Master Thesis

International Development Studies

The Enabling Power of Culture: The Effects of Myths of Creation on Cultural Practices and Green Energy Choices in Ecuador

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ABSTRACT

Kimmerer (2015) exposed an intricate relationship between the Native Americans of the Great Lakes of North America and their natural environment. The author unveils a distinct difference between the culture of the Western world and that of the native inhabitants of North America by researching the myths of creation that are dominant in native American communities. For instance, by establishing that sweetgrass, or wiingaashk, is honoured as one of the four sacred plants of the indigenous people. Among others, this plant is protected and preserved within their lands while simultaneously proven to be of importance in the studied myth of creation. In essence, she hints at an existing 'Culture of Sustainability' that can be linked to their myths of creation. A recent emphasis on indigenous literature and alternate forms of knowledge showcases the need for novel approaches to attain true reform within the sustainability realm. The concept of 'inner worlds' already proposes a convincing approach within this new movement, but additionally other forms of knowledge are increasingly used to research climate change.

However, the opportunities that renewable energy provides is less extensively researched within this context. This thesis aims to embrace this recent shift in knowledge-generation by studying indigenous creation stories in the Andean region of Ecuador. It examines whether and how such stories are told and subsequently examines how they link to sustainability concerns. These insights are used to explore the varying cultural practices affecting the relationship between the indigenous people and their environment. The possible presence of a 'culture of sustainability' is used to study the importance of an indigenous worldview towards sustainable concerns, and in particular to renewable energy.

Finally, this thesis reveals that myths of creation and the practice of telling them are becoming increasingly rare in indigenous communities in modern-day Ecuador. The continuous encroachment of indigenous people and their land sees traditional cultural practices fade. As a consequences, the sharing of traditional myths of creation seems to occupy a less prominent place in their traditions. However, the cultural practices which are said to be influenced by creation myths do hint at a distinct 'Culture of Sustainability.' Together with factors such as monitoring indigenous lands, viability and long term cost effectiveness, a Culture of Sustainability can be regarded as influential in facilitating approaches regarding renewable energy.

Keywords: *Myths of creation, Culture of sustainability, Renewable energy, International Development Studies, Indigenous Communities, Ecuador*

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For a long time, Machu Picchu and the Incan culture of Peru had been on my so-called 'Bucket list' of things to discover. Since I was young, I have been fascinated by history, often to the annoyance of my family. This resulted in the choice to pursue a bachelor's in history and specialising in International Development in historical perspective at Utrecht University. In its core, this has driven my fascination with South America and my urge to study its history and culture beyond the textbook. It moreover provided a base of historic and political knowledge of the continent. Due to political turmoil in Peru, my country of destination switched to Ecuador. This unexpected switch, however, proved to be more than I could have hoped for. It has given me an excellent opportunity to learn about the history, social context and the positioning within international development of a country I was much more unfamiliar with.

The process of writing this thesis has been long, challenging, intriguing, complex and stressful at times. Yet in the final moments of this process, there is little I would have done differently. It aided me to learn so much about the research process, as well as the country visited and the social opportunities and difficulties that such research entails. However, this research could not have been possible without the help and support of many people that I have come to know and supported me during this process.

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Yannick van Hattem

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LIST OF ABBREVIATIONS AND ACRONYMS

ALDEA	Latin American Association for Alternative Development
BCE	Before Common Era
CONAIE	The National Confederation of the Indigenous People of Ecuador
CoS	Culture of Sustainability
IRENA	International Renewable Energy Agency
LAC	Latin America and the Caribbean
LCOE	Levelized cost of electricity
MWh	Megawatt hour
NGO	Non-governmental organisation
OECD	Organisation for Economic Co-operation and Development
RE	Renewable energy
SDG	Sustainable Development Goals

CHAPTER 1 – INTRODUCTION

1.1 Research background

The Skyworld opened and let through a stream of sunlight, presenting light to a place where only darkness had been before. A long time it took her to fall, while clutching an unfamiliar bundle tightly in her hand. Looking down, she only saw dark water filled with eyes looking up at the sudden beam of light. What these eyes saw was a small object in comparison to the beam of light. As she fell closer to the eyes beneath, they could identify her as a woman. A woman with her arms outstretched, and long black hair billowing behind her while she fell towards them. The geese rose from the water and flew beneath her to break the fall, carrying her gently downward. As they could not hold the woman above water indefinitely, they called a council. A great turtle offered his shell for the woman to rest upon. The animals understood that for her survival, land was needed. Amongst the animals were deep divers, who had heard rumours of mud at great depths in the water. So they ventured to the dark below. A stream of bubbles rose to the surface, with quickly thereafter the limp body of a little muskrat and mud in his stiff arms. While many animals tried, all but the little muskrat returned with success. He gave his own life for that of the woman. With mud secured, the turtle spoke: “Here, put it on my back, and I will hold it.” The Skywoman spread the mud on the back of the turtle and sang and danced in thanksgiving to the animals. Her feet caressed the earth, after which the land grew, and the whole earth was made. The bundle clutched in the hand of the Skywoman contained fruits and seeds of all kinds of plants, which were scattered all over the new ground. After careful tending, the earth changed from brown to green, and the sunlight, still shining through the hole in the sky, allowed the seeds to flourish. Now that the animals had plenty to eat, many came to Turtle Island to live with the Skywoman. This is how Robin Kimmerer (2015) describes the story of how the known world was created, as told among the Iroquois people, an indigenous group of the great lakes of North America.

The story exposes how the Iroquois people connect the natural world to the origin of their forefathers. Following the story, sweetgrass, or wiingaashk, is still honoured as one of the four sacred plants of the indigenous people. It is supposed to be one of the plants the Skywoman had clutched in her hands and said to be the very first plant that grew on the earth. Kimmerer unveils a distinct difference between the creation story of the Iroquois people and the creation story of Adam and Eve, prevalent in the Western World and Middle East. The latter creation story is often linked to Abrahamic religions in areas dominant in ‘the first world,’ but can presently be found all across the

globe (Schwalbe, 2020).[1] Kