective: climate change, poor water resources, low air quality, loss of biological diversity are indicators of the human activities on our Planet, in this chapter, the starting point is the assumption that environmental change and social change are indissolubly interconnected, therefore it is not thorough to address them separately, at the same time, it is not thorough to discuss women's subordination without making association with Nature destruction. As a matter of fact, as the environment is suffering so are some parts of the world that are suffering from tremendous lack of resources and exploitation.

As stated before, Ecofeminism is not just about women, it makes a connection among all the subordinated groups victims of the patriarchal capitalist society. Therefore, the origins of the problems have been detected in the separation between humans and Nature. There are few thesis concerning the beginning of the separation between humans and

Nature, in 1993, in their essay *Ecofeminism: Toward Global Justice and Planetary Health*, authors Greta Gaard and Lori Gruen gathered them:

- a) According to Carolyn Merchant, the separation is a product of the scientific revolution, nature stopped being seen living-thing but it became a machine. Science were used to objectify nature and experiments on animals were seen as a rightful process. *The domination or oppression of nature was not considered to be unethical, but rather a judicious use of resources* (Gaard, Gruen 1993:237).
- b) Another school of thought believes that the separation between human and nature is a product of patriarchal religions, therefore it dated back the origin of oppression at 4500 b.C. Before the endorsement of the patriarchal religions, women and the Earth held divine position and they were divined. However, from 4500 b.C the shift from *goddess-worshipping cultures to male deities began* (Gaard, Gruen 1993:237). As Greta Gaard and Lori Gruen in 1993 wrote:

In the goddess religions, both the earth and women's fertility were seen as sacred. There was no gender hierarchy, and the divinity was seen as immanent. With the advent of patriarchal religions, people worshipped a sky god, and nature was seen as his creation. The role of the male in reproduction was elevated above the role of the female; women were compared to fields which would gestate and bear the male seed (Gaard, Gruen 1993:237).

- c) Others think that the origin of the oppression has to be found in the human social development and the division of labour. Hunting, a typical human behaviour, is what firstly distinguished humankind from Nature, then this activity, for the characteristics that embeds, has been depicted as *male-only*. The violence, the competition, the killing ability are qualities that are unknown to the women's realm. In fact, women are more concerned with life-bearing activities and care, at the same time, in the past women's body were considered too small and weak and thus inappropriate. For these reasons, women were excluded from men's activities and they were considered equal to Nature, hence inferior to men.
- d) Many scholars point out that the patriarchal cultures see the world *in terms of self and other dualisms*. This vision creates hierarchies, all the things linked to self and thus male are valued and all the other things have less value. These dualisms of self/other are manifested, for instance, as culture/nature, man/woman, white/non-white, human/non-human animal, civilized/wild, heterosexual/homosexual, reason/emotion, wealthy/poor etc.

Reason/Nature	Reason/Madness (unreason)
Culture/Nature	Mental/Manual
Mind/Body	Urban (city)/Rural (countryside)
Male/Female	Civilised/Primitive
Masculine/Feminine	Self/Other
Human/Animal	Active/Passive
Reason/Emotion	Production/Reproduction
Subject/Object	Order/Disorder
Public/Private	Heterosexual/Queer
Adult/Child	Master/Slave
Universal/Particular	Theory/Practice
Freedom/Nature	Reason/Matter (physicality)
Reason/the Erotic	White/Non-White

Table (2.2) - Western Dualisms from Twine (2001), *Ecofeminisms in Process*, Adapted from Plumwood (1993) and Gaard (1997).

Here, the concept of domination arises, because the *Other* is not a powerful self; on the left side of the table we can see the valued half, the terms are all vertically interconnected and linked to a male sphere, on the contrary on the right side we can find the unvalued ones that refer to a female sphere (Twine, 2001). In this perspective women and nature are connected because both are configured as *Other*. Through this table, it is figuratively possible to see how all the oppressions (Women, Nature, Queer, Non-white, Slave, Animal, Child) are interconnected. The system of dualisms creates a dominance relationship characterized by the permanent externalization of the unvalued (Plumwood 1993). Moreover, scholars studied the metaphorical connections to strengthen the concept of dualism, for instance, “rape of nature”, “mother nature”, and “virgin forest”, nature embeds female traits and in a culture in which women are object of oppression, the metaphors authorize also the subordination of nature.

- e) Finally, there are theories of human-nature separation connected to a Marxist and a colonialist perspective that we will discuss in the further paragraph when discussing the different traditions of Ecofeminism.

The separation between humankind and nature is the starting point of a system of oppression and exploitation, coming back to the title of this paragraph *Why the environment should be a female concern*, according to Gaard and Gruen: *if we can establish that a proposed activity or practice contributes to the subordination of women, then by necessity it becomes a feminist concern* (2009:239).

To begin with, it is a fact that women and children suffer the effect of climate change and environmental degradation a way more than men for a few reasons, among them: biological factors, the division of labour and the access to education (Gaard, Gruen 1993).

Another field where a connection between women and nature can be found is in the international market economy and again labour division, that is, much of the work carried out by women doesn't count because it doesn't enter the cash economy (Gaard, Gruen 1993), for example preparing food, taking care of children and elderly people, travelling long distance to gather firewood and collect the water, all these daily activities doesn't generate cash flow and thus are outside the economic cycle. At the same time, for nature's production and ecosystem's services is the same thing, the services don't count unless they can be monetized. An example of Marilyn Waring (1988) made clear this relation, a forest that provide women firewood and fuel wood doesn't have an economic value and so doesn't the women's work, at the same time, if the same forest is logged and the woods are manufactured and sold, then it has value in the accounting system. Therefore, we can see that often women and nature are placed on the same level, both externalized from the international market but paying the highest price (Gaard, Gruen 1993). Vandana Shiva² summarized this situation with the three economies discourse (Shiva 2005), she explained the current ecological and social crisis in light of the unbalance of the three dimensions of the economy. Specifically, the economic development system has three dimensions, the market economy, the subsistence economy and the natural economy. Today's poverty and lack of resources derives from the destruction of subsistence economies and natural economies thus determining the dominance of market economy. The current system only provides for the market and care for the market trends, neglecting the contribution of the other two economies. Under this condition, the consequences such as depletion of natural resources and impoverishment are crucial for the development of the market economy. If economic development is just understood as production and trade of goods, natural services such as production of water and reproduction through the hydrological cycle, microorganisms that make the soil fertile, pollination that makes plants reproduce etc., and self-reliance practices don't have productive functions.

Scientific manipulation and biotechnological intervention can be understood as well from an ecofeminist standpoint, in fact, although it has harmful effect on both humans

² Vandana Shiva is an Indian physicist, environmental activist and anti-globalization advocate.

and animals, the use of chemicals in agriculture increases the production and so the profit, similarly the hormonal treatments on animals. Patents on GMOs have allowed multinationals to sell GMOs to small producers and villages. In developed countries, technological intervention on seeds has been causing prices to drop and many small farms to go bankruptcy because they cannot keep up with mega-industries and cannot reuse the seeds. In developing countries, it strengthens a dependence relation of the Global South towards the western innovators, with the promises of fake forecasts, multinational enterprises have attracted peasants turning them into their first buyers. However, in most of the cases, for instance the introduction of BT cotton or the hybrid maize seeds in India, have cause massive economic losses (Shiva 2005). Those who suffer the most from this situation are the women because of their connection to the land, this topic will be discusses further in subsequent sections. Gaard and Gruen (1993) in *Ecofeminism, Toward global justice and planetary health* conclude:

The increase in biological manipulation in agriculture and the widespread growth of biotechnological industry are of concern to ecofeminists. These endeavours involve the objectification and domination of both women's bodies and animals' bodies as well as the further economic exploitation of working class and Third World people (Gaard, Gruen 1993:243).

In this scenario, we can see another connection, a dependence relation of women and those who can help them modify their bodies with hormonal treatments, fertilization techniques, surgical manipulation etc., all the manipulations are carried out in the name of the progress and science regardless of all the negative consequences. What women have to go through is the consequence of a social product that stresses the gender differences, men are associated to the idea of virility and active sex life and women's main scope is the reproduction at any costs (Bianchi 2012), it is mainly the social constrain of motherhood that may force the women to undergo some treatments (Gaard, Gruen 1993). Women are thus deprived of their reproductive freedom that is seen as a prerogative of men.

The topic of reproductive freedom has space in the debate about global population. As aforementioned, the population has been dramatically increasing over the centuries, for people endorsing population control policies, the overpopulation is the cause of troubles that the world is now facing: environmental devastation, lack of resources, hunger, poverty etc., what is worse is that women and the poor have been held responsible for the increase in population. Under these circumstances, the approach of ecofeminism doesn't

consider women guilty but rather it claims that women don't have fertility control, but men, politicians and religions have, ecofeminists also argue that overpopulation is not the cause of environmental collapse (Bianchi 2012; Gaard, Gruen 1993; Shiva 2005). Not only is there a limited fertility control, but also and most importantly, over the last few decades some scholars, such as Garrett Hardin³, have blamed the overpopulation of the global south as the cause of environmental downfall. The core idea is that the poor of the world and the vulnerable categories are an unnecessary burden that exceeds the planet capacity and a waste of natural resources. However, from an in-depth glance, it is incorrect to link the environmental crisis to the overpopulation issue, precisely because, if it is undeniable that the more people the more resources are needed to satisfy everyone's need, it is also true that resources are not equally allocated and environmental spaces⁴ are not respected. For instance, the average American citizen consumes daily an average of resources that is 250 times higher compared to a Nigerian citizen, the same U.S. with a population that accounts for 5% of the global population produces around 15% of the total CO₂ pollution (Shiva 2005). Many studies on the population-environment connection just analyse local populations' needs and their impacts on the eco-system, but they fail to analyse the effects of the demands and needs from the global market. In fact, the requests coming from the developed countries play a major role in the environment scenario, the high demand for resources burdens the ecosystems of developing countries and dramatically reduces the availability of resources for local populations. Not only do they have to satisfy their needs, but also they have to meet the requests for raw materials of rich countries. Therefore, the population growth is not the cause of ecological crisis, it is just an aspect. In circumstances of lack of resources, unemployment, poverty and lack of social assistance, children become the only source of livelihood and future guarantee. Dealing with environment devastation and overpopulation means resolving world hunger, giving back the poor their access to resources to improve their living standards (Shiva 2005). To support these theories on population growth and environmental collapse, Gaard and Gruen clearly state:

The issue of the world population cannot be ignored, but from an ecofeminism perspective, population does not describe the problem in a way that it can be solved. It is the North

³ Garrett Hardin was an American ecologist, he was well-known for his neomalthusian positions and his essay *The tragedy of the commons* (1968).

⁴ Given the Earth limited capacity, the concept of *environmental space* determined the share of resources available for each individual and thus, proportionally for each nation, taking into consideration the global amount of natural resources and the planet capacity to cope with pollutants

overconsumptions, coupled with the global unjust distribution of wealth, resources and power, which is causing world hunger and environmental degradation. Population control obscures the very real issue of women's lives and holds women responsible for overpopulating the world. From an ecofeminism perspective, the problem of population may be more adequately addressed by looking at the intersections of several factors: reproductive control, socioeconomics, and particularly the social status of women. (Gaard, Gruen, 1993:244).

To sum up, the environment has to be a female concern and it is not possible, as Scoones (2016) stated, a transition to sustainability without a transformation of the system.

In 1975 Rosemary Ruether wrote in *New Woman/NewEarth*:

Women must see that there can be no liberation for them and no solution to the ecological crisis within a society whose fundamental model of relationships continues to be one of domination. They must unite the demands of the women's movement with those of the ecological movement to envision a radical reshaping of the basic socioeconomic relations and the underlying values of this [modernindustrial] society. (Ruether 1975:204)

2.1.3 The conceptual conflicts with pure feminism

The main tenet that lay at the foundation of the ecofeminist thinking is the idea that all forms of life on Earth are interconnected and there should be no hierarchies. Hierarchies and dualisms are products of the patriarchal conceptual framework, two creations of humankind that exercise their power on the environment and are used to legitimize each form of oppression. What the weak categories have in common is that they all have been placed at the same level as nature, they are all part of nature, thus they are ideologically placed outside the realm of reason. For ecofeminists, it is fundamental to look at the complexity of the world with female eyes, without making comparison or contrasts but rather carrying out grassroots analysis that can help understand all the relations of dominance. The aim of ecofeminism is the subversion of the patriarchal capitalist system, not for the sole emancipation of women, but rather for the emancipation of all the categories externalized from the realm of culture (Gasparetto 2013). Anna Gasparetto in her paper *Femminismo ed Eco femminismo: una prospettiva di discussione culturale e antropologica* (2013) states:

L'ecofemminismo auspica un rovesciamento basilare dell'ordine costituito, non cercando i diritti all'indipendenza, all'emancipazione, alla parità dentro la gerarchizzazione di carattere capitalista, ma all'esterno di essi, riconoscendo l'importanza della vita non solo di uno strato della popolazione mondiale ma anche di tutta l'umanità come della natura con cui la popolazione umana è necessariamente in una relazione imprescindibile (Gasparetto 2013:12).

This is the conceptual framework that differentiates ecofeminism from feminism, the latter, analysing the concept of oppression, makes a sharp division between the dominants

and the oppressed. This is an exclusionary approach, not an inclusive one, and this pattern is likely to maintain and, in some cases, exacerbate the ideology of dualisms and create new categories of opposites, thus without taking into account the complexity of the situation (Warren 1994). The feminist theory is more concerned with women's self-realization, gender equality and women's rights; the South of the world, the ecosystems and the more-than-human world are not really matter of concern, everything outside the western socio-economic context is labelled as *Other* (Gasparetto 2013, Bianchi 2012).

Contrasts can also be found in the framework of gender differences. While feminists support the gender equality, ecofeminists don't focus on gender differences *tout court* but rather focus on the gendering of human societies (Mellor 2002). Feminist scholars believe that this pattern enhance the gender binary system, ecofeminists, on the contrary, believe that the feminist claim for gender equality and equal rights within a patriarchal capitalist system, it is nothing but the justification of the system itself and it is an attempt by the women to be recognized as part of it, hence women themselves provide the legitimacy of the capitalistic system and uphold its supremacy (Gasparetto 2013).

Ecofeminism, unlike feminism, emphasizes feminine qualities to support the theory of interconnections and the relationship with nature. The idea of motherhood is one of the central argument of ecofeminism, it is not about biology, it is more about the enhancement of the values associated with the concept of motherhood: the ethics of care, vulnerability, growth, love, but also the undeniable biological differences place women in a different position in relation to the environment compared to men, authors point out that women have a different way of feeling, knowing and learning (Bianchi 2012). The biological traits are taken into consideration as well, the possibility of giving birth is connected to the feminine qualities of preservation/conservation and taking care of the life itself, for biological reasons such as menstruation, pregnancy and lactation, women are considered closer to the environment compared to men, and for gender roles their relationship with the Nature is more intimate, this is the framework where the images of women as caregiver and family nurturer are depicted (Miles 2018); women's life-oriented approach is the opposite of the profit-oriented approach that is based on the exploitation of resources to satisfy the need of a few (Gasparetto 2013).

Gender differences are at the core of many debates, Carol Gilligan and Nancy Chodorow carried out some works studying the gender differences in relation to the

theory of care and they outlined a psychological framework that we will briefly discuss. Identification, moral development and decisions ethics differ from men to women: the construction of the concept of masculinity develops in the framework of dualisms, allowing men to place themselves in a position of superiority means to detach themselves from the realm of nature and establish themselves as holders and creators of the culture, *feminization, naturalization or animalization of an Other is often requisite to its ensuing subordination* (Gaard, Gruen 1993:238). For this reason, Chodorow studies the identification of men as a denying of connections and need of differentiation from the others, in fact scholars studied that male self-identity develops from the separation with the mother, an evolution and identification totally opposite to the identification of women that is constructed on a sense of continuity and self-in relationship, female identities are more embodied and relational. With regard to ethical decisions, Gilligan sees contrasts between male and female moral development: when making decision women are more likely to consider the effect of the potential decision on each subject involved and they finally make ethical decision according to the specific context they are, whilst men consider the people involved in the decision as separate and non-connected identities that potentially have other interests, hence they are seen as competitors (Gaard, Gruen 1993). Men have a rights-base ethic and following the dualistic thinking, they are considered more rational and linked to the idea of aggressiveness and competitiveness (Plumwood 1993:8) while women are the holders of redemptive morality (Jordanova 1980).

All these characteristics are considered gender specific and therefore highlighted by the ecofeminist advocates. In this context, the main contrast with pure feminism came out. As mentioned before, feminists endorse gender equality therefore their main critic is the ecofeminist highlight on the importance of motherhood, they are afraid that many years of struggle for sex equality and equal rights may be vain if enhancing this female-specific traits, there is a feminist general concern that women may be relegated back to the domestic realm and to their traditional tasks. However, from an ecofeminist standpoint, the emphasis on motherhood concerns its symbolical value and embeds a creative meaning (creating a life), it is not to be understood as a men/women separation with the consequent perpetuation of dualisms, on the contrary, it is about giving value to women's activities of creating and preserving life (Plumwood 1993).

To conclude, women have always had to make a choice, accept or refuse the dominant system, a pattern that embeds a dualistic view of the world. According to the ecofeminist theory though, men and women are all part of the same humanity and, in particular, they are both inside the realm of culture. However, it is necessary to leave aside the dualistic approach and give space to other ways that don't force women to choose (Plumwood 1993). Ecofeminism challenges feminism to take seriously the issue of the environment, particularly, in this moment in which our Planet is concretely in danger. An ecofeminist ethic *would constrain traditional ethics based on rights, rules, and utilities, with considerations based on care, love, and trust* (Merchant 1992:185).

2.1.4 Unity in diversity: some ecofeminist traditions

There is not just one ecofeminism, there are more branches of the same movement. It is not easy to give a precise definition of ecofeminism, because it embeds a wide series of concepts that focus on the parallel women-nature, the differences on the branches of the movement are detected in the focal point each tradition take up and in their understanding of the environment related to women (Thorpe 2016). According to Karen J. Warren, 1993:

Ecological feminism is the name given to a variety of positions that have roots in different feminist practices and philosophies. These different perspectives reflect not only different feminist perspectives (e.g., liberal, traditional Marxist, radical, socialist, black and Third World), they also reflect different understandings of the nature of and solution to pressing environmental problems. So, it is an open question how many, which, and on what grounds any of the various positions in environmental philosophy that acknowledge feminist concerns or claim to be feminist are properly identified as ecofeminist positions. What one takes to be a genuine ecofeminist position will depend largely on how one conceptualizes both feminism and ecofeminism (Warren 1993:webservice).

The feminist traditions, especially the liberal, the cultural, the social and socialist feminism have contributed to ecofeminism because they are concerned with the enhancement of the relation between humankind and environment (Merchant 1992). In the subsequent section the paper analyses the most relevant ecofeminist traditions.

2.2.1 Cultural ecofeminism:

Cultural ecofeminism highlights the relationship between women and nature. Women are considered closer to the environment for biological reasons and social reasons, in fact, the domestic activities, child and elderly care have kept women closer to the earth and far from the workplace. Psychological and biological characteristics also place women closer

to nature, for instance for the life-bearing possibility and the greater emotional capacity (Merchant 1992). According to the theorists of this branch, these biological and gender specific aspects are considered women-specific and for this reason highlighted, women by intrinsic nature are more sensitive to the discrimination and degradation of the environment. This sensitivity must lead to the idea of coexistence on earth of humankind and the natural world. Cultural ecofeminism sees in political actions the way to liberate women and nature, here it is important to recall that the major activists against toxics, hazardous waste disposal and nuclear tests were women concerned for the health of their offspring. As regard science, it can be stated that cultural ecofeminism sees science as a male-controlled means to dominate the Earth, on the contrary, this tradition of ecofeminism values spirituality (Merchant 1992), the cultural movement has its roots on nature-based religions.

Often stemming from an anti-science, anti-technology standpoint, cultural ecofeminism celebrates the relationship between women and nature through the revival of ancient rituals centered on goddess worship, the moon, animals, and the female reproductive system. A vision in which nature is held in esteem as mother and goddess is a source of inspiration and empowerment for many ecofeminists. Spirituality is seen as a source of both personal and social change. Goddess worship and rituals centered around the lunar and female menstrual cycles, lectures, concerts, art exhibitions, street and theater productions, and direct political action (web-spinning in anti-nuclear protests) are all examples of the re-visioning of nature and women as powerful forces. Cultural ecofeminist philosophy embraces intuition, an ethic of caring, and web-like human-nature relationships (Merchant 1992:191)

Some feminists have some doubts about cultural ecofeminism because they think stressing the link between women and nature may enforce stereotypes and lead to further exploitation (Miles 2018).

2.2.2 Radical Ecofeminism:

On the total opposite, Radical ecofeminism has its roots in radical feminism that seeks gender equality in every aspect of life. Radical ecofeminism focusses on the idea that the male-centred society aims at subordinating both women and environment in order to degrade both. Starting from this assumption, the end of the association between women and nature is necessary to stop male domination. Radical ecofeminism aims at eradicating the idea of man as order-establisher (Miles 2018).

2.2.3 Liberal Ecofeminism:

Liberal ecofeminism has its roots in liberalism and has been characterizing the feminist movement since its beginning. Liberalism leaves space for the scientific analysis and see humans as rational subjects provided with maximum freedom to pursue their economic satisfaction, capitalism is the accepted economic structure and the optimal situation is when the productive potential is maximized. Liberal feminists see humans and nature as two separate identities and at the same time, they argue that women are equal to men but the first have been given less access to education, hence they have had less possibility to contribute to the society goals and less possibility to fulfil their own realization. According to liberal ecofeminists, environmental problems result from the overly rapid exploitation of natural resources and the failure to regulate pesticides and other environmental pollutants (Merchant 1992:199). The solution is the enhancement of women's lives, giving them more space to learn science and conservation. Providing them with educational opportunities can allow women to be at the same level of men ending the relation of oppression and meanwhile contributing to solve environmental issues.

There are many other variations of the movement, especially two of them are worth mentioning in this paper, one is the post-colonial ecofeminism and the other is the Marxist ecofeminism. In both these traditions reverberate the principle of social justice reverberates, it is declined with clearly different approaches though. Environmental racism is another concept that resonates in the claim of post-colonial and Marxist ecofeminism. For this dissertation's purpose, it is relevant to evaluate the contribution of post-colonial and Marxist ecofeminism in terms of capitalistic system's responsibility of environmental devastation and the oppression of the poor and lower class.

2.2.4 Post-colonial ecofeminism:

The ecofeminist movement is also very much concerned with ex-colonies and more generally with the Global South. Ecofeminism undertakes the cause of developing countries because in these settings the imposed globalization on local communities have caused major environmental devastation and have exacerbated people's impoverishment. The shift from subsistence economies to production for the global market have left developing countries dealing with lack of access to resources and production, hunger, poverty and social dysfunction.

It can be stated that post-colonial ecofeminism is basically a new conception and so it is still in its initial phase. However, there is a vast amount of literature revolving around this topic, especially coming from Indian authors and activists like Vandana Shiva, Arundhati Roy, Kamala Markandaya, in their writings that foreground women in post-colonial environment, it is possible to catch a post-colonial ecofeminist perspective (Chae 2015, Kaur 2012, 2013). Post-colonial ecofeminism is an intersection between ecofeminism and postcolonial ecocriticism, Glotfelty described ecocriticism as: *the study of the relationship of the human and non-human, throughout human cultural history and entailing critical analysis of the term 'human' itself* (1996). Stemming from a postcolonial ecofeminist standpoint, injustice and environmental problems are related to male domination in a capitalist patriarchal system typical of the West (Shiva 1994; Kaur 2012) but in the postcolonial context the issue about race also arises, that is, the way in which colonialists place themselves against nature is connected to racist attitude towards the local population (Kaur 2012). It can easily be stated that in this kind of environment the relation between women subordination and environment degradation is coupled *with notions of class, caste, race, colonialism and neo-colonialism* (Kaur 2012:100).

However, it can be said that ecofeminism *tout court* is an academic discipline that was born in the West, an ideology that was studied from a European and an American perspective, the same as for ecocriticism, therefore for both we can say that there is a western ideological domination. The implication of this situation is a lack of adequate conceptualization in terms of postcolonial ecofeminism and a marginalization of the literature of postcolonial writers (Kaur 2012). For addressing the topic adequately, postcolonial ecocriticism and ecofeminism have to recognize the effects of the *double-bind* (Campbell 2008) that is being a woman and meanwhile being colonized.

Regarding the work of post-colonial ecofeminists, we can say that it strongly engages with activism. As a matter of fact, in ex-colonies, especially in India, there is a long history of movements, the environmental consciousness of women from the South of the world made them team up for the environment. One of the most famous movement is the already mentioned *Chipko* movement in India in 1974. It was a non-violent protest carried out mostly by women for the conservation of the forests from logging activities, women were the most affected by the massive deforestation, therefore they literally stood with the trees by hugging them (Kaur 2013). Vandana Shiva, one of the most popular Indian

environmental activist and ecofeminist, works with and for the women of the global South that have been negatively affected by colonialism and globalization, through her books she described the impact of such phenomena on the people of the Third world. She called the economic development characterized by wide globalization and the Green Revolution, *Mal(e)development*, and she described it with these words:

Maldevelopment militates against equality in diversity, and superimposes the ideologically constructed category of western technological man as the uniform measure of the worth of classes, cultures and genders (Shiva 1989:5)

Among the other things, this pattern of economic development is responsible for the shift in the Global South from subsistence economies to monoculture of a cash crop for the global market. Community villages have long-lived in a system based on an economy of subsistence, they relied on natural resources for their livelihoods without crossing eco systems boundaries. This process that erased subsistence economies from developing countries and imposed the market economy, was forced by big multinationals, the WTO and the IMF and it has had massive drawbacks for Indian farmers that in most of the cases, have gone bankruptcy and have been left with nothing. Vandana Shive fights this and other forms of globalization in the South, like the GATT General Agreement on Tariffs and Trade that allows corporations to obtain a patent on a plant or other forms of life, this means that the peasants are no longer independent, but they have to give money to the corporation if they want to plant. Biodiversity patents and privatization of resources such as forests and water by multinationals are primary reason of poverty, underdevelopment and environmental devastation (Shiva 2005). To rival these global forces, the ecofeminist created in 1991 Navdanya an organization to preserve biodiversity and seeds, and empower women, children and indigenous groups. Not just India, but also in South America and Africa, in Nigeria for example where western oil conglomerates like Shell destroyed local people's farmland and polluted fishing water (Kaur 2012), in this particular context the work of activists were hindered by the despotic regime. The consequences of capitalism and globalization in postcolonial environments, the social problems and the gender dimensions have been investigated alongside with novels of Indian authors like Roy and Markandaya that shed light on the intersection between postcolonialist environmental devastation and gender, class and race oppression based on an ecofeminist perspective. In their novels, they address problem of illiteracy that make people believe in susperstitutions, hence making them more credulous means they are easier

to exploit; they critique the child marriage and the exploitation of nature through the application of western technology; they fight women unpaid work; finally, they believe that even though there are some forms of betterment for peasant and low classes, landowners and elite are those who really benefit from the economic development. Globalization have produced uneven development, but they are not against the idea of development *tout court*, instead they contrast the logic of dualisms that legitimize hierarchies and the system of exploitation, knowing that women's freedom cannot be achieved without the liberation of all forms of life (Kaur 2012, Chae 2015; Shiva 1994).

From a final review of the literature, at the question: why women in particular are affected by postcolonization and globalization effects? The answer still lays in the relationship that women from the South of the world have with nature, nature is the environment where they live, where they work, they are connected (Shiva 1994). It is no coincidence that Vandana Shiva uses the terms *partnership* and *cooperation* to describe ecofeminism, women work the land that provide them with enough food, and women treat the land properly with care and respect.

2.2.5 Marxist ecofeminism:

Marxist ecofeminism clearly owes its origins to Marxist theory by Marx and Engels and it was later influenced by Marxist feminism. The movement is an intersection among theories, however, in the epoch of Anthropocene where humankind domination towers over the environment in the capitalist system, eco-socialism and more generally Marxist theories, from an ecofeminist perspective, have been re-evaluated by the international community. From a Marxist point of view, women oppression is not due to biological traits, but rather to social relations. Furthermore, men's effort to control women unpaid labour and fertility have been institutionalized through the system of nuclear family in the capitalist system. Engels argued that the events associated to men's control over women, are attributable to the private property system, owned by the patriarchal upper class that also owned slaves. For this reason, gender oppression is linked to class oppression, the men/women relation is similar to proletariat/bourgeoisie relation (Ferguson et al. 2019).

Connecting women's condition to ecology and historical materialism, Australian feminist activist and writer Ariel Salleh states that:

Since the interest of women as a global majority lies in challenging existing productivist structures, women as an economic underclass are astonishingly well placed to bring about the social changes requisite for ecological revolution (Salleh 2017:25).

According to theories, in the capitalist system there are two types of labour named productive and reproductive. The first one produces goods and services that have monetary value and enter the economic cycle in the capitalist system, moreover productive labour is compensated through wages and salaries. The latter concerns the activities associated with the domestic realm and the private sphere, such as childbearing, elderly care, cleaning, cooking, working the land, reproducing social relation and workforce. Nevertheless, reproductive labour is not paid and therefore doesn't account in the accumulation of capital. Although both types of labours are necessary for capitalist accumulation, in industrial capitalism, reproductive work is subordinated to the productive and women along with marginalized groups end up externalized from the capitalist patriarchy (Merchant 1992).

In a more recent review, Ariel Salleh (2017) argues that ecofeminism unveils a “embodied materialism” that can be explained through the words of Pellow (2018) as:

[It] subverts the Eurocentric view that places Man over and above Woman and Nature. Embodied materialism focuses on the recognition of the othered labor produced by women, indigenous peoples, and peasants, whose caring work and productive energies are discounted and minimized by the dominant economic and social system. Salleh concludes that the experiences of those populations must be at the center of our politics if we have any hope of confronting the violence and brutality of global capitalism today (Pellow 2018:online).

For Marxist and social ecofeminism, nature and human nature are product of a social and historical construction that can be modified through human practices. Nature is not an object to be dominated but rather it is active and humans have to be aware that if they don't want it to take revenge on them, they must build a sustainable relationship. Hence the importance of creating a partnership between nature and human economy where a production/reproduction balance is respected (Merchant 1992). With the disruption of the profit-oriented capitalist economy and the recognition of the reproductive work, there would be no more need to burden women, environment, indigenous groups and children, there would be no more space for racism, sexism, homophobia and other forms of oppression. Environmental pollution will decrease because in a socialist system no surplus would be produced, available resources would be equally allocated and people

would be encouraged to carry out environmental researches to protect the Planet (Merchant 1992).

Having analysed both movements, it can be noted that there are points of intersections between postcolonial ecofeminism discourse and Marxist ecofeminism. Compared to other traditions, the two latest engages more with the issue of justice, they conceptualize theories and actions to foster three dimensions of justice: the environmental, the social and the economic justice. In post-colonial and capitalist contexts, a question of interest for ecofeminists is certainly environmental racism and environmental/climate justice. According to the Greenaction for Health and Environmental Justice, environmental racism is described as:

Environmental racism refers to the institutional rules, regulations, policies or government and/or corporate decisions that deliberately target certain communities for locally undesirable land uses and lax enforcement of zoning and environmental laws, resulting in communities being disproportionately exposed to toxic and hazardous waste based upon race. Environmental racism is caused by several factors, including intentional neglect, the alleged need for a receptacle for pollutants in urban areas, and a lack of institutional power and low land values of people of color. It is a well-documented fact that communities of color and low-income communities are disproportionately impacted by polluting industries (and very specifically, hazardous waste facilities) and lax regulation of these industries (Greenaction:webservice).

Environmental racism is a matter of concern for ecofeminists because it affects unprivileged categories and at the same time it exacerbates the environmental degradation. This topic will be further analysed with consistent examples in the subsequent sections.

Despite all the differences inside ecofeminism, many scholars believe that the plurality and the intersectionality of this movement are also its strong points.

(...) the myriad definitions and applications, which sometimes complement and sometimes conflict with one another, demonstrate the liberating and inclusive aspects of the movement. (Miles 2018:webservice).

Table (2.3) - Summary table of the main ecofeminist traditions:

	Main principles	Human-Nature Relationship	Political behavior
Cultural Ecofeminism	- Social actions are needed to free women and nature from devaluation	- Women are closer to nature. - Ethic of care is necessary for environmental protection	- Rejection of science and technology as tools for domination. - It values spirituality. - Enhancement of women and Nature
Radical Ecofeminism	- Gender equality	- Ending the association between women and nature is necessary to stop the domination of both	- Liberation of women and nature
Liberal Ecofeminism	- Gender equality - Humans are rational subjects free to pursue their economic satisfaction	- Humankind can dominate nature, science and the possibility to learn for women can guarantee the conservation of the environment	- Faith in science - Empowering women to contribute to environmental protection - Access to education for women - Gender mainstreaming - Capitalism is accepted
Post-colonial Ecofeminism	- Mal(e)development - Double-bind of being woman and being colonized	- Women are deeply connected to the natural environment, it is their source of livelihood, it is their home - Ethic of partnership	- Environmental justice - Strong activism - Gender equality - Contrast the effects of capitalism and globalization in post-colonial environments
Marxist Ecofeminism	- Social relations are the cause of women oppression - Women oppression is linked to class oppression	- Nature and human nature are product of a social and historical construction that can be modified through human practices. - It is necessary to build a sustainable relationship	- Critic to capitalism, bad use of resources and accumulation - If no surplus is produced, environmental pollution is minimal - Recognition of reproductive work - Socialist society would share the resources - Science and environmental research - Environmental justice

2.2 Ecofeminism to keep the Anthropocene layer thinner. Ecofeminism practices

After providing a conceptual framework of ecofeminism, the second part of this chapter goes on investigating the actualization of this movement, in particular, information about the practices of ecofeminism will be gathered to assess the contribute of the movement to the challenges of our present time. As we all may know by now, life in the andro/anthropocene not only has brought irreversible damage to the Earth, its ecosystems and biodiversity, but it has also contributed to the exploitation of global South and the further depletion of unprivileged people. According to some scholars such as

Susanne Moser (2007), what is important now is to try to keep the Anthropocene layer thin, that means let the Anthropocene last as short as possible to limit the damage and enter another epoch in which humans and nature can harmoniously coexist. Ecofeminism is here proposed as a contribution to this scope because through a set of practices, it can help restore a natural balance and social justice through redistribution rather than further growth (Buckingham 2004). With the concept of *practice* we mean two main dimensions, one is the personal dimension that refers to the implementation of ethical behaviours and respectful choices towards the environment and a more conscious use of resources, the other one is the institutional dimension through which organizations, governments and media promote initiatives to engage people, to modify governance of natural environment and resources and to lead the society towards a sustainable future. The ecofeminist's values concentrate on daily practices that function in solidarity with the liberation of the weak categories, focus on the idea of conservation and sought to protect the environment.

2.2.1 Ecofeminism and environmental justice

The term environmental justice is used to address issues that are not just related to the environmental domain, but also relates to economics, ethics and gender issue, considering dynamics such as equality, human rights and countries responsibility for climate change. The movement for environmental justice has developed relatively recently, in its first stages it studied inequalities based on race, lately it has begun to incorporate the gender dimension in its research (Buckingham 2004). In this context, intersections with ecofeminism can be found.

Women have always been at the forefront of environmental movements. One of the main reasons for this gendered mass mobilization resides in the fact that climate change has gender-differentiated impacts, it is likely to increase gender inequality and exacerbate the burden on the unprivileged (Dankelman, Jansen 2010).

There are numerous evidences of the disproportion of the climate change impacts on women and weak categories in general. Labour division, vulnerability of children and pregnant women, biological factors, the composition of household and social factors (such as limited access to education) are the main cause for which children and women are relegated to poor quality environments and, in most of the cases, they are more likely

to be the first victims of environmental hazard situations (Buckingham 2004). Environmental hazards fall into 4 categories: physical hazards such as natural disasters, chemical hazards that can be anthropogenic and natural chemical hazards, the human-made chemical refers mainly to synthetic chemicals as pesticides, disinfectants and plastic, cultural hazards, named also social hazards that include location, behavioural choices, socioeconomical status and occupation, and lastly biological hazards such as malaria, tuberculosis etc. (Builder 2012). With regards to physical hazards, it is no coincidence that, for instance, out of 140,000 people killed by the cyclone occurred in Bangladesh in 1991, 90% were women and children. With regard to chemical hazards, marginalized groups characterized by low-income, disability, race or low-status occupation are statistically more vulnerable to toxic exposure; women, in turn, suffer from a double system of discrimination, not only they are part of the marginalized group but they also carry biologic traits and cover social roles that make them even more exposed (Buckingham 2004). In this respect, ecofeminist literature coined the term *embodiedment* to refer to the fact that women's body are more sensitive to environmental pollution (Mellor 1992), there is also another consideration to be made, that is, historically, men's body have been generally used to estimate the safe chemical load, not women's.

It is also true that women and men's interactions with the environment are not the same, the environment-related tasks ascribable to women are more compared to those of men. In particular, in rural setting, women are involved with food gathering, duty for which it is necessary to have a high level of expertise and knowledge; they play a major role in food production, for which they pay attention to sustainable fertility cycles; they provide water for the family's consumption as men are rarely involved with this kind of tasks, and lastly women also substantially contribute to income generation, according to UNDP (1998) women account for the 68% of economic activities (64% in developing countries and 79% in industrial countries). Almost all of the activities that women carry out depend on natural resources and environmental functions, the conclusion is that women and children's work is closely related to the natural environment and thus affected by its conditions, even if men perform some environment-related tasks, the time devoted to the latter is not even comparable to that of women.

Deforestation has forced women to walk long distanced to gather firewood; scarcity of water resources put heavy pressure on women like in Sri Lanka where the 60% of the

natural spring have disappeared and women have to walk through the valleys to find drinking water; the wide use of fertilizer in the Global South have caused many health problems, for example, to women in Malaysia working in plantations; in urban setting the rate of women living in poverty is higher than the rate of man, in these areas poor people live close to industrial zones and consequently they are highly exposed to pollution. These communities not only are exposed to toxic hazards but the households are often located in dangerous sites where the risk of flooding or landslide is high (Dankelman 2001). One example is the major industrial disaster of Bhopal in 1984, in that occasion India suffered a million death for the leakage of gas coming from a pesticide factory, it was a human and environmental tragedy, the people who survived suffered from the exposure to the gas and the chemical waste remained on the spot and contaminated the water that poor people drank (Narain, Bhushan 2015).

As the pollution increases and the quality of the natural environment decreases along with the availability of supplies, household conditions worsen, the first victims are poor communities with women and children. The ecological devastation exacerbates social dysfunctioning and inequalities. An increasing number of people depend on a less productive ecosystem and this interaction worsen the environmental situation (Dankelman 2001).

Climate change is a direct responsibility of the Anthro/andropocene, characterized by what Vandana Shiva called *Mal(e)development* (1989), a western economic pattern of development imposed on the whole world that refuse to recognize the reproductive work of women and refuse a relationship of dependence on Nature, but instead treat both as necessary resources to be exploited for the capitalistic accumulation. The process of privatization and statization of resources (like forest, water, seeds...), opposed to the “commons”, biodiversity and seeds patents, not only impoverished women but also have made them the first target of environmental degradation. Furthermore, technology that uses polluting materials, a high intensity of resources and it is not location-specific, contributes to aggravate the unsustainable development. Lastly, another aspect to take into account is the institutional one, under this system, most of the top down initiatives tend to exclude unprivileged communities from decision-making processes (Dankelman 2001).

To conclude, also according to an ecofeminist perspective, what is beyond the current situation of social and ecological destabilization is an unsustainable development trend that reinforces inequalities, the force that underpin this unsustainable development is the profit-oriented economy. The unbalanced production and consumption processes allows a system in which the rich become richer and the poor remain poor and lose access and right to resources and their control (UNDP 1998).

2.2.2 Ecofeminism and conservation

The international community focusses on climate change and how to deal with it, this has probably made people underestimate the importance of conservation of “what is left”, untamed natural spaces, unspoiled settings, recovery of land and resources, preservation of biodiversity. In the context of conservation, ecofeminist literature and practices can offer a valid contribute and a starting point for analysis.

Women around the world play a key role in the conservation of the natural environment. Vandana Shiva, Indian ecofeminist and activist, called it *prakriti*, the *feminine principle* and refers to the greater creative force, source of energy, diversity and vitality, it associates women and nature with the scope of maintenance of life (Shiva 1989). Women are the principal caretaker of the environment and life-givers, they are responsible for the care-tasks, for some scholars like Wickramasinghe (1994) the fact that women are so into environmental struggle is mainly ascribable to the women’s concern for the sake of their families, in any case, what always emerge is the intrinsic mother instinct proper of all the women, the feminine principle that give, nurture and protect life. For ecofeminists, this is what differentiate female and male attitude, the same attitude that make women active for environmental and biodiversity conservation.

Women’s proximity to the natural environment for the reasons examined in the previous paragraph, have made them expert of plants, seeds, flows of fertility and cultivation practices thus allowing them to respect the nature cycles and live in a sustainable manner. According to Irene Dankelman in her paper *Gender and Environment: lessons to learn* (2001):

Because food collection required a thorough knowledge of plant and animal growth, maturation and fruition or reproduction, women have been credited with the discovery of domestication and cultivation of plants and animals and invented selective breeding. They discovered propagation by shoots and cuttings, seed selection and the construction of seedling beds. The following inventions are credited to women in cultivation: the use of

ash as fertilizer, the creation of work tools such as the hoe, spade, shovel and simple plough; fallowing and crop rotation; mulching, terracing, contour planting, irrigation and land recuperation through tree planting. Eight out of the most important cereals (worldwide) were all domesticated by women: wheat, rice, barley, oats, sorghum, millet and rye. (Dankelman 2001:6)

As we can verify, women master the necessary knowledge to respectfully manage the environment with the intention of its conservation and preservation for mutual benefit and for the sake of future generations. Women are tied with ecological functions and their expertise in the field make their sign on the Earth smaller and lighter.

Everyday women are involved in works of conservation, they actively participate in replanting activities for example in areas hit by severe natural catastrophe, afforestation (like the women of the Mosuo ethnic group), waste management, coastal clean-up, moreover, given their often exclusion from rural management and decision-making process, they have engaged in bottom up initiatives with the aim of educating people of their community, to inculcate them some environmental awareness, transmission of know-how, information and articles about ethic, spirituality, new perspectives etc. (such as the *Colectivo Con-spirando* of the women of Chile). In some cases, for instance in the Philippines, women carry out educational campaigns and create partnership with NGOs (Guiriba 2013).

When analysing the conditions in the Global South, we can see the deep ecological connection of women, in fact, they implement various strategies to cope with the Anthropocene: they try to reproduce natural resources by planting trees, install water points and rehabilitate degraded land, they build kitchen gardens, not only do they try to make available more resources but also they economize them, for instance, in time of scarcity, they change nutrition and shift to food that needs less cooking and boiling time. Groups of women are involved in recycling activities, mostly water, they save it and re-use it for different purposes, when it comes to cooking, they often use solar and wind energy. With regards to the source of income, if the resource they are counting on is becoming limited, they seek other resources that can guarantee them some earnings. Mass actions are also quite common: women, mostly in rural settings, have always been used to work together in the field, therefore, for them is rather normal to act in groups: they group together to clean up waste sites like for example in Africa and South east Asia, they group to protest against development project that undermine their livelihoods and the environmental (Dankelman 2001).

However, despite women's strong motivation to preserve and cherish the environment, they encounter significant challenges that hinder their work. It can be stated that most of the challenges converge in the blurry framework of the institutions that exclude women from policy formulation and environmental conservation and management (Guiriba 2013), women often don't have decision-making power and suffer from restrictions imposed on their organizations, they don't receive enough funding to sustain projects for the environment conservation and lastly women lack of access to sources of productions (education, technology, training...) and lack of access to ecosystems in good quality (Dankelman 2001).

In this section foregrounded by the concept of conservation, it is impossible not to mention the animal question from an ecofeminist perspective. Exponents of the movement have been dealing with this topic since the 70s. Ecofeminism, with its transdisciplinary approach, embraces the question of animals and interrogates the interconnections of all forms of domination (Birkin 1993), it believes that each human and more-than-human forms of life on Earth have equal value and have to be respected. Moreover, the western dualistic construction has placed women and animal at the same level, on the right side, separated from the realm of culture, for authors like Greta Gaard, ecofeminism becomes the means to link these forms of oppression alienated by the patriarchal system (Gaard 1993). Carol J. Adams e Josephine Donovan, two feminists involved with animal rights, underpin the idea of the interconnection between women and animals because from an ecofeminist perspective, no creature is free until all the creatures on Earth will be released. Therefore, all forms of dominion must cease if we want women and animals' suffering to end (Adams, Donovan 1995). The androcentric paradigm oppresses women, non-humans, migrants, low-status classes etc., Adams believes that the society we are living in, controls the access to our alimentation that reverberate around the concept of masculinity. In the western culture, in fact, the meat is associated with the male power and the virility and it is opposed to the female realm that is part of nature and, in turn, the animal becomes feminized (Adams 1990). The opposition to this system is possible through personal assumption of responsibility, that means translating the theory into practice through the veganism. The branch of ecofeminism that embeds the vegan practice is the Ecovegfeminism (Adams, Donovan 1995). It is important here to point out that, even if we are not all vegan, most of the economies in which women are involved in

the global south are subsistence economies based on planting and harvesting, not hunting and the consumption of meat is rather exceptional.

To sum up, ecofeminism stands for antispecism, embraces and values the differences, it condemns every form of exploitation both on humans, animals and nature and simultaneously sustain all the struggles for their liberation (Gaard 1993). The conservation of the environment and its biodiversity, it is not sole responsibility of women, that most of the time suffer from a lack of empowerment. Women act as advocates of sustainable livelihoods through respectful and inclusive practices but it is not enough, they need the commitment of people in charge at national and international level, the work of NGOs and obviously the commitment of common people. As Vandana Shiva stated, being the caretaker of the Earth is the key to women empowerment (1988).

2.2.3 Ecofeminist political economy: redefining values through daily practices and environmental activism

The last paragraph of this chapter focuses its attention on the alternatives to capitalism proposed by ecofeminism. The modern system headed by a male-dominated socio-economic system is held responsible for the global crisis and represents a threat to human survival, therefore, the ecofeminist proposition provides an array of ideas and practices aimed at coping with the Anthropocene, restore an equilibrium among human and nature and eradicate social inequalities.

An ecofeminist political economy concentrates on the crisis of social reproduction, linking it to the patterns of production and consumption and the division of the labour market. The crisis of capitalism has to be viewed as the limited availability of natural resources associated with the exploitation of women reproductive labour, a female political economy then studies the extent to which ecological downfall is connected to gender. With regard to this specific topic, Mary Mellor, an ecofeminist leading figure, stated that not only women are subjects of domination but also men can be oppressed through discrimination for their race, social status or religion; given this assumption, the key question for ecological economics *is not sex-gender difference but the gendering of human societies* coming from the western dualistic relationships (Mellor 2002:webservice).

As stated in the first chapter, there is the necessity of a change in the value system: the valued economy, that is the ME-economy (male-centred) has left women, children,

indigenous groups behind and it is disembodied from the ecological realm. Central to this structure are the personal interest, the short-term orientation, the mass consumption, the pursue of profit at any cost without considering the future generations (Bennholdt-Thomsen 2011; Mellor 1999), a blind faith in technology and the rejection of nature. In this framework, ecofeminists claim that the current value system externalizes both women and nature, it sees itself as superior to traditional subsistence economies. Therefore, the ecofeminists' alternative proposes a countertrend, a sustainable and non-exploiting model that embeds the voices of marginalized groups through the valorisation of traditional knowledge and the elimination of social injustice foregrounded by a value system that stress the importance of care, respect, collaboration and conservation (Mellor 1999).

In the subsequent paragraphs, the main tenets of an ecofeminist economies will be outlined according to the insights provided by the works of major ecofeminist writers such as Mary Mellor's WE-economy (Mellor 1999), Carolyn Merchant's partnership ethic (1998) and Maria Mies and Veronika Bennholdt-Thomsen's subsistence perspective (1999).

Throughout the history, even though women have largely contributed to the development of economic and social system, their work have never been properly recognized. A WE-economy would redesign the relationships and our habits focusing on keeping things under control and creating sustainable livelihoods (Mellor 1999). The main traits of an ecofeminist economy would be:

1. A radical change in the pattern of production and consumption, from a disembodied structure to one that is respectful towards life cycles and ecological sustainability.
2. The provision of food would be local and, especially, seasonal. Farmers would be encouraged to produce food for local markets.
3. Local resources would be used for local needs and minimum waste would be allowed.
4. The focus of WE-economy wouldn't be the profit but instead the provision of necessary goods and services.
5. The highlight would be *work* and not *employment*, an array of rules would be enacted against labour exploitation and environmental pollution.

6. There would be a shift from a western society underpinned by individualistic values towards a more collectivist society in which work and leisure would be integrated.
7. There would be no gender difference, both genders would share tasks and resources.
8. Clearly, international trade wouldn't be banned but it would be an occasion of cultural exchange and not just a monetary exchange.

At a first glance, it can be noticed how a women-economy looks totally different from the pattern we are used to because it revolves around the principle of *subsistence*. As discussed in the section about post-colonial ecofeminism, the eradication of substantial economies in the Global South is one of the causes of all the problems which that portion of the world is still facing, we can notice here how a subsistence pattern of development is re-instated as a key to a sustainable future. It is pertinent to clarify what *subsistence* means, here four basic tenets for a politics of subsistence are reported according to professor Bennholdt-Thomsen:

1. The politics of subsistence are politics of daily life, decentralized, and practised by the sovereign individual as a so called politics from below;
2. Subsistence politics are dealing with the realm of necessity, with immanency as against the transcendence of the growth economy;
3. The politics of subsistence are based in the concrete matter, in the body, and in the senses as against the abstraction of the money system and the anonymity of the commodity;
4. The subsistence politics serves to restore the community in the holistic sense of Mother Earth (Bennholdt-Thomsen 2011:webservice).

People have been forced to change their subsistence economies in the name of the globalization, they have been deprived of their land in the name of the economic development and the result is a global crisis of value and resources. What is needed it is not just a new economic pattern but a new social contract built on fresh values as well. The new values have to be inspired by the maternal care and enhance the relations among humans and more-than-human. The aim of a subsistence production is the maintenance of the life itself, the orientation towards what it is really necessary, not just for us, but for others as well, whereas in the production of goods the goal is the accumulation of capital. Subsistence means to put ourselves on the line and take the challenge to recognize what is excessive, to learn to do things by ourselves, to leave the greed aside and give value to the natural living forces (Bennholdt-Thomsen 2011).

In the West, ethical choices can be made to subvert the global trend and become aware of our role in the society and reduce the personal impact we leave on the environment: in urban setting, the movement “urban gardening” came to life (Müller 2011), people transform small portion of land into vegetable gardens, other practices are: the participation or the establishment of fair trade purchasing groups, buying food from local farmers’ market, recycling clothes, create community support networks, choose a vegan or vegetarian diet (Cristofori 2019). The key point is thinking globally and acting locally: the driving force of our time it is us, it is the individual and the choice he/she makes starting from a local basis, clearly not all the sources of subsistence can come from our territory, but it is an important starting point for the creation of a network (Bennholdt-Thomsen 2011).

The orientation towards a subsistence perspective can restructure the society and the communities, as Carolyn Merchant advocates, this perspective has to be combined with a new relation with the environment that surrounds us, the partnership ethic. The foundation of this new relation is that nature and humans are partners and they are equally important, it is a combination of an ecologic approach based on equality and a human-centred approach based on the fulfilment of human needs. This concept advocates the interconnections among all the actors, humans and more-than-humans and goes beyond the Anthropocentric view of the world by enhancing values of cooperation and friendship, humans and nature are, in fact, in a relation of mutual interdependence and both have the right to survive (Merchant 1996). The partnership ethic is very much engaged with the concept of subsistence and local economy because it interrogates the benefits of the free global market. The prerequisite for the implementation of the partnerships is the recognition of human destructive potential and the recognition of nature as an autonomous entity, successively the partnerships are implemented through dialogue among all the agents of the various levels, from local to national, in practices aimed at obtaining consensus rather than creating winners and losers; the effort is concentrated on negotiation and consensus as the partners discuss jointly about the short/long term interests of both human and non-human communities in specific spaces (Merchant 1996).

In the framework provided so far, we can see how the concept of degrowth finds its space: *DG [degrowth] advocates have a different vision of prosperity, one based on dramatically less material abundance and consumption* (Kallis et al., 2012:174). As

mentioned by the end of first chapter, the insight of degrowth has been advocated as a countertrend and a means to attain a fair and sustainable development. However, from an ecofeminist standpoint, some last considerations have to be made. In time of resources' constraint and climate change, the major challenge is how to ensure humankind well-being without crossing ecosystem's boundaries. In the light of an ecofeminist framework, it is rather controversial to discuss degrowth because this concept doesn't take into consideration non-market work and ecosystem services, but the unvalued economy, accountable for the non-market work, accounts for a third of the GDP in industrialized countries (Folbre 2015). Degrowth advocates fail to mention the possible impact of this choice on the marginalized groups and the gender dimension is absent from the degrowth literature as well. Clearly, for people in developing countries already living in poor conditions degrowth can be destructive. To cut the matter short, the fact that degrowth literature as such doesn't address issue of gender, race, social, economic and politic crisis represents a limit for its feasibility, it can only exacerbate the inequities of capitalism and negatively affect people (Fotopoulos 2007, Perkins 2017). As degrowth alone cannot represent a fair choice to cope with the Anthropocene, ecofeminism advocates the combination of concept of degrowth with redistribution, that in other words, would see a slower development trend accompanied by redistribution of wealth and resources made possible by instituting the "commons", sustainable socio-economic system that focus on ownership, land, assets and resources that wouldn't be privately owned anymore, fostering collective actions, shared governance and participation in decision-making (Hess 2008; Perkins 2017). A more equal allocation of resources between developed countries and developing countries is also necessary to deal with the global crisis.

In a nutshell, Ecofeminism distinguishes itself from other movements for its plurality of approaches and its inclusiveness, for the central role of activism and for its concreteness. Integrating the tenets of ecofeminist into the current social, economic and political framework has a great potential to determine the shift in the value system and to contribute to sustainable development.

3. Ecofeminism with Chinese characteristics

The last chapter firstly focuses on when and how the concept of ecofeminism led its way into the Chinese academia, briefly analysing the historical and cultural background of China from the Eighties, it follows an explanation of the development of ecofeminism literary criticism among Chinese scholars and the peculiar traits that characterize the Chinese criticism efforts. Then, the challenges for the practice of ecofeminism in mainland China will be analysed mainly from a political and administrative standpoint. The final part of the chapter tries to gather a few insights about possible Chinese constructions of ecofeminism that detach themselves from the western construction of the concept. During the years, not only the western domination of the concept has probably prevented the Chinese from elaborating a national version of ecofeminism rooted into the Chinese culture, but also the People's Republic of China (PRC)'s system has hindered the ecofeminist discourse and its diffusion. However, over the last few years few connections with Daoism have started being detected. Furthermore, the matrilineal system of the Mosuo ethnic group will be investigated exploring the extent to which it benefits the environmental conservation. Finally, experiences of Chinese women engaged with the environment will be discussed to see if connections with ecofeminism are possible.

3.1 The introduction of ecofeminism in the People's Republic of China

Ecofeminism is a synthesis of ecological and feminist movements that has developed from the 70s in the West. By 1990, it evolved into a fine intellectual discourse with political engagement that aims at foster gender equality, environmental and social rights.

Even if ecofeminism is a well-known concept for the western societies, in mainland China it is relatively new. It can be stated that ecofeminism penetrated through Chinese doors in the shape of intellectual discourse and literary criticism among the Chinese academia from the 1980s. At that time, Deng Xiaoping took the lead of the Country after the Mao's era and reopened china's doors to the world, he put every effort into the goal of modernization and launched massive economic reforms. Before the policy of reform and opening up (*gaige kaifang* 改革开放) of 1978 and therefore during the Maoist era, Chinese scholars were forced to follow the guidelines of the Communist Party and literary criticism was shaped under the interpretation of Marxism. There was a strict control over

intellectual activities and scholars' publications, the political power dictated the intellectual agenda, as a result there was no freedom and everything converged around the topic of revolution and class struggle. With the death of the leader Mao Zedong and the end of an era, Deng Xiaoping shed light over China and gradually let the world come in (Danke 2012).

As a matter of fact, the first introduction of ecofeminism occurred when Chinese scholars started having the possibility to study foreign literature after 1978. In the same year, Rachel Carson's *Silent Spring* was translated in China for the first time, the translation was rather inaccurate and reflected the lack of understanding in terms of environmentalism of that period. The book was then translated for the second time in 1997, this time the translator depicted Carson as a woman fighting for the environment and stress the importance of environmentalism. The third edition was published in 2008 and included Liang Congjie's preface, she is one of the leading activist for the environment of China and founder of the NGO *Friends of Nature*. Between the first and the last edition of *Silent Spring* there is an abyss reflecting the opening up of the Country, the social changes and the understanding of the environment and women's position. The evolutionary path has marked the shift towards intellectual globalization and the introduction of environmentalism in China (Danke 2012).

During the post-reform era, the concept found breeding ground in the Chinese academia because the fast economic development raised increasing social challenges and concerns for the environment, ecofeminism with its critics to capitalist societies and social injustice, represented a fresh approach to capture the puzzled realities that the economic reforms created, it provided a new framework for art studies and broaden the horizon of researches. Ecofeminism intellectual discourse was thus embraced, it is estimated that from the 1990s to 2011 more than 630 articles were published and around 200 master thesis were written by Chinese scholars (Danke 2012; Jike 2014).

To conclude, the introduction of ecofeminism in the People's Republic of China is associated to the reopening of China to the outside world under the lead of Deng Xiaoping; there are a few reasons why this western concept was that much embraced, first and foremost, part of the Chinese scholars were influenced by western publications, then the economic reforms in China have brought massive social change and have had visible impacts on the environment, this situation helped the introduction of the ecofeminist

debate because it provided new perspectives and new horizons to be explored, lastly the fact that ecofeminism judges western capitalist industrialization provides the Chinese academia with a *politically safe perspective* (Danke 2012:39), lastly ecofeminism literary criticism represented an effort of Chinese academic globalization that wasn't that much documented.

In the next paragraph the path of ecofeminist literary criticism in China will be analysed with its peculiar traits and connected constraints.

3.2 The development of ecofeminist literary criticism among Chinese scholars

As mentioned in the previous section, when ecofeminism penetrated in China in the form of western literature in the post reform era, Chinese scholars immediately showed their interest. According to the publications of Chinese researchers on ecofeminism literary criticism, they can be divided into three major fields:

1) Study of ecofeminism literary criticism from the West.

Three Chinese scholars are mainly responsible for introducing ecofeminism literary criticism theories to the Chinese academia: Wei Qingqi, Chen Xiaolan and Huang Lin. Part of their endeavour was to introduce major works of western ecofeminist such as Greta Gaard, Cheryl Glotfelty and Patrick Murphy and to provide their own comments (Chen 2002; Huang 2007; Wei 2003; Danke 2012). Through their efforts, Chinese scholars realized the value of ecofeminism literary criticism that provided a new framework compared to the Maoist, offering new horizons that were able to overcome the class-struggle dimension and to embrace diversity in all its forms: of race, of culture, of gender... The perspective of an ecofeminist criticism was perceived as necessary to foster social and green justice (Wu 2008; Danke 2012).

2) Review of western literature with an ecofeminist perspective

Chinese scholars have re-read the great classics of Western literature using an ecofeminist approach, they have been able to discover hidden meanings and give new interpretations. This is the case of Charlotte Bronte's *Jane Eyre* (W. Wang, 2008; Danke 2012), Margaret Mitchell's *Gone With The Wind* (Li, J., Li, L., 2010; Li, Y., 2010; Danke 2012), Nathaniel Hawthorne's *The Scarlet Letter* (Zhang, J., 2009; Danke 2012). It is also important to remember that some Chinese scholars began to write their works of

ecofeminist literary criticism in English. In this way not only did they make them accessible to the rest of the world, but they helped create a global platform of intellectual discourse. Ecofeminism has played a central role in the reopening of dialogue and cultural exchanges with the West (Danke 2012).

3) Review of Chinese literary and art works with an ecofeminist perspective

It is undeniably true that most of the Chinese academia has addressed its efforts toward the revision of European and American literature, however, some scholars have focussed their attention on the re-examination of Chinese literary and art works with an ecofeminist eye. This is the case of Pu Songling's *The Sorries of Fox Spirits*, a classic of Chinese literature whose protagonists are women harassed by the patriarchal system. These women are possessed by animal spirits, nature is their habitat, but nevertheless they often return to the human world moved by feelings. In its review, the scholar Qin Junrong connected the rejection of the patriarchal society with the ecofeminist tenets, showing the close relation between women and nature (Qin 2010; Danke 2012). Ecofeminism has provided the mean to re-read also modern and contemporary Chinese writers such as Lin Bai, Jia Pingau, Zhao Shuli, it has also inspired the writing of *Wolf Totem* (Jiang 2004), a masterpiece of literature that illustrates the environmental devastation through the relationship between man and wolf, the book has contributed to arousing interest in the Chinese environmental situation both nationally and internationally. Furthermore, the worldwide-known cinematographic works of Zhang Yimou, which often feature female figures (*Raise The Red Lantern, Yellow Earth...*) have been re-studied giving them an ecofeminist interpretation (Danke 2012).

During the Maoist period and therefore when the ecofeminist perspective was still far away from China, the description of nature in Chinese literary works was mere circumstance, a means used for descriptive purposes, it wasn't perceived as an integral part of the lives of female protagonists. On the contrary, thanks to the opening up of China, foreign literature and ecofeminist theories have helped the Chinese academia broaden its fields of research. By reinterpreting the old works, scholars have analysed the suffering of women under the patriarchal system and their resistance as falling into the category of global ecofeminism, whose major principles are the rejection of androcentrism and anthropocentrism, thus giving them a deeper meaning (Wang 2010; Danke 2012).

3.3 The limits of the ecofeminist literary criticism in the Chinese academia

After the premises made in the previous sections, it is also necessary to point out the limits of the ecofeminist criticism in China. As mentioned before, the American and European domination of the concept have probably prevented the Chinese from elaborating their own ecofeminist theories, from giving them a Chinese life. Although there is plenty of ecofeminist publications in China, during the 1990s and 2000s, the Chinese have limited themselves to a re-reading of texts according to guidelines dictated by Western ecofeminist canons, they have used the Western approach to carry out their analyses but hardly have they produced some native version or actively participate in the global intellectual discourse (Danke 2012; Zhang, Liu 2013).

According to scholars Zhang Mei Fang and Liu Bing the core problem is that theoretical research carried out inside the academia and practical application are disjoint, for this reason there is still a lack of *bentuhua*, 本土化 (localization). Reviewing the literature, we find that the major Chinese ecofeminists come mainly from two fields of study: one is that of the dialectics of nature, these scholars analyse the relationship among gender, nature and science from a philosophical point of view, the other field is that already analysed of literary criticism. Without a shadow of a doubt, both categories of scholars have a broad theoretical understanding, yet the understanding of the practice is lacking because the theoretical investigation rarely focuses on it. Making a comparison, feminist and environmentalist literature does not lack a practical focus because it investigates the role of women in environmental protection (Zhang, Liu 2013).

From these considerations and for other reasons, it is possible to state that the Chinese have a blurry understanding of ecofeminism. First and foremost, they tend to struggle dealing with the concept of ecofeminism in its entirety, they rather focus on "eco" or "feminism" dimension (Liu 2009). In the ecofeminism as we know in the West, environmental and gender issues bond together, in China, by analysing the literature and the articles on the topic we can see how ecofeminism lies on a background of *kechixufazhan* 可持续发展 (sustainable development) and *shengtai wenming* 生态文明 (eco-civilization), this means that the highlight is on the greater responsibility of women and their duties in terms of environmental protection: under the terms of sustainable development and eco-civilization there is no place for in-depth investigation on the

significance of women's participation in environmental protection, nor in terms of gender equality, neither in terms of their position in the society. For instance, in 1990, in order to mobilize women to participate in forestry development and eco-environment construction, the All-China Women's Federation and the State Forestry Administration jointly launched the “*sanba luse gongcheng*, 三八绿色工程” (38th Green Project), the project was carried out by encouraging women with slogan such as: “*guangda funu chengwei wo guo shishi kechixu fazhan zhanlue de yi zhi zhongyao lilian*, 广大妇女成为我国实施可持续发展战略的一支重要力量” (The majority of women have become an important force in implementing sustainable development strategies in China) or “*wei shixian kechixu fazhan zuo gongxian*, 为实现可持续发展做贡献” (Contribute to sustainable development), (Zhang, Liu 2013:118; Zhongguo Linye Wang 2006). From these statements we can see how the responsibility of women to give their contribution for the cause of the sustainable development is emphasized at the expense of a real investigation of their role in the society related to the environment. Women's endeavours must converge towards the establishment of an eco-civilization for the good of the Country, this is the aim of this kind of activism. It goes without saying that the Chinese undertaking compared to the western one is totally different.

Finally, when dealing with ecofeminism the Chinese tend to adopt an essentialist approach for which they take into consideration only certain ecofeminist principles and apply them to their works, for example, the fact that there are essential intrinsic traits that women and nature have in common, such as the reproductive capacity, are emphasized and most of the time they are the only aspects analysed (Zhang, Liu 2013). The approach they use towards ecofeminism is therefore selective (Danke 2012).

Ultimately, it can thus be argued that the influence of ecofeminist research and theories on women/ecology practice is limited, the challenges that ecofeminism faces in China are a few, among them how to create a local version rooted in Chinese culture and reality, a *bentuhua*, 本土化, (localization), according to Danke Li (2012):

If Chinese scholars wish to develop an ecofeminist discourse with local resonance, then it will be crucial for them to strike a balance between ecofeminism's universal principles and Chinese reality. In the process, this would also enrich the theory and practice of ecofeminism globally and promote awareness of gender equality and environmental protection and sustainable development in China and the world. (Danke 2012: 52)

3.4 Challenges for cross-cultural ecofeminism: the practice of ecofeminism in the Chinese context

Moving now away from the academic realm, it can be said that an important event that has marked the beginning of the Chinese awareness of women conditions was the fourth world conference on women of the United Nations, held in Beijing in 1995. On this occasion, the need to reconsider the gender relations in the society was emphasized along with the importance of recognizing women's rights as human rights, the concepts of empowerment and gender mainstreaming have also been introduced during the conference. The *Beijing Platform of Action* was adopted to ensure the enhancement of women conditions in 12 critical areas, one of them is *Women and the Environment* (Ji 2014; UN WOMEN 1995). The conference of the United Nations has drawn the attention of many Chinese scholars on the topic of women but also of their position with respect to the environment. Although in 1995 the publication of academic articles and research on the subject have increased exponentially (Ji 2014), there are still many constraints to the implementation of ecofeminism in China.

In a patriarchal society like China, not only are the ideas of ecofeminism groundbreaking, but also, more generally, the implementation of ecofeminist theories cannot overlook the historical, political and cultural context in which they are to be applied. Firstly, it is necessary to analyse the social culture and the environment, this includes the political system, the level of economic development, the characteristics of science and technology culture etc., only then will it be possible to understand which problems hinder the theoretical promotion and practice of ecofeminism in China. The problems have been divided into three main areas: the management system, the economic pattern of development and the scientific cultural ideology (Zhang, Liu 2013).

- 1) The management system: from the perspective of the management system *guanliti* 管理体, women and environment's undertakings and affairs have to be state-led and the implementation of the practices and the management model have to follow a top-down trend, that is a top-down control on feminists and environmentalists' agenda. This situation implies that women and the environment are influenced by the current political and social system. As regards the environment, the administrative system that China adopts is the following: “*you guowuyuan tongyi lingdao, huanjing baohu bumen tongyi jianguan, ge bumen fengong fuze, difang*

zhengfu fenji fuze, 由国务院统一领导、环境保护部门统一监管、各部门分工负责、地方政府分级负责" (The unified leadership of the State Council, the unified supervision of the environmental protection department, the division of labor of each department, and the responsibility of the local government). However, few problems can be found in this system, for instance: there is a large number of environmental function departments, each of which is an independent executive body. The problem is that within the current laws there are no regulations dictating the authority, the cooperation among departments and the specific tasks of each department, this management system easily leads to problems between departments (Zhang 2010). Furthermore, the environmental protection administrative departments at all levels of government are only responsible to the government at the same level, this means that the superiors lack the necessary control power to the lower levels and there are often interferences in the process of law enforcement. Local environmental management institutions and management systems based on administrative divisions are prone to local protectionism, making it difficult to manage and protect cooperatives across regional environmental issues.

Making a comparison, in China the organ that governs women's affairs is the All China Women's Federation, compared to Western women's NGOs is different, we can say that it has strong Chinese characteristics. First and foremost, it is an organization of women which is under the government and it is led by the party. Every level of women's federation organizations must accept the leadership and the control from the party and the government at the same level. This system has caused massive interference from local governments over the work of women's organizations along with strong control over the funds (Fu 2010).

The result is that this kind of administration causes the politicization and formalization of environmentalist and feminist discourses: in the context of the country's high attention to the construction of ecological civilization and the cause of women, organizations have to respond the administration of the central government. Environmental protection and the promotion of women's work are often treated as a political matter, lacking in-depth understanding of the environment and women's issues. On a practical level, this means that the environment and women are no longer the focal points of the issue. In other words,

feminists and environmentalists' practices in China are vulnerable to government orientation and related policies.

The importance of participating in environmental protection for women is not fully recognized. In this condition there is a great distance from the Western ecofeminist scene. In the West, the ecofeminist movements are free from governments, they were born spontaneously probably also thanks to the strong awareness of the activists about the bond of women with nature and they had resonance also thanks to the ideological synergy that characterizes them.

In China, such considerations cannot be made, ecofeminism has Chinese characteristics, the emphasis is placed only on the intrinsic characteristics of women, on the role of care that reinforces the link with the environment and their responsibility. At a broader level, these responsibilities and the possible ecofeminist work are under the control of the government that dictates the guidelines to follow for the construction of sustainable development and eco-civilization. According to scholars, in order to develop a local ecofeminism, it is necessary to revolutionize the administrative political system and adopt a change of methods (Zhang, Liu 2013).

- 2) The economic pattern of development: from the point of view of ecofeminism, economic development must simultaneously guarantee environmental sustainability and gender equality. As a developing country, China is experiencing a fast-growing economy, which causes environmental pollution, ecological damage, and social imbalances/poverty. Ecofeminists advocate a *sustainable* development and a social balance, these two main contents are the biggest challenges in China. From an environmental point of view, as long as rapid economic growth and social stability are the only targets of local and central government, it will be difficult to implement an efficient environmental policy (Li 2011). The result is the perpetuation of a resource exploitation regime, pollution and loss of ecological balance. From a gender standpoint, economic development does not necessarily mean gender equality and the enhancement of women's condition, in fact, in many cases it just exacerbates their marginalization. Scholars believe that a first necessary step would be the inclusion of gender awareness in economic development programs and policies, only in this way will it be possible to achieve gender equality and at the same time foster the development of the

society and the economy and promote empowerment (Funu yanjiu luncong, 2006). The reality is that in the pursuit of economic development and industrial modernization, natural environment and women are the first victims. According to scholars, to solve such problems it is not enough to include gender discourses in economic policies and plans, it is necessary to change the thinking, the ideology behind economic growth, society and the environment, above all we must dispel the modern myth of progress and economic development at any cost. Ecofeminism can offer itself to China as a means of reversing this route because it offers a new model of development and administration and can provide, at the same time, an ideological background for the inclusion of both gender and cultural differences (Zhang, Liu 2013).

- 3) The scientific cultural ideology: in the process of economic development and industrialization, science and technology play a fundamental role. “*kexue jixshu shi diyi shengchanli*, 科学技术是第一生产力”, (science and technology are primary productive forces) the sentence pronounced by Deng Xiaoping, reflects the important position that they occupy in the Chinese society, therefore while discussing the relationships between nature, development and genres we cannot fail to mention the massive influence that the blind faith in science and technology exert on such relationships. From the environmental point of view, this involves a rejection of nature as an independent entity to be worshipped (Fang 2005). This aspect influences the relationships that men establish with the environment. Scholars argue that *jingwei ziran* 敬畏自然 (awe in nature) contrasts with the development of science and technological progress, it is an irrational attitude ascribable to the women’s realm. On the other hand, from a gender perspective, Western dualist thinking has also influenced China and it is reflected in the practice: the percentage of women participating in technical-scientific activities is low, the gender stratification in this field is still very high. Moreover, the feminine attitude is considered opposite to science and therefore suppressed. With regards to this situation, Chinese scholars believe that the gender perspective has to be incorporated into the reform of China's science and technology system and in the formulation and implementation of science and technology policies. The value system of scientific culture and capitalism have therefore jointly neutralized and exploited nature and women. This is in deep conflict with the ideas advocated by

ecofeminism. Precisely because in China these instances are so strong, there is a need to develop ecofeminism to investigate the ideology underlying scientific culture and to analyse the influences of the modernization process on the most vulnerable categories (Zhang, Liu 2013). This is not an easy endeavour because in the semi-authoritarian system of China, science has been used to exclude citizens from the political debate, that means the political power has used the scientific discourse to legitimize its decisions, if an issue is proposed as a scientific and as a demonstrable truth it cannot be argued and ordinary people are excluded from a public debate.

To conclude, these three are the main challenges that a construction of a local ecofeminism in China faces.

3.5 Possible constructions of ecofeminism with Chinese roots

So far we have analysed the difficulties that this western concept has to experience in the PRC, in fact, even if the Chinese academia is rather active in the production of articles on this matter, it can be stated that the intellectual discourse on ecofeminism barely sneaks out from the academia's golden doors to find its roots in the Chinese context. The aim of this section is to gather some insights on possible Chinese construction of ecofeminism, or as scholars Zhang and Liu (2013) call it: the "localization", *bentuhua*, 本土化 of ecofeminism in China. In order to do that, a review of the Chinese, American and European's literature has been made to find some insights and paths to follow. The result of the research is a section divided into three parts which displays three different experiences. The first is more conceptual and investigates the connections between ecofeminism and Daoism, the second part explores the practical experience of a Chinese matrilineal society, its role in environmental protection and the similarities with ecofeminist principles, the last part analyzes the work of two prominent figures in China engaged in the fight for environment, one is Wang Yongchen and the other is Chai Jing.

3.5.1 The intersections with Daoism

Daoism, a philosophy with Chinese roots and ecofeminism, a concept developed in the West around the 1970s, have something in common. First and foremost, both philosophies believe that the idea that man occupies a privileged position and make use of this position to satisfy any of his need by exploiting nature is essentially wrong. The

choices made by humankind over time to ensure waste and overproduction with consequent emission of greenhouse gases, have led to the transition to the Anthropocene and the environmental devastation. Ecofeminism and Daoism seek to propose themselves as alternatives to the current model, fostering more ethic choices in harmony with the environment (Rowe 2002). For the Daoists, in fact, the behaviour of men and women must follow the natural order of things, their intervention must be limited and they must be aware that every action has consequences.

As we all may know by now, ecofeminists criticize the anthropocentric society and the patriarchy which oppresses women and nature, at the same time they believe that a transformation of the system is necessary to obtain their release. By transformation of the system, ecofeminists mean a change of values that recognize the worth of each human and more-than-human entities, by doing so, the dualistic thinking must be eliminated (Birkland 1993). If Daoism doesn't criticize patriarchal system, it does judge the dualistic view though. In fact, Asian cultures have a propensity to regard the world holistically, Chinese culture but also Indian culture have a propensity for integrative thinking as opposed to the western binary bind. Integrative thinking includes other ways of thinking such as the dialectics of *yin-yang*, the components are not in contrast but they are complementary, the power of two combined forces comes from their cooperation rather than their competition and they can be described as an *inter-relational whole* (Dellios et al, 2018:2). This philosophy differs totally from the dualistic thought developed in the West, thanks to this holistic approach the hierarchical structure loses power and a flat hierarchy is often the result of an integrative thinking (Peter, Swilling 2014). According to Chinese scholars Wei Qingqi in her essay *The Way Of Yin: The Chinese Construction Of Ecofeminism In A Cross-Cultural Context* (2014):

This comprehension of the nonduality of yin and yang also suggests what the yin-female can contribute to the latest postmodern feminism and to a harmonious ecological culture. Yin and Yang themselves are neither good nor bad. Rather, they exist in the way the cosmos does. Whereas the Western dyadic pattern tends to be didactic, so that the dark (yin) is evil while the bright (yang) benign, in accord with which the demon is bad, and God good; the whites are good, and the colored bad; men are good, and women bad. This either-this-or-that choice of value is bound to render crises within human civilization and between man and nature. (Wei 2014:757)

Another connection between the two philosophies is the presence of a strong feminine principle. The Dao itself is often presented as female, if there are no reference of the Dao as father, there are many that depict the Dao as Mother, also the vocabulary used is

emblematic, for example the verb *giving birth* is often employed and it is rather evocative, it recalls a female realm (Deppe 2010). However, the Daoism transcends the gender dimension because *the ten thousand things are female on one side and male on the other. Using both creates vitality. Balancing both creates harmony* (Deppe 2010:133). This means that all the creature under the Dao are all equal, this is a concept that we will further investigate related to ecofeminism in the following paragraph. In the Daoism, not only there is the presence of women *as shamans, heads of monasteries, spiritual teachers of sages like legendary Yellow Emperor, and as the enlightened beings known in Daoism as 'immortals'* (Dellios et al, 2018:8), but also the yin perspective, that is feminine, is fundamental to keep the balance and the harmony. Men and women are complementary, indispensable to each other like day and night, black and white, light and darkness. In fact, living in harmony with the Dao means to leave in harmony with the universe and all its inhabitants.

It is also undeniable that some translated versions of the Dao De Jing have been influenced by a western male perspective. For this reason, the female dimension was often omitted or misinterpreted. The male is often chosen over the female, for instance the Chinese word *ren* that refers to both a man or a woman indistinctly, is often translated as *man*, as for the plural translators often use *men* rather than *people*. The same happens with the translation of the figure of the enlightened, the Sage, it could be both man or woman because there are no references to a specific gender, but in the translations it is often translated with the male pronoun (Deppe 2010).

Chapter XXVIII of the Dao De Jing says *zhixiong, shouqici* 知其雄，守其雌, that means *Knowing male but holding to female*. Undoubtedly, the Dao De Jing has been translated thousand times and yet many doubts remain, it conveys thousand meanings and it is open to thousand interpretations, however, this sentence may be interpreted as the importance for every creature of knowing the male strength but abide by the female principles and virtue of kindness, weakness, and maybe motherhood. It is necessary to be fluent and integrate the two principles, integrating the seemingly weak with the powerful, in a ceaseless motion (Deppe 2010; Wei 2014).

In general, it can be said that there are some characteristics of Daoism that are similar to the ecofeminist's, for example Daoism promotes an altruistic attitude and a collaborative and supportive behaviour, it does not dictate a particular social order and among its practices there is a call to vegetarianism.

In terms of relationship with the environment, Daoism worships nature. The daoist philosophers retreated into the mountains to observe nature and recognized two phenomena: flow and transformation. In Chinese *ziran* 自然 means nature but also spontaneity, this duality reveals the conception of nature as not fixed, a ceaseless transformation. From this standpoint, we draw an important Daoist principle, that is the continuity and interconnectedness among Earth, Heavens and the myriad things under the Dao (Epple 2009). The lessons that ecofeminism and the contemporary society can draw are a few: in this continuum and in the ceaseless fluctuations, identities don't work because they are in the process of transformation as well, this consideration give rise to another concept that is the parity within the Dao, all the creatures are equal and complementary. The diversity is thus embraced and the variety of nature is celebrated.

From these considerations, we can deduce that there is not a single exact position, a single right way to live. This does not imply that all the ways are right, this leads us to another fundamental principle of Daoism, that of non-action *wuwei* 无为 that is described as:

Acting effortlessly and spontaneously in perfect harmony with a normative standard and thereby acquiring an almost magical efficaciousness in moving through the world and attracting people to oneself (Slingerland 2000:296)

In environmental terms, the spontaneous practice of non-action can be interpreted as abandoning oneself to the natural flow of things without engaging in forced and non-natural actions such as the exploitation of natural resources and reproductive work, overproduction and massive industrialization. The actions from the non-action are the result of a respectful approach. This attitude is beneficial for the environment protection, the non-action can be interpreted as an effort towards environmental sustainability, the establishment of respectful relationship between human and nature (Rowe 2002; Epple 2009).

The last and probably the most important lesson that ecofeminists and the societies in general can draw from Daoism is the concept of transformation. Daoism teaches that transformation begins within ourselves, in our consciousness, and takes shape in our choices. This is why there can be no social change without a personal change before, at the same time if personal change occurs, social change will be inevitable. Ecofeminists advocate a change in the values that underpin our society and our actions, supporting the ethics of care and cooperation, but this change starts from ourselves. The Chinese

philosophy argues that the transformation can take place only when the individual lets go of his ambitions, his projects and returns to the *Dao* 道 (Rowe 2002). In more ecofeminist terms, the change begins in our consciences and it reflects on our society, it can be interpreted as human beings letting go of the lust for possession, the thirst for power, the consumerism, the globalization to the detriment of the poorest. Only the change of values can lead to the liberation of women and nature, enhancing the principles of equality and non-violence and promoting new forms of participation in decision making process (Birkland 1993). The concept of transformation would be also utterly beneficial for the environment, it can be interpreted as an effort to mitigate the effects of human activities on the Earth and limit the consumption.

In the next paragraph there are two chapters from the *Dao De Jing*, that, to some extent, summarize what we have seen so far and give further proof of the similarities between ecofeminist and daoist ethics.

The Chapter XL of the *Dao De Jing* defines the meaning of *Dao* and the concept of transformation with the motion of return. The returning is intended as fluidity, this reflects the continuous alternation and integration of forces, of being and of not being, life and death, weakness and strength. Weakness, a characteristic attributed to women, is an asset and embodies the potential of force (Duyvendak 1994).

反者道之动；
弱者道之用。
天下万物生于有，
有生于无。 Dao De Jing, XL

Returning is how the Way progresses.
Weakness is how it performs its function.
The myriad creatures arise from Something,
And Something arises from Nothing. (translated by Kline 2003)

Chapter LXXX of the *Dao De Jing* is quite emblematic and contains some ecofeminist principles:

小国寡民。
使有什伯之器而不用；
使民重死而不远徙。
虽有舟舆，无所乘之，虽有甲兵，无所陈之。
使民复结绳而用之，甘其食，美其服，安其居，乐其俗。
邻国相望，鸡犬之声相闻，民至老死，不相往来。 Dao De Jing, LXXX

Reduce the size and population of the state.

Ensure that even though the people
have tools of war for a troop or a battalion they will not use them;
and also that they will be reluctant to move to distant places because they look on death
as no light matter.
Even when they have ships and carts, they will have no use for them;
and even when they have armour and weapons, they will have no occasion to make a
show of them.
Bring it about that the people will return to the use of the knotted rope,
Will find relish in their food,
And beauty in their clothes,
Will be content in their abode,
And happy in the way they live.
Though adjoining states are within sight of one another, and the sound of dogs
barking and cocks crowing in one state can be heard in another, yet the people
of one state will grow old and die without having had any dealings with those of
another. (translated by Lau D.C. 1990)

The contents written in these verses around the 4th century BC are utterly current topics. Limiting the population is good to guarantee a high living standard, preserve the environment and living a simple and everyday life is often the key to happiness. Following our ambitions constantly and never having enough of what we have, only leads to dissatisfaction, to seek for other places, other resources, other way to satisfy our greed. Today, chasing economic growth, progress and personal interest have led to ecological and social crisis, Laozi's words are extremely up-to-date. We should focus more on what we really need, in the present, in our community, a return to simplicity, to a local and subsistence economy can be somehow the way to restore a balance within ourselves and the natural world.

In a nutshell, reinterpreting ecofeminism through the 阴 *yin* can surely enrich the ecofeminist discourse and open a window for a construction of the concept in China. However, it is good to be cautious in the faith placed in the daoist ecofeminism since the Daoist interpretation also has its limits. In fact, some scholars believe that Daoist philosophy is too metaphysical to actually engage in the practice. The same scholars are doubtful about the fact that daoist ethics can be useful in the present as in the past it has not preserved China from environmental devastation (Birdwhistell 2001; Wei 2014). With regards to the women position in the Daoism, there are also rather negative interpretations, Daoist ethics is not always immaculate, *yin yang* cosmology turns out to be too far from the relations between human beings and often also in Daoism men placed themselves in a position of superiority over women (Lieh-tzu 1960; Wei 2014).

To conclude, combining the Daoist philosophy with ecofeminism can be a viable way to create a Chinese ecofeminism, however it is fundamental to give the right interpretation, that according to Wei Qingqi would be:

A better construal and a better way of reconstructing Daoist ecofeminism would bring yin and yang, female and male, into a reconciled, nondualistic equilibrium. (Wei 2014:762)

3.5.2 Ecofeminism in China's ethnic minorities: the case of the Mosuo 摩梭

There is a relationship between the issues of sustainability, ecofeminist theories and the values of matrilineal societies. Such societies, now a rarity, row against the patriarchal customs and focus on the role of mothers. The term does not want to be opposed to patriarchy because it would be a misleading opposition, instead it outlines a different way of interpreting reality and relationships, these are egalitarian systems.

Before the advent of the patriarchal system in a time span from 5000 B.C. to 2000 B.C., the world was governed by matrilineal societies and their feminine principles; there was no hierarchy, no private property, no war and no family nucleus as we understand it today. The main divinity was identified as Mother Earth who was thus worshipped along with the characteristics of motherhood. The society was organized around the clan of women represented by the older woman and together they made decisions for the sake of the community. Women were healers, priestesses, shamans, custodians of knowledge and traditions, cooks, hunters...in the prehistoric period, societies were flourishing and women made the most important discoveries in history (Zapparoli, 2015).

Currently, only one hundred examples of matrilineal societies have remained in the world, one of which can be found in China, the Mosuo ethnic group, *mosuozu* 摩梭族.

The Mosuo ethnic minority *Mosuozu: Shenmi de nu'er guo* 摩梭族: 神秘的女儿国, the mysterious female kingdom:

The Mosuo are a Chinese ethnic group located in the provinces of Yunnan and Sichuan provinces, in south-east China, close to the Lugu Lake and the plateau of Yongning (He 2001), the area is surrounded by mountains at 2,600 meters above the sea level. This tribal community is known worldwide for its matrilineal system, it is known as the “female kingdom” or “the daughters’ kingdom”, the population is around 50,000 people (Hays 2008).

They used to be extremely poor, mainly because of their geographic position very hard to reach and rather isolated. However, their position turned out to be also their advantage, the particularity of this matrilineal society it that it has managed to preserve itself over

time because of the presence of strong traditions and also thanks to its remote geographical position. In fact, until recently, communication and transport were sporadic. Unfortunately, these traditions have been weakened by the booming tourist industry and the economic development, on one hand the Mosuo are getting richer, they can afford electricity, telephone, washing machine, refrigerator, bathroom with flush toilet, on the other hand they are losing their peculiarities and part of their traditions. Before the tourist industry, the Mosuo communities used to live of mainly farming (maize, rice, barley, wheat, oat...) animal husbandry and handicraft production, the income used to be around 200 yuan per capita, the economy was thus self-sufficient, (He 2001).

The organization of the society:

As already mentioned, the fulcrum of this society lies in the female figure, the maternal line of descent is the one that matters while the paternal descent is not taken into consideration. In addition to the mother figure, the mother's brother, the uncle, plays an important role, he takes care of the children and he takes the most important decisions for them (Morosi 2016), the father has a secondary role. This organization implies that the children stay with the family of the mother and get her surname, it can easily be stated that the Mosuo family just counts the relatives of the mother's blood lineage. Generally, women hold a very high status, but elders are the real community leaders and heads of the family, they control production activities, farming, money, and rituals, they make the major decisions and control the finance of the household (Hays 2008).



Figure (3.1) - Women working the land in Yunnan province, 2017

The system of Walking marriage *zouhun* 走婚 and its implications:

As regard the relationship with men, the Mosuo have traditionally practiced the *zouhun* 走婚 the “walking marriage”, it is a particular institution because there is no marriage system at all, women don't take any husband but rather engage in love relationship when it pleases them, the men visits the woman during the night in its house and leave before dawn. Although it is possible to have a couple relationship, man and woman live and work in separate families, men call women *axia* 阿夏 and women call men *azhu* 阿注 (Baidu baike 2019). If they have children, the father is not required to take care of them, instead he has responsibilities towards his sister's offspring. This system not only allows relationships to last as long as there is love, whether it is a night or a life, but also avoid men supremacy and domination over women, because they have no rights (Hays 2008), the base of the relationship is just the love between the couple because no money and no dowry are involved. This marriage guarantees more equality between women and men and people enjoy more freedom (He 2001).

Unfortunately, over the last few decades the walking marriage tradition has been fading leaving space for conventional marriages.

The key role of Mosuo's women in environmental protection:

In Lugu lake area, the natural environment has remained unspoilt since many years and generation, the quality of the water is good and the ecology is preserved. These conditions have lasted for long for three main reasons: the first is the geography of the place, the second is the economic underdevelopment and the third is the presence of the Mosuo people (Yan et al. 2008).

The matriarchal system of the Mosuo has contributed to environmental protection, to birth control without adopting coercive mechanisms and has limited the use of natural resources. Specifically, Mosuo's lifestyle, religious beliefs and matrilineal household structure have played a central role in environment conservation and afforestation of the damaged areas.

The Mosuo live in close contact with the forest, which has been their source of livelihood. In the past, communities used forest resources only on a subsistence-base but with the boom of the tourism industry the demand for wood has increased, causing deforestation. It is also true that the changes in lifestyle brought by tourism have increased people environmental awareness. The increase in the economic possibility has allowed

the Mosuo to rely less on the forest resources because they started having other channels to make profits (He 2001). This led to the development of ecological tourism.

However, despite the changes in the ownership and use of the forest, the matrilineal system has played a central role in the preservation of the ecosystem and in the afforestation. First and foremost, women are the guardians of ecological knowledge, they are in charge of weeding, planting and fertilization processes. With regards to afforestation, the majority of people involved in voluntary work of afforestation are women, specifically the 80%, and when cutting firewood, the ecological knowledge of women has helped protecting the forest because they know how to cut to ensure the well-being of the tree, this means cutting the twigs while men statistically perform random cuts (He 2001). Secondly, the structure of the families has helped narrowing the demand for wood because the matrilineal system doesn't split the family into smaller units, this imply less need to build houses. In fact, matrilineal family structure doesn't consider the set up of a new family after the marriage, woman and man remain with the family of their mother allowing the household to grow bigger, offspring stays with the mother's (He 2001). As regard population control, the Mosuo don't have that much motivation on having children. Not only have they small portion of arable land, but also all the family members (from the maternal line of descent) live and work in the same household and fields, so the labour force is rather stable, they don't need more labour force as it is in other rural household. In addition, the kids belong to all the household, not just to the mother. This spontaneous activity of birth control is beneficial for environmental preservation (Yan et al. 2008).

With regards to religious beliefs in terms of environmental protection, the Mosuo have traditionally practiced the *daba* 达巴 religion until the arrival of Tibetan Buddhism or Lamaism. The two religions coexisted until they have merged. Although the main religion today is Lamaism, the Daba tradition has influenced the beliefs of the Mosuo. The Daba religion is at the base of their culture and it is an animist religion. It is based on the cult of ancestors and on the cult of divinities with feminine characteristics, the most important is *Gemu* 格姆, the mountain goddess, she is the creator and destructive goddess. The cult of the goddess *Gemu* is the oldest, every year the Mosuo go on pilgrimage at her feet to offer her gifts. In addition to the Lion Mountain associated with the goddess *Gemu*, each village has its sacred mountain, this involves their protection, for the Mosuo it is in fact forbidden to cut trees and graze on the sacred mountains. The same goes for the *Springwoods*, which are hundred years old trees that are forbidden to be cut. The young

trees are also untouchable because cutting them is seen as the murder of a child. These activities have clearly preserved forests from deforestation and discouraged logging activities (Yan et al. 2008, He 2001). Furthermore, religion has influenced the lifestyle of this population. In Tibetan Buddhism, in fact, what matters is to have a holistic view of the world, this vision allows to see humans as part of nature in a long-lasting and interdependent relationship. Buddhist belief suggests the interdependence of all things on earth and their equality. These concepts make it possible to reduce the impact of human activities on the environment.

The Mosuo respect nature as if it were their mother. The Lugu lake in Chinese is called *Xienami* 谢哪米, or mother lake and the Mosuo believe it should be protected as if it was their mother. In the lake it is therefore impossible to spit, wash diapers, leave garbage, urinate etc (Yan et al. 2008).

To sum up, the worship of Nature allows Mosuo people to protect, cherish and value the natural environment.

Collectivism and the gift economy:

Another important aspect of the matrilineal societies' lifestyle is the collectivist attitude, this matrilineal system has a different conception of goods and services and a different management of the resources. They have a subsistence economy, and the private property doesn't exist, what belongs to a family directly belongs to all the families in the community that work together for the sake of the village. The reason is that "Mother Earth" cannot be owned, She offers her land, her fruits, her animals that are to be shared equally. The elder matriarchs are responsible for the subsistence and the well-being of the clan members, in organizing the activities they don't follow the logic of accumulation and the pursue of personal profit, their choices are guided by the maternal logic instead. Following the maternal behaviour, altruism and people safety are the most important thing, like Mother Nature takes care of all her children so does a woman. In matrilineal societies, the maternal ethic rules among women and men as well and permeate all the aspects of life. In economy for example this principle is well translated into what is now called the "gift economy", that means give to receive, in the exchange the focus is the satisfaction of the others need, not the satisfaction of the self, the orientation is toward the need rather than the profit (Goettner-Abendroth 2013). The goods are seen as gift, money doesn't have values, the clan with more possibilities help the less advantaged in order to reach a balance, the goal is the levelling of the living standards of all the

household of the village. Who has more, has to give, this is the leading principle and it creates a circular support chain. The clan that donates, gains the honor and the respect of the other clans, that means friendship, a quality that cannot be monetized (Goettner-Abendroth 2013).

From the private sphere of the clan, this conception is translated to the organization of production, for example, the village of Luoshui has efficiently managed to deal with the development of tourism: all the activities were managed by the village council and each household has contributed to the development and management of the services provided, at the end all the profits are shared equally. This mechanism has increased the income of the Mosuo while avoiding the pursue of individual profit and competition (Yan et al. 2008).

To conclude, the values of simple life, subsistence, love, care and sharing are all values developed from women, the same as for the non-monetary/gift economy which is synonymous of women's economy (Bianchi 2012). Matriarchies base their existence on maternal work, which is the most important work of all, it is the work to maintain and give life and it is the work to guarantee the future, this aspect is totally obscured in patriarchal systems (Goettner-Abendroth 2013), that is why probably a change in the dominant pattern is what the world needs.

Clearly, economic and tourism development has been threatening the ecological balance of the Lugu Lake region and the survival of the traditions. Changes in the patterns described so far have occurred throughout the years, the contact with the modern society has influenced the perception of the young Mosuo people, migration has also occurred along with mergers with han people and the pursue of economic benefits have started being important also in Mosuo's lives. However, scholars argue that after having experimented new lifestyle coming from the outside world, Mosuo have become more aware of their peculiarities and they are rather proud of their identity, moreover religion still plays a central role in the Mosuo's life. These are some of the reasons why China's last matriarchy still lasts (He 2001, Yan et al. 2008).

It is quite evident that in the matrilineal system there are some characteristics that also belong to the ecofeminist theory, such as the holistic view, the collectivist ideas, the importance of recognizing the value of women, the support of a model different from the

patriarchal and capitalist one, a model that is in favour of the environment, that fosters harmonious relations between man and nature.

This type of system is different from what we are used to, but this does not mean that it could not be better. It is important to start from the assumption that the model that has governed the world for centuries has sanctioned the entry into the Anthropocene, the environmental collapse, wars, hunger, and the crisis of values. The logic is that to build a new society it becomes necessary to eradicate the old one that is founded on the patriarchal and capitalist culture. In the constitutive practices and ethics of matrilineal societies there are the components for implementing a revolution of society, a transformation of the values that allows the eradication of patriarchal domination, overcome the andro/anthropocene phase and create a new system based on an ethics of respect and care, on the protection of every life form, and allow a revolution in interpersonal relationships. The organization of matrilineal societies is based on the method of consent and sharing, on the circularity of power and on responsibility, concepts dear to ecofeminists (Colombini, Di Bernardo 2013).

In conclusion, even if members of the Mosuo ethnic group cannot be called ecofeminists, they are like proto-ecofeminists in the lifestyles and beliefs because they have been living this way for centuries. This means that even in China, despite the limits discussed in the previous paragraphs, it is possible to build a meaningful experience of ecofeminism, it is possible to broaden the horizons by looking at the lives of the members of this matriarchy in ecofeminist terms, to broaden the intellectual discourse and to locate a Chinese ecofeminism outside the academia.



In figure (3.2), common traits of matrilineal system and ecofeminism are briefly outlined

3.5.3 Ecofeminist insights in Chinese female activists: Wang Yongchen and Chai Jing

The aim of this last section is to analyse the work of two well-known Chinese women, environmentalists and public figures and investigates which aspects of their work match the ecofeminist criticism and which do not. The limits of their criticism will be studied through the lenses of the Chinese political system. One is 汪永晨 Wang Yongchen, famous environmental activists and environment radio reporter, founder of the NGO's Green Earth Volunteers and especially known for her involvement in the Nu River's dam project campaign; the other one is 柴静 Chai Jing, journalist and environmental activist, especially know for the documentary concerning China's pollution "Under the dome", *qiongdong zhixia* 穹顶之下, released in 2015 causing quite a stir.

Wang Yongchen:

Born in 1954 in the Anhui province, Wang Yongchen is one of the most famous Chinese environmental activists.

She has witnessed the Deng Xiaoping era with the promotion in 1978 of the Reform and Opening policy that lifted China out of underdevelopment but has caused massive ecological losses and social imbalances. Her work has begun during the 90s and still goes on: environmental reporter for China National Radio and founder of one of the first NGOs in the PRC in 1996, namely Green Earth Volunteers, Wang is a passionate woman with a precise commitment, the protection of the natural environment with its biodiversity.

It can be said that Wang Yongchen is mostly known for her involvement in the Nu River's dam project. In China, hydropower has been the core of environmentalists claims, the construction of dams has encountered the opposition of many people and has stirred the action of many activists (Moriggi 2017). Today, China accounts for more than 87,000 dams on its territory, it is the country with more dams in the world; hydropower development has had a price though, 42% of Chinese rivers are polluted and lots of Chinese are still suffering for the displacement they underwent for the construction of the dams (International Rivers).

Not surprisingly, the most polluted rivers in the world are in China or pass through China: the Yangtze, the Yellow River, the Mekong...



Figure (3.3) - Shore of the Mekong River (Phnom Penh, Cambodia 2017)

In 2003, with no previous experience of dam's opposition, Wang started her fight against the implementation of the dam project for the Nu River, she created a society alliance against the construction of the dam and after only few months a large number of organizations and individuals signed a petition with that purpose. The efforts of Wang led to the suspension of the project by the former Prime Minister Wen Jiabao. The suspension was called because of concerns for the environment and ethnic minorities, it was a great victory for Wang and for the environmental movement (Moriggi 2017). Besides the threat to biodiversity, the displacement of the inhabitants and the potential loss of cultural traditions, Wang was concerned of the different impacts on genders. She recognized the relevance of the gender dimension in situations of ecological stress, women are in fact those who suffer more for the consequences of the dam project, because they have to undergo the loss of land, that it is their source of livelihood as men often migrate to the cities.

In this context, it is possible to see the pure connection with nature she has, her uttermost respect and love toward the natural environment is displayed in her writings in the bilingual website *Zhongwai duihua* 中国对话 (*China Dialogue*), founded by British researchers and Chinese activists and journalists (Marino 2015).

In her work, Wang organizes journeys along the rivers of China, to document the environmental crisis, take pictures, write articles and make surveys. Wang's efforts aim at reporting the impacts of hydropower development on the rivers and on the people living close to the shores. Not only does she record the ecological damage and the pollution, but she also stops in places inhabited by ethnic minorities and collect their testimonies, their

efforts and their struggles to survive and to protect the environment⁵ (Wang 2007, Wang 2018). In 2006 she carried out surveys in the Nu valley to assess the impact of the dam project on the locals, she documented the conditions and the thought of the people, the result was that local people have lived in uncertainty for years, without the right access to information and without being consulted from the government, waiting to be relocated, suffering water shortage and food scarcity⁶. The rivers' environment is also home to the largest biodiversity, at the same time this biodiversity is threatened by human activities, overdevelopment causes rivers to dry up and chemical plants pollute the areas. For instance, the delta of the Yellow River, also called "Mother River", home of more than 800 species and rare birds is now in danger due to oil drilling activities, nature reserves leave room for chemical companies.

Wang fights against the risk of biodiversity loss, as in her article *Farewell to the Baiji*⁷, she documents the extinction of the Chinese dolphin caused by massive human activities, described in an old Chinese dictionary as the "Goddess of the Yangtze", trying to raise people's awareness. However, it is in her article *What if Nature could speak?*⁸ that Wang demonstrates the profound empathy that binds her to nature, her deep connection and dedication to preserving ecosystems. In this article, Wang reported her visits during the Chinese holidays to some beautiful natural sites in China, what she found were natural heritages destroyed by mass tourism, the environmentalist put herself on the side of Nature and tried to make her talk. *What if Nature could speak?* She asked herself, *I felt her lament*, she replied. She concluded the article with a moving sentence: *don't base*

⁵Wang Yongchen, 汪永晨, 2018, Cong bohai dao qinghai: Wang yongchen de huanghe xingzou riji, 从渤海到青海: 汪永晨的黄河行走日记, (Journal from the Yellow River), *zhongwai duihua*, 中外对话, (*China dialogue*), URL <https://www.chinadialogue.net/culture/10542-Journal-from-the-Yellow-River/en>
Wang Yongchen, 汪永晨, 2007, Zhongguo jianghe hubo ji dai jieke, 中国江河湖泊急待解渴, (Quenching China's thirst), *Zhongwai duihua*, 中外对话, (*China dialogue*), URL

<https://www.chinadialogue.net/article/show/single/en/738-Quenching-China-s-thirst>

⁶ Wang Yongchen, 汪永晨, 2006, NuJiang, Jiangshui neng bian"shiyou"ma?, 怒江, 江水能变"石油"吗?, (Report from the Nu River: "Nobody has told us anything."), *Zhongwai duihua*, 中外对话, *China dialogue*, URL <https://www.chinadialogue.net/article/show/single/en/240-Report-from-the-Nu-River-Nobody-has-told-us-anything->

⁷ Wang Yongchen, 汪永晨, 2007, Nanshuo zaijian: Baijitan, 难说再见——白鱀豚, (Farewell to the Baiji), *Zhongwai duihua*, 中外对话, *China dialogue*, URL <https://www.chinadialogue.net/article/show/single/ch/673-Farewell-to-the-baiji>

⁸ Wang Yongchen, 汪永晨, 2007, Weiwuyande daziran Qingming, 为无言的大自然请命, (What if Nature could speak?), *Zhongwai duihua*, 中外对话, *China dialogue*, URL <https://www.chinadialogue.net/article/show/single/en/775-What-if-nature-could-speak->

your pleasure on nature's suffering. If you want to live in harmony with nature, you have to try to listen to what it is saying. (Wang 2007:websource).

In a nutshell, Wang Yongchen is a female activist for the environment but also an activist for human right, because in fighting her environmental battles she is also fighting for of all those people who may suffer from choices made for the interests of a few, she teaches the secrets of the natural heritage to people through her NGO, she is an advocate of transparency and people participation in environmental issues (Moriggi 2017) and she believes in the role that anyone can play in protecting the environment.

Chai Jing:

Born in 1976 in Shanxi province, Chai Jing is a former CCTV investigative reporter and television host but it was only in 2015 that she gained world-wide attention with the release of her self-financed documentary about pollution in China. *Qiongdong zhixia* 穹顶之下 in English *Under The Dome*, is the result of a year-long investigation carried out by the author into China's deepest problem, the environmental pollution. The documentary was released on March 1 and it went viral immediately, in less than 48 hours it had more than 150 million views, and on March 3rd it was censored in China (Hatton 2015).

In the nearly two-hour recording, Chai reports specific pollution data, infographics, illustrated animations, she shows videos in which she visits Chinese factories and she also expresses personal thoughts. The author criticizes the excessive use of fossil fuels in China, the constant development of heavy industries and the failure to comply with environmental standards (GlobalVoices 2015).

The power of Chai Jing's documentary lies in the maternal tone she uses to catch people's attention and to raise awareness, she uses the lens of a mother to analyse the problem and she does it by sharing with the audience the story of her child. Her baby was born with a benign tumor and she had a perilous surgery to had it removed, the mother blames the overwhelming China's pollution for the disease. In telling her story, Chai leaves the audience with a sense of uncomfortableness and suspense, in the meanwhile she shows ultrasonic picture of the unborn child. The maternal voice creates emotional response and engage the public by connecting the problem of the smog with the harmful effects on the beloved ones (Cui 2017). Below are phrases taken from the documentary which demonstrate the maternal attitude the author employs to address the issue and the audience as well:

听到她的心跳的那一瞬间，我觉得对她没有任何别的期望了，健康就好。但是她被诊断为良性肿瘤。

Tingdao ta de xintiao de na yi shunjian, wo jue de dui ta meiyou renhe biede qi wang le, jian kang jiu hao. Danshi ta bei zhenduan wei liangxing zhongliu.

The instant when I heard her heartbeat, I felt I didn't have any other hope for her but to be in good health...but, she was diagnosed with a benign tumor.

医生对我说，她这么小的年纪做全身麻醉是有可能性不过来的，你要有个心理上的准备。

Yisheng dui wo shuo, ta zhe me xiao de nianji zuo quanshen mazui shi you kenengxing bu guolai de, ni yao you ge xinli shang de zhunbei.

The doctor said to me, at such a young age it is possible that she doesn't make through general anaesthesia. You have to be mentally prepared.

我还没来得及抱她一下，她就被抱走了。

Wo hai mei laideji bao ta yixia, ta jiu bei baozou le.

I didn't even had time to hold her for a moment, that she was taken away.

回家的路上，我就已经开始感到害怕了全是烟熏火燎的味，我就拿一个手绢捂在她的鼻子上。（...）以前我从来没有对污染感到过害怕，去哪我都没戴过口罩。现在有个生命抱在你怀里，她呼吸她吃她喝都要由你负责。你才会感到害怕。

Huijia de lushang, wo jiu yijing kaishi gandao haipa le quan shi yan xun huo liao de wei, wo ji una yi ge shoujuan wu zai ta de bizi shang. (...) Yiqian wo conglai mei you dui wuran gandaoguo hai pa, q una wo dou mei daiguo kouzhao. Xianzai you ge shengming bao zai ni huai li, ta huxi ta chi ta he dou yao you ni fuze. Ni cai hui gandao haipa.

I'd never felt afraid of pollution before, and never wore a mask no matter where. But when you carry a life in you, what she breathes, eats and drinks are all your responsibility, then you feel the fear" (Tran 2015; Moriggi 2017:221; Chai 2015:video source).

Chai Jing took the pollution issue personally, she felt deprived of her right to live a joyful maternity because of the concerns about living in an environment that is harmful to the health of people and children in particular. She uses the power of motherhood to shake people's consciences and raise people's interest on the matter.

Chai continues emphasising the role of children as vulnerable victims through an interview to a six-year old girl in Shanxi:

柴静：你见过真正的星星吗？

Chai Jing: Ni jianguo zhenzheng de xingxing ma?

Chai Jing: Have you ever seen a real star?

女孩：没有

Nuhai: mei you

Girl: I haven't

柴静：你见过蓝色的天马？

Chai Jing: Ni jian guo lanse de tian ma?

Chai Jing: Have you ever seen a blue sky?

女孩: 见过蓝一点的

Nuhai: Jianguo lan yidian de

Girl: I have seen it a little blue

柴静: 你见过白云吗?

Chai Jing: Ni jianguo baiyun ma?

Chai Jing: Have you ever seen white clouds?

女孩: 没有

Nuhai: mei you

Girl: I haven't



Figure (3.4) - Screen capture of the interview

The six-year old girl is a witness of this world, she has never seen the stars, nor a blue sky. Chai, as a mother, feels scared for her unborn baby and she feels responsible not just for her own, but for children as vulnerable subjects.

In the narrative mother-daughter used by the author and in the construction mother-children-environment we can glimpse an ecofeminist background. The mother's call for the protection of the environment and of the children shares an ecofeminist ethic that see women as caregivers and links them with nature (Cui 2017). Chai's speech is persuasive, nature and children are in danger and guilty is the system based on economic exploitation, her discourse is legitimized by her maternal credibility and heads towards people's hearts. Furthermore, using this mode of discourse Chai Jing manages to identify herself with the audience: mothers, women, mothers to be or simply concerned citizens, she places herself in a non-hierarchical position with the ordinary people, creating mutual connections and sympathy.

Due to her ecofeminist attitude and her narrative, she received not a few criticisms, she was accused of reporting unscientific information and essentialism, that there were no proof that the smog caused her baby a tumor, some other people blamed her of using her child's story just for strategic purpose. However, the truth is, the fact that Chai Jing is an investigative reporter and environmental activist empowers the credibility of her speech, by providing scientific evidences, she corroborates her knowledge and her access to both scientific and media's information (Cui 2017).

In Chai's efforts to shed light over the environment issue and to inspire public action, we foresee the constraint of a semi-authoritarian system. The short circulation of the

documentary proves the socio-political constraints and the reality of media censorship. These are the same limits discussed in previous section when dealing with the challenges that ecofeminists practices face in China. Being an investigative journalist in China is no smooth endeavour, that is also one of the reasons why Chai resigned from the CCTV and started working independently. This doesn't mean that the problems disappear at all, but at least one can try to open his/her own way exploiting the cracks of the Chinese fragmentary system (Cui 2017, Moriggi 2017).

Wang Yongchen and Chai Jing, like other activists, demonstrate the crucial role that female activism plays in China. The gender-specific traits, which are the female characteristics highlighted by the ecofeminist theory, direct and characterize the environmental efforts of these women. On the one hand by using the maternal dimension as leverage, the concern for the children and the future generation, on the other hand fighting for environmental justice and protecting biodiversity.

CONCLUSIONS

Although China may seem a monolithic block in terms of political power, from an in-depth glance it is not quite precise to think China as a totally state-led society. In fact, the reality is much more complicated. It is undoubtful that the Party-state plays a major role in influencing the works of activists, NGOs, and it strictly controls the freedom of the civil society. However, its fragmentary system allows instances to, in some cases, reach their purposes and gain political and social attention, as for example in the Nu River case. The relations between the State and the society can be interpreted as a delicate equilibrium of evolving negotiations: the limits imposed by the Party-State can be partially overcome by the civil society through interaction and negotiation, the answer is working with the state, not rowing against it. Fundamental for NGOs, independent associations and activists is the creation of *guanxi* 关系 (relationship), a network of informal relations that can bridge the gap between the society and the Party-State (Ho, Edmonds 2012).

Having said that, environmentalism or feminism in China are thus totally different from what we are used to in western societies, that mostly consists of overwhelming social forces able to catalyse mass actions. In China, environmental movements and independent activists cannot operate independently from the Party-State and as a matter of fact, any mass movement harming the integrity of the State is not tolerated. For these reasons, the nature of Chinese environmentalism is small-scale, organized around local issues and thus fragmentary. Despite the limits and the tendency to avoid the confront with the State by precautionary auto-censorship and depoliticization of the topics, this form of activism is also resourceful and seems to work in semi-authoritarian contexts by catalysing incremental change while gaining social influence (Ho, Edmonds 2012).

Therefore, even if a localization of ecofeminism in China may not be straightforward, it is still possible because as discussed before, there are already few experiences in the PRC both in terms of theory and practice. Beyond academic studies, one possible path for a Chinese ecofeminism may be the one revolving around environmental activism, because it combines environmental protection, conservation of biodiversity and at the same time, it acts to protect China's ethnic minorities, preserving and cherish diversity. Undoubtedly, given the semi-authoritarian context and the socio-political limits it is natural to expect a different ecofeminism commitment and practice in China, this commitment can follow the same direction of social movements and activism in general,

that would be an ecofeminism based on a local basis and small-scale. We can see it in the Mosuo system that epitomizes the possibility of a pattern that is no more male-centred and profit-oriented but respect nature and gender balance, while the endeavours of Chai Jing and Wang Yongchen demonstrate the leader role that women undertake in the Chinese environmental scene, women are sure enough the protagonists of the Chinese environmental movement (Moriggi 2017). At the same time, the Chinese culture with the Daoist background provides ethical principles that are re-evaluated in the epoch of Anthropocene and are allies of ecofeminism. This conceptual framework can contribute to the process of understanding and raise environmental awareness by revitalizing the sense of wonder instead of consumerism, through story-telling and dialogues. For the reasons highlighted, there can be fairly good prospects for ecofeminism or at least ecofeminist criticism in China, also because Chinese women are also burdened with historical facts and realistic environmental pressures. The combination of ecology and women's movements can represent a reasonable choice for Chinese women's empowerment.

The international community can help fostering a new set of values promoted also by ecofeminism that has the potential to shape a new development model different from the one that sanctioned our entry into the Anthropocene. The Anthropocene, the new geological epoch dominated by humankind and proposed by Paul Crutzen in 2000, is underpinned by an unsustainable model. Climate change, loss of biodiversity, air, soil and water pollution are just some of the evidences of the Anthropocene epoch. This model is based on the uncontrolled exploitation of natural resources and exploitation of women's reproductive work to serve capitalism. Science and technology debate is only ascribable to the male realm and by marginalizing women, nature and the underprivileged, it legitimizes the system of exploitation. Considering also that women and vulnerable categories are the first victims of climate change, ecofeminism provides an array of principles founded on inclusion, equality of both humans and non-humans, non-violence, care and respect, fostering a return to the subsistence economies, implementing what Carolyn Merchant calls *Partnership ethic* with nature (1996) and the equal sharing of the available resources without crossing Earth's thresholds.

We are first and foremost citizens of the Earth, we belong to the Earth, Earth is what we all share and what makes us all equal. We have the uttermost responsibility to respect and cherish it.

BIBLIOGRAPHY

[Mei, 美, US] Li Yuru, 李侃如. Zhongguo de zhengfu guanli tizhi jiqi dui huanjing zhengce zhixing de yingxiang, 中国的政府管理体制及其对环境政策执行的影响, (China 's government management system and its impact on environmental policy implementation). Li Jilong yi, 李继龙译, (Li Jilong translation). Jingji shehui tizhi bijiao, 经济社会体制比较, (Economic and social system comparison). 2011 (2):142-147.

Adams, C. J., Donovan, J., (eds.), Introduction, in Adams, C. J., Donovan, J., (eds.), *Animals and Women*, cit., pp. 1-8.

Adams, C. J., *The Sexual Politics of Meat. A Feminist-Vegetarian Critical Theory*, Continuum, Bloomsbury, New York-London 1990-2010.

Agenbroad, L. D., Fairbridge, R. W., 2018, Holocene Epoch, *Encyclopædia Britannica*, dicembre 07, 2018, available at: <https://www.britannica.com/science/Holocene-Epoch>

Allegro, R., 2013, Monsanto: brevetti e monopoli, *Il Fatto Bresciano*, available at: www.ilfattobresciano.it

Angus, I., 2015, When Did the Anthropocene Begin...and Why Does It Matter?, *Monthly Review*, Volume 67, Issue 04 (September), available at: <https://monthlyreview.org/2015/09/01/when-did-the-anthropocene-beginand-why-does-it-matter/>

Baidu baike, 百度百科 2019 , Mosuoren, 摩梭人 , (The Mosuo people) [https://baike.baidu.com/item/%E6%91%A9%E6%A2%AD%E4%BA%BA/4746847?fromtitle=%E6%91%A9%E6%A2%AD%E6%97%8F&fromid=2922419&fr=aladdin#ref_\[1\]_262213](https://baike.baidu.com/item/%E6%91%A9%E6%A2%AD%E4%BA%BA/4746847?fromtitle=%E6%91%A9%E6%A2%AD%E6%97%8F&fromid=2922419&fr=aladdin#ref_[1]_262213)

Baskin Y., 2002, A plague of rats and rubber-vines: The growing threat of species invasions. *A SCOPE-GISP Project*, Island Press, Washington.

Battilana, J., Leca B., Boxenbaum E., 2009, How Actors Change Institutions: Towards a Theory of Institutional Entrepreneurship, *The Academy of Management Annals*, Volume 3, No. 1, available at: https://www.academia.edu/4944106/2_How_Actors_Change_Institutions_Towards_a_Theory_of_Institutional_Entrepreneurship

Bennholdt-Thomsen, V., 2012, La politica della prospettiva di sussistenza, in Ecofemminismo/Ecofeminism, DEP *Deportate, Esuli, Profughe, Rivista telematica sugli studi sulla memoria femminile*, Università Ca' Foscari di Venezia, No. 20, July 2012, Venezia.

Bertell, R., 2000, *Planet Earth: The Newest Weapon of War*, Black Rose Books Ltd, Montreal.

Bianchi, B., 2012, Ecofemminismo e decrescita: una convergenza possibile? Intervento alla Terza Conferenza internazionale sulla Decrescita, Venezia, 19-23 settembre 2012.

Bianchi, B., 2012, Ecofemminismo: il pensiero, i dibattiti, le prospettive, in Ecofemminismo/ecofeminism, DEP *Deportate, Esuli, Profughe, Rivista telematica sugli*

studi sulla memoria femminile, Università Ca' Foscari di Venezia, N.20, July 2012, Venezia.

Birdwhistell, J. D., 2001, Ecological Questions for Daoist Thought: Contemporary Issues and Ancient Texts, *Daoism and Ecology: Ways within a Cosmic Landscape*. Ed.N. J.Girardot, James Miller, and Liu Xiaogan. Cambridge, MA: Harvard UP, 2001. 23–44. Print.

Birkin, J., 1993, Ecofeminism, Linking Theory and Practice, in G. Gaard (ed.), *Ecofeminism. Women, Animals, Nature*, Temple University Press, Philadelphia, pp. 13–59.

Birkland, J., 1993, Ecofeminism: Linking theory and practice, In G. Gaard *Ecofeminism* (p. 20). Philadelphia, PA: Temple University Press.

BroadlyTV, 2016, The Land Where Women Rule: Inside China's Last Matriarchy, A Vice Production, available at: https://www.youtube.com/watch?v=t_19D7tEixc

Brombal, D., Wang, H., Pizzol, L., Critto, A., Giubilato, E. & Guo, G., 2015, Soil environmental management systems for contaminated sites in China and the EU. Common challenges and perspectives for lesson drawing. *Land Use Policy*, 48, pp.286–298. DOI: 10.1016/j.landusepol.2015.05.015

Buckingham, 2004, Ecofeminism in the twenty-first century, *The Geographical Journal*, Vol. 170, No. 2, June 2004, pp. 146–154.

Builder, D., 2012, Four Categories of Human Environmental Hazards Essay, *Bartleby writing*, available at: <https://www.bartleby.com/essay/Four-Categories-of-Human-Environmental-Hazards-F3J3T2N3VC>

Camille, B., 1974, Françoise d'Eaubonne, «Le Féminisme ou la Mort», éd. P. Horay. In: *Les Cahiers du GRIF*, n°4, 1974. L'insécurité sociale des femmes. pp. 66–67.

Campbell, A., (Ed.), 2008, *New Directions in Ecofeminist Literary Criticism*. Cambridge: Cambridge Scholars Publishing, 2008.

Carson, R., 1962, *Silent Spring*, Houghton Mifflin, Boston.

Chae, Y., 2015, Postcolonial ecofeminism in Arundhati Roy's *The God of Small Things*, *Journal of Postcolonial Writing*, 2015 Vol. 51, No. 5, 519–530, University of North Carolina at Pembroke, USA, available at: <http://dx.doi.org/10.1080/17449855.2015.1070010>

Chai, J., 2015, Chaijing wumai diaocha: qiongdong zhixia, 柴静雾霾调查: 穹顶之下, (Chai Jing's review: Under the Dome – Investigating China's Smog), *Youtube*, available at: <https://www.youtube.com/watch?v=T6X2uwlQGQM>

Chameides, W.L., Yu, H., Liu, SC, Bergin, M., Zhou, X., Mearns L., Wang, G., Kiang, C.S., Saylor, R.D., Luo, C., Steiner, A., Giorgi, F., 1999, Case study of the effects of atmospheric aerosols and regional haze on agriculture: An opportunity to enhance crop yields in China through emission controls. *P Natl Acad Sci USA* 96: 13626–13633

Chen, X., 2002, Nature as the “Other” to Human Beings: about Contemporary Western Ecological Criticism. *Theory and Criticism of Literature and Arts*, 6, 42–48.

- Choudhury, S., 2018, Hard-hitting Information About the Holocene Extinction, ScienceStruck, available at: <https://sciencestruck.com/information-about-holocene-extinction>
- Colombini, F., Di Bernardo, M., (Ed.), 2013, Matriarché: il principio materno per una società egualitaria e solidale, Collana Perimetrie, Exòrma Edizioni.
- Cooper, N., Carling, B., 1999. The social context and ethical implications of ecology, in Farina A. (ed.), 1999. Perspectives in Ecology. Leiden, Backhuys Publishers: 411-418.
- Cristofori, R., 2019, Ecofemminismo. Donne in lotta contro lo sfruttamento della terra, *The Bottom Up*, available at: <https://thebottomup.it/2019/03/09/ecofemminismo-pratiche-lotte-donne-violenza-ambiente/>
- Crutzen, P.J., 2002, Geology of Mankind, *Nature*, 415, 23.
- Cui, S., 2017, Chai Jing's Under the Dome: A multimedia documentary in the digital age, *Journal of Chinese Cinemas*, 11:1, 30-45, DOI: 10.1080/17508061.2016.1269481
- Danke, L., 2012, Ecofeminist Literary Criticism in Mainland China: A Window into China's Academic Globalization, *Asian Women*, 2012 Vol.28 No.4.
- Dankelman, I., 2001, Gender and Environment: Lessons to Learn, Expert Group Meeting on *Environmental management and the mitigation of natural disasters: a gender perspective*, EGM/NATDIS/2001/OP.2
- Dankelman, I., Jansen, W., 2010, Gender, Environment and Climate Change: Understanding the Linkages, available at: https://www.researchgate.net/publication/254882385_Gender_Environment_and_Climate_Change_understanding_the_linkages
- Dellios R., Bhattacharyya, A., Minarova-Banjac, C., 2019, Ecofeminism in a World of BRICS: Opportunities and Challenges, *Culture Mandala: The Bulletin of the Centre for East-West Cultural and Economic Studies* 13,2, Bond University.
- Deppe, C., 2010, Tao Te Ching: a window to the Tao through the words of Lao Tzu, Fertile Valley Publishing Corvallis, Oregon, available at: <https://terebess.hu/english/tao/Deppe.pdf>
- Du, Yi, Wang, Xiaoyan, Brombal, D., Moriggi, A., Sharpley, A., Pang, Shujiang, 2018, Changes in Environmental Awareness and its Connection to Local Environmental Management in Water Conservation Zones: The Case of Beijing, China, in *Sustainability*, vol. 10 (ISSN 2071-1050)
- Duyvendak, J.J.L., (Ed.), 1994, Tao Te Ching Il Libro della Via e della Virtù, translated by Anna Devoto, Gli Adelphi 71/1994, Milano.
- EEA, European Agency for the environment, 2016, Green Economy, European Environmental Agency, available at: <https://www.eea.europa.eu/publications/europes-environment-aoa/chapter3.xhtml>
- EEA, European Agency for the environment, 2016, Tropospheric ozone, available at: <https://www.eea.europa.eu/publications/92-826-5409-5/page032new.html>
- EEA, European Agency for the environment, 2017, Air pollution, available at: <https://www.eea.europa.eu/it/themes/air/intro>

EEA, European Agency for the environment, 2018, L'ambiente in Europa, Seconda Valutazione. Degrado del Suolo (Chapter 11).

EEA, European Agency for the environment, 2019, Cambiamenti climatici e acqua — Oceani più caldi, inondazioni e siccità, available at: <https://www.eea.europa.eu/it/segnali/segnali-2018/articoli/cambiamenti-climatici-e-acqua-2014>

Encyclopedia Britannica, 2015. 'Women Strike For Peace (WSP)'. <http://www.britannica.com/topic/Women-Strike-for-Peace>

EPA, United States Environmental Protection Agency, 2017, What is particulate matter?, available at: <https://www3.epa.gov/region1/eco/uep/particulatematter.html>

EPA, United States Environmental Protection Agency, 2018, Ground-level ozone basics, available at: <https://www.epa.gov/ground-level-ozone-pollution/ground-level-ozone-basics#formation>

Epple, 2009, The Role of Daoism in Environmental Ethics in China, available at: <https://dra.american.edu/islandora/object/0910capstones%3A187/datastream/PDF/view>

ESDAC, European Soil Data Centre, 2019, Soil Contamination, Joint Research Centre, available at: <https://esdac.jrc.ec.europa.eu/themes/soil-contamination>

Estes et al., 1989, The ecology of extinctions in kelp forest communities, *Conservation Biology*. 3: 252-264, Wiley-Blackwell, available at: <https://courses.pbsci.ucsc.edu/eeb/bioe161/wp-content/uploads/2012/12/Estes-James.-The-Ecology-of-Extinctions-in-Kelp-Forest-Communities.pdf>

European Commission, 2016, Environment, Soil, available at: http://ec.europa.eu/environment/soil/index_en.htm

Fan, P.F., Fei, H.L., F., Luo, A.D., 2013, Ecological extinction of the Critically Endangered northern white-cheeked gibbon *Nomascus leucogenys* in China, Cambridge University Press, available at: <https://www.cambridge.org/core/journals/oryx/article/ecological-extinction-of-the-critically-endangered-northern-whitecheeked-gibbon-nomascus-leucogenys-in-china/45C418B53120683B50C3E4CFCF5F0CF7>

FAO, Food and Agriculture Organization of the United Nations, 2018, Report sounds alarm on soil pollution, available at: <http://www.fao.org/news/story/en/item/1126971/icode/>

Faura, R., 2015, Climate Change: Survival Guide 1, World, *National Geographic*, Cool it., November 2015, pp. 30-31.

FFF, FridaysForFuture website, 2019, available at: <https://www.fridaysforfuture.org/>

Folbre, N., 2015, Valuing non-market work, *Background think piece for Human Development Report 2015*. New York: UNDP-HDRO. http://hdr.undp.org/sites/default/files/folbre_hdr_2015_final_0.pdf

Fotopoulos, T., 2007, Is degrowth compatible with a market economy?, *The International Journal of Inclusive Democracy* 3:1, available at: https://www.inclusivedemocracy.org/journal/vol3/vol3_no1_Takis_degrowth.htm

Fox, A., 2019, East Antarctica's ice melting at an expectedly rapid clip, *Science*, available at: <https://www.sciencemag.org/news/2019/01/east-antarctica-s-ice-melting-unexpectedly-rapid-clip-new-study-suggests>

Fu Jia, 付佳. Jin shinian zhongguo fulian zuzhi yanjiu zongshu, 近十年中国妇联组织研究综述, (A review of the research of the China Women's Federation in the past decade). Wangluo caifu, 网络财富, (Network wealth), 2010(6):151-153.

Gaard, G., (ed.), *Ecofeminism. Women, Animals, Nature*, Temple University Press, Philadelphia, 1993.

Gasparetto, A., 2013, *Femminismo ed Ecofemminismo: riflessioni e discussioni antropologiche*, Università Ca' Foscari di Venezia, available at: <https://unive.academia.edu/AnnaDimitrovaGasparetto>

Global greenhouse warming, 2019, *Glacial Retreat*, available at: <http://www.global-greenhouse-warming.com/glacial-retreat.html>

Global Voices, 2015, Under the dome: il documentario virale di Chai Jing sull'inquinamento in Cina, available at: <https://it.globalvoices.org/2015/03/under-the-dome-il-documentario-virale-di-chai-jing-sullinquinamento-in-cina/>

Glotfelty, C., Fromm H. (Eds.), 1996, *The Ecocriticism Reader*. Athens; London: University of Georgia Press.

Goettner-Abendroth, H., 2013, *Le società matriarcali. Studi sulle culture indigene del mondo*, Le Civette Saggi, Roma, Venezia, 2013.

Goulson, D., 2012, Decline of bees forces China's apple farmers to pollinate by hand, *China Dialogue*, available at: <https://www.chinadialogue.net/article/show/single/en/5193-Decline-of-bees-forces-China-s-apple-farmers-to-pollinate-by-hand>

Gran, G., Gruen. L., 1993, *Ecofeminism toward global justice and planetary health*, in *Environmental Ethics: an anthology*, Volume Blackwell philosophy anthologies, Blackwell, Malden, Mass, Oxford, available at: https://www.academia.edu/32438639/Ecofeminism_Toward_Global_Justice_and_Planetary_Health

GREENACTION for Health and Environmental Justice, *Environmental Justice & Environmental Racism*, available at: <http://greenaction.org/what-is-environmental-justice/>

Greenwood, R., Hinings, B., Jennings D., 2013, *Sustainability & Organizational Change: An Institutional Perspective*, University of Alberta, available at: <https://www.hbs.edu/faculty/conferences/2013-change-and-sustainability/Documents/Greenwood.pdf>

Griffin, S., 1978, *Women and Nature: The Roaring inside her*, Counterpoint; Reissue edition (September 13, 2016).

Guiriba, O. G., 2013, ECOFEMINISM: WOMEN'S WORK ON ENVIRONMENTAL CONSERVATION IN SORSOGON PROVINCE, PHILIPPINES, *The International Journal of Social Science*, July 2013. Vol.13 No.1.

- Hatton, C., 2015, Under the Dome: The smog film taking China by storm, China Blog, *BBC News*, available at: <https://www.bbc.com/news/blogs-china-blog-31689232>
- Hays, J., 2008, Mosuo Minority, Facts and Details, available at: <http://factsanddetails.com/china/cat5/sub87/item182.html>
- Haywood, M., Ridgwell A., et al., (2011), Are there pre-Quaternary geological analogue for a future greenhouse warming?, in *Phil. Trans. Royal Society A*, pp. 933-956.
- He Zhonghua, 2001, Forest Management in Mosuo Matrilineal Society, Yunnan, China, *Gender, Technology and Development*, 5:1, 33-62, DOI: 10.1080/09718524.2001.11909983
- Hess, C., 2008, Mapping the New Commons, Presented at the twelfth biennial conference of the International Association for the Study of the Commons, Cheltenham, UK, 14-18 July. Available at: <http://surface.syr.edu/cgi/viewcontent.cgi?article=1023&context=sul>
- Ho, P., Edmonds, L., (Ed.) 2012, *China's Embedded Activism: Opportunities and constraints of a social movement*, 2nd Edition, Routledge, London.
- Hodgson, G. M., 2006, What are institutions?, *Journal Of Economic Issues*, Vol. XL No. 1 March 2006
- Holland, J. S., 2015, How to live with it. Who will thrive?, *National Geographic*, November 2015, pp. 136-142.
- Huang, L., 2007, A Comprehensive Study of Contemporary Female Literature, 2001-2005. Capital Normal University, Social Sciences Edition, L (1), 99-104.
- IGBP, 2015, Planetary dashboard shows “Great Acceleration” in human activity since 1950, available at: <http://www.igbp.net/news/pressreleases/pressreleases/planetarydashboardshowsgreataccelerationinhumanactivitysince1950.5.950c2fa1495db7081eb42.html>
- International Rivers, 2019, China, available at: <https://www.internationalrivers.org/programs/china>
- IPCC (2001b) *Climate change 2001: Impacts, adaptation and vulnerability. Contribution of Working Group II to the Third Assessment Report of the Intergovernmental Panel on Climate Change*. McCarthy JJ, Canziani OF, Leary NA, Dokken DJ, White KS (eds) Cambridge University Press, Cambridge and New York.
- Ji Keli, 吉科利, 2014, *Shengtai nuxing zhuyi yanjiu jiqi zaizhongguo de yingxiang, 生态女性主义研究及其在中国的影响, (Ecofeminist Research and Its Impact in China)*, Xian keji daxue renwen yu waiguoyu xueyuan shanxi xian, 西安科技大学人文与外国语学院陕西西安 710054, (School of Humanities and Foreign Languages, Xi'an University of Science and Technology, Xi'an 710054, China).
- Jiang, R., 2004, *Wolf Totem*, Beijing, China: Yangzi River publishing House.
- Jordanova, L., 1980, *Natural Facts: A Historical Perspective on Science and Sexuality*, in MacCormack, C. & Strathern, M. eds. *Nature, Culture and Gender*.
- Kallis, G., Kerschner, C., Martinez-Alier, J., 2012, The economics of degrowth, *Ecological Economics* 84, 172-180.

- Kaplan, S., 1992, *The Restorative Environment., The Role of Horticulture in Human Well-being and Social Development*, Ed. Diane Relf. Portland: Timber Press. 134-142.
- Kaur, G., 2012, Postcolonial Ecofeminism, Women and Land in Kamala Markandaya's Nectar in a Sieve, *International Journal of Humanities and Social Science*, Vol. 2 No. 21; November 2012.
- Kaur, G., 2013, Women and Environment: Postcolonial Ecofeminism, Activism and Women Writing Indian Fiction in English, University of Warwick, Coventry, United Kingdom, available at: <http://www.ipedr.com/vol44/007-ICSHH2012-W00008.pdf>
- Kintisch, E., 2010, Hack the Planet: Science's Best Hope - or Worst Nightmare - for Averting Climate Catastrophe, Wiley; 1 edition (April 1, 2010).
- Kunzig, R., 2015, Survival guide 1, Cool it., *National Geographic*, November 2015, p. 15.
- Lao Tzu, 2003, Tao Te Qing, *Poetry In Translation*, Translated by A. S. Kline, available at: <https://www.poetryintranslation.com/PITBR/Chinese/TaoTeChing.php>
- Lau, D.C., 1990, Chapter-80-Commentary, *CenterTao*, available at: <https://www.centertao.org/essays/tao-te-ching/dc-lau/chapter-80-commentary/>
- Legge, J., (Ed.) 1891, The Tao Te Ching, *Chinese Text Project*, simplified Chinese version available at: <https://ctext.org/dao-de-jing/ens>
- Li, J., Li, L., 2010, Gone with the Wind and O Pioneers from the Perspective of Ecofeminism, *The Border Economy and Culture*, 83(11), 84-85.
- Li, Y., 2010, A Review on Gone with Wind from Ecofeminist Perspective, *Journal of Kaifeng University*, 24(2), 45-47.
- Lieh-tzu, 1960, *The Book of Lieh-tzu: A Classic of Tao*, Translated by A. C. Graham. New York: Columbia UP, Print.
- Liu, Q., 2009, The Receiving Misunderstandings of Ecofeminist Literary Criticism. *The World of Entrepreneurs*, 6, 258-259.
- MA (Millennium Ecosystem Assessment), 2005, *Ecosystems and human well-being: Synthesis*. Washington, DC: Island Press.
- Marino, G., 2015, Il cielo sopra Pechino: come sta cambiando l'ambientalismo cinese, *GREENNEWS.info*, available at: <http://www.greenews.info/politiche/il-cielo-sopra-pechino-come-sta-cambiando-lambientalismo-cinese-20150114/>
- Marten G.G., 2001. *Human Ecology. Basic concepts for sustainable development*. London, Earthscan Publications Ltd.
- McLamb, 2011, The Ecological Impact of the Industrial Revolution, *Ecology Today*, available at: <http://www.ecology.com/2011/09/18/ecological-impact-industrial-revolution/>
- Meadows, D., 1999, Leverage Points: Places to Intervene in a System, *Sustainability Institute*, December 1999, available at: <http://donellameadows.org/archives/leverage-points-places-to-intervene-in-a-system/>

- Mellor M., *Feminism & Ecology*, Polity Press, Cambridge 1997.
- Mellor, M., 1999, *Ecofeminist Economics: Women, Work, and the Environment*, *Women & Environments International Magazine* 14991993, Spring2002, Issue 54/55.
- Merchant, C., 1980, *The Death of Nature - Women, Ecology and the Scientific Revolution*, Harperone, San Francisco.
- Merchant, C., 1992, *Radical Ecology: The Search for a Livable World*, Routledge, New York.
- Merchant, C., 1996, *Earthcare*, cit., pp. 216-19; Ead., *Partnership Ethics: Business and the Environment*, in *Environmental Challenges to Business*, edited by P. Werhane, Ruffin Lectures, University of Virginia Darden School of Business, Society for Business Ethics, Bowling Green, Ohio 2000, pp. 7-18; Ead., *Partnership with Nature*, *Landscape Journal* 1998, special issue, pp. 69-71.
- Michielin, D., 2017, L'inizio dell'Antropocene: viviamo davvero in una nuova era geologica?, *Il Tascabile*, available at: <https://www.iltascabile.com/scienze/inizio-antropocene/>
- Mies, M., Bennholdt-Thomsen, V., 1999, *The Subsistence Perspective: Beyond the Globalized Economy*, ZED BOOKS, London, UK & New York, USA.
- Miles, K., 2018, *Ecofeminism*, *Encyclopædia Britannica*, available at: <https://www.britannica.com/topic/ecofeminism>
- Miller, P., 2012, What's causing extreme weather?, *National Geographic News*, available at: <https://news.nationalgeographic.com/news/2012/08/120820-extreme-weather-heat-waves-science-environment-global-warming/>
- Missiroli P., 2016, *Problematizzare l'Antropocene, Prospettive e costruzione di un concetto*, Università di Bologna, available at: https://www.academia.edu/36457721/Problematizzare_lAntropocene._Prospettive_e_costruzione_di_un_concetto
- Moriggi, A., 2017, *Chinese Women at the Forefront of Environmental Activism: Wang Yongchen, Liao Xiaoyi and Tian Guirong*, *DEP deportate, esuli, profughe*, *Rivista telematica di studi sulla memoria femminile*, Università Ca' Foscari di Venezia.
- Morosi, S., 2016, *Quando è la donna a contare: le società matrilineari*, *Il Corriere della Sera*, available at: <https://www.corriere.it/extra-per-voi/2016/10/13/quando-donna-contare-societa-matrilineari-5d38ff9a-915b-11e6-ac33-c191fa0a3477.shtml>
- Moser, S. C. and Dilling, L., (eds.), 2007, *Creating a Climate for Change: Communicating Climate Change and Facilitating Social Change*, Cambridge, UK: Cambridge University Press.
- Müller, C., (Hg.), 2011, *Urban Gardening. Über die Rückkehr der Gärten in die Stadt*, Oekom, München.
- Narain, S., Bhushan C., 2015, *30 years of Bhopal gas tragedy: a continuing disaster*, *DownToEarth*, available at: <https://www.downtoearth.org.in/coverage/environment/30-years-of-bhopal-gas-tragedy-a-continuing-disaster-47634>

NASA (2019), Global Climate Change, Vital signs of the Planet, available at: <https://climate.nasa.gov/evidence/>

NOAA, National centres for environmental information, 2018, Global Climate Report 2018, available at: <https://www.ncdc.noaa.gov/sotc/global/201813>

Nunez, C., 2019, Climate 101: Deforestation, National Geographic, available at: <https://www.nationalgeographic.com/environment/global-warming/deforestation/>

Pellow, D., 2018, *Ecofeminism as Politics: nature, Marx and the postmodern* (2nd edition) by Ariel Salleh, Radical Ecological Democracy, available at: <https://www.radicalecologicaldemocracy.org/ecofeminism-as-politics-nature-marx-and-the-postmodern-2nd-edition-by-ariel-salleh/>

Peng Huijie, 彭慧洁, 2017, Lun shengtai nuxing zhuyi sixiang de yiyi he kunjing, 论生态女性主义思想的意义和困境, (On the significance and dilemma of ecofeminist ideology), Jiangxi shifan daxue shuoshi xuewei lunwen, 江西师范大学硕士学位论文, (Master's thesis of Jiangxi Normal University) 2009050.

Perkins, P.E., 2017, Degrowth, Commons and Climate Justice: Ecofeminist Insights and Indigenous Political Traditions, Paper proposal for the workshop on “Climate Ethics and Climate Economics: Economic Growth and Climate Justice”, University of Manchester.

Peter, C., Swilling, M., 2014, Linking Complexity and Sustainability Theories: Implications for Modeling Sustainability Transitions. *Sustainability* 6: 1594-1622.

Pimm, S. L., 2019, Biodiversity, *Encyclopædia Britannica*, available at: <https://www.britannica.com/science/biodiversity>

Pimm, S.L., Russell, G.J., Gittleman, J.L., Brooks, T.M., 1995, The future of biodiversity, *Science* 269:347–350.

PLANET Responsabilità e territorio, 2018, Terra: uso e consumo di suolo: tra etica ambientale e sostenibilità, available at: <https://www.bloginsegnanti.it/terra-suolo/>

Plumwood V., *Feminism and the Mastery of Nature*, Routledge, London-New York 1993.

Pulcini E., *La cura del mondo: paura e responsabilità nell'età globale*, Bollati Boringhieri, Torino 2009.

Qin, J., 2010, Reading Xiangyu from Fox Spirits with Ecofeminist Perspective. *Literature Review*, S2, 89-91.

Rejmanek, M., Randall, J.R., 1994, Invasive alien plants in California: 1993 summary and comparison with other areas in North America, *Madroño* 41(3):161–177

Rodrigue, J., 2017, World energy consumption 1965-2016, *The geography of transport systems*, available at: https://transportgeography.org/?page_id=5865

Rofel, L., 2007, *Desiring China: Experiments in Neoliberalism, Sexuality, and Public Culture*, Duke University Press Books, Durham USA.

Roser., M., Ortiz-Ospina E., 2017, World Population Growth, Our World In Data, available at: <https://ourworldindata.org/world-population-growth>

- Rowe, S., 2002, Returning to What Matters: Daoist Lessons for Ecofeminisms, *International Research in Geographical and Environmental Education*, 11:1, 63-67, DOI: 10.1080/10382040208667466
- Royal Society, 2011, Climate Change: Evidence and Causes, available at: https://royalsociety.org/-/media/Royal_Society_Content/policy/projects/climate-evidence-causes/climate-change-evidence-causes.pdf
- Ruddiman, W. F., 2003, The anthropogenic greenhouse era began thousands of years ago, Department of Environmental Sciences, University of Virginia, Charlottesville, 2003.
- Ruehler, R. R., 1975, *New Woman/New Earth*, New York: The Seabury Press.
- Salleh, A., 2017, *Ecofeminism as Politics: Nature, Marx and the Postmodern* (2nd edition), Zed Books, London.
- Scoones, I., 2016, The Politics of Sustainability and Development, *Annual Reviews*, Volume 41/2016, available at: www.annualreviews.org
- Shiva, V., (ed.), 1994, *Close to Home: Women Reconnect Ecology, Health and Development Worldwide*. Philadelphia: New Society Publishers.
- Shiva, V., 1989, *Staying Alive: Women, Ecology and Development*. London: Zed Books.
- Shiva, V., 2005, *Earth Democracy: Justice, Sustainability and Peace*, South End Press, Cambridge.
- Sicilia Network, 2019, La Cina in Sicilia grazie ad un accordo turistico, available at: <https://www.sicilianetwork.info/la-cina-in-sicilia-grazie-ad-un-accordo-turistico/>
- Slingerland, E., 2000, Effortless Action: the Chinese Spiritual Idea of Wuwei, *Journal of the American Academy of Religion*, June 2000 Vol. 68, No.2. 296.
- Steffen, W., Broadgate, W., Deutsch, L., 2015, The trajectory of the Anthropocene: The Great Acceleration, *The Anthropocene Review*, available at: <https://journals.sagepub.com/doi/full/10.1177/2053019614564785>
- Steffen, W., et al., 2004, *Global Change and the Earth System: A Planet Under Pressure*, Springer, Berlin, 258–59, available at: <http://igbp.net>
- Steffen, W., Grinevall, J., Crutzen, P., McNeill, J., 2011, The Anthropocene: conceptual and historical perspectives, in *Phil.Trans. Royal Society*, pp. 842-867
- Thorpe, J., 2016, What exactly is Ecofeminism, *Bustle*, available at: <https://www.bustle.com/articles/155515-what-exactly-is-ecofeminism>
- Turner, J., 1997, *The Institutional Order*, New York: Longman.
- Tutton, M., 2019, What warmer oceans mean for the planet, *CNN*, available at: <https://edition.cnn.com/2019/01/12/health/warm-ocean-effects-intl/index.html>
- Tuxill, J., 1998, Losing strands in the web of life: Vertebrate declines and the conservation of biological diversity, *Worldwatch Paper 41*, Worldwatch Institute, Washington DC.
- Twine, T. R., 2011, *Ecofeminisms in Process*, available at: www.ecofem.org/journal

UN WOMEN, 1995, The United Nations Fourth World Conference on Women, Beijing, China - September 1995 Action for Equality, Development and Peace, available at: <https://www.un.org/womenwatch/daw/beijing/platform/environ.htm#object1>

UN, 2015, Transforming our world: the 2030 Agenda for Sustainable Development, Sustainable Development Goals Knowledge Platform, available at: <https://sustainabledevelopment.un.org/post2015/transformingourworld>

UNDP, 1998. Human Development Report 1998. Oxford University Press, Oxford, New York.

UNEP, 2011, Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication (advance copy available from <http://www.unep.org/greeneconomy>).

Unity Statement of the Women's Pentagon Action, 1980, available at: <http://www.wloe.org/WLOE-en/background/wpastatem.html>

US Climate Change Assessment, 2002, United States national assessment of the potential consequences of climate variability and change: A detailed overview of the consequences of climate change and mechanisms for adaptation. US Global Change Research Program Office. www.usgcrp.gov/usgcrp/nacc/default.htm, 30 April 2002

Wang Yongchen, 汪永晨, 2006, Nujiang, Jiangshui neng bian "shiyou" ma?, 怒江, 江水能变“石油”吗?, (Report from the Nu River: "Nobody has told us anything."), *Zhongwai duihua*, 中外对话, *China dialogue*, [English and Chinese version] available at: <https://www.chinadialogue.net/article/show/single/en/240-Report-from-the-Nu-River-Nobody-has-told-us-anything->

Wang Yongchen, 汪永晨, 2007, Nanshuo zaijian: Baijitun 难说再见——白鬃豚, (Farewell to the Baiji), *Zhongwai duihua*, 中外对话, (*China dialogue*), [English and Chinese version] available at: <https://www.chinadialogue.net/article/show/single/ch/673-Farewell-to-the-baiji>

Wang Yongchen, 汪永晨, 2007, Weiwuyan de daziran Qingming, 为无言的大自然请命, (What if Nature could speak?), *Zhongwai duihua*, 中外对话, *China dialogue*, [English and Chinese version] available at: <https://www.chinadialogue.net/article/show/single/en/775-What-if-nature-could-speak->

Wang Yongchen, 汪永晨, 2007, Zhongguo Jianghe hubo ji dai jieke, 中国江河湖泊急待解渴, (Quenching China's thirst), *Zhongwai duihua*, 中外对话, *China dialogue*, [English and Chinese version] available at: <https://www.chinadialogue.net/article/show/single/en/738-Quenching-China-s-thirst>

Wang Yongchen, 汪永晨, 2018, Cong Bohai dao Qinghai: Wang Yongchen de huanghe xingzou riji, 从渤海到青海: 汪永晨的黄河行走日记, (Journal from the Yellow River), *Zhongwai duihua*, 中外对话, (*China Dialogue*), [English and Chinese version] available at: <https://www.chinadialogue.net/culture/10542-Journal-from-the-Yellow-River/ch>

Wang, F., 2010, Examining Female Images in Zhang Yimuo's Films from the Perspective of Ecofeminism, *Journal of Changsha University*, 24(6), 122-123.

Wang, W., 2008, Re-read Jane Eyre from the Perspective of Ecofeminism, *Foreign Literature Studies*, 1, 119-124.

Waring, M. 1988, *If women counted: a new feminist economics*, HarperCollins, San Francisco, 1988.

Warren, K. J., (ed.), 1994, *Ecological Feminism*, Routledge, London-New York.

Wei, Q., 2003, Ecofeminism: A New and Unique Perspective of Literature Criticism. *Foreign Literature Trends*, 4, 17-20.

Wei, Q., 2014, The Way of Yin: The Chinese Construction of Ecofeminism in a Cross-Cultural Context, *Interdisciplinary Studies in Literature and Environment* 21:4 (Autumn 2014) doi:10.1093/isle/isu148

Whitmarsh, L., Perception of Climate change, *Tyndall Centre for climate change research*, available at: <https://tyndall.ac.uk/ideas-and-insights/perceptions-climate-change>

WCED, World Comm. Environ. Dev., 1987, *Our Common Future*. Oxford: Oxford Univ. Press.

Worldatlas, The World's Most Polluting Industries <https://www.worldatlas.com/articles/the-top-10-polluting-industries-in-the-world.html>

Wu, Y., 2008, Building the ecofeminist writing ideals in the 21 century, *Journal of Lanzhou*, Liaotong University, 27(5), 87-89.

WWF, World Wide Fund for Nature, 2019, How many species are we losing?, available at: http://wwf.panda.org/our_work/biodiversity/biodiversity/

Yan, Y., Zixin, H., Jing, D., Ding, D., Suping, Z., 2008, Analysis of the role of the Mosuo culture in local environmental protection in Lugu Lake region, *The International Journal of Sustainable Development and World Ecology*, 15:1, 48-55, DOI: 10.1080/13504500809469768, available at: <https://doi.org/10.1080/13504500809469768>

Zapparoli, G., 2015, Inganni ed Omissioni sulle Nostre Origini. Le Società “Matrilineari”, *Il Sapere*, available at: <http://www.ilsapere.org/inganni-ed-omissioni-sulle-nostre-origini-le-societa-matrilineari/>

Zhang Meifang, 章梅芳; Liu Bing, 刘兵, 2013, Shengtai nuxing zhuyi zai zhongguo de bentuhua wenti yu sikao, 生态女性主义在中国的本土化问题与思考, (An attempt to localize eco-feminism in China: possible problems and considerations), *Ziran bianzhengfa yanjiu*, 自然辩证法研究, (Studies in dialectics of Nature), Vol. 29, No. 8, August 2013

Zhang Rui, 张瑞; Qin Shusheng, 秦书生. Wo guo shengtai wenming de zhidu jiangou tanxi, 我国生态文明的制度建构探析, (Analysis of the institutional construction of ecological civilization in China), *Ziran bianzhengfa yanjiu*, 自然辩证法研究, (Research on Dialectics of Nature) 2010, 26(8):111-117.

Zhang, J., 2009, An Ecofeminist Interpretation of the Birthmark, *Literature*, 11, 19-22.

Zhongguo Linyewang, 中国林业网. (China Forestry Website), 2006, 全国“三八绿色工程”活动情况简介, (Brief introduction to the national "38th Green Project" activities), [online]. URL <http://www.forestry.gov.cn/>

Zhongguo xingbie pingdeng yu funu fazhan zhibiao yanjiu yu yingyong keti zu, 中国性别平等与妇女发展指标研究与应用课题组. (China Research Group on the Study and Application of Gender Equality and Women's Development Indicators), Zhongguo xingbie pingdeng yu funu fazhan pinggu baogao, 中国性别平等与妇女发展评估报告, (China Gender Equality and Women's Development Assessment Report) (1995-2005). Funu yanjiu luncong, 妇女研究论丛, (Women's studies) 2006, 71(2):11-21.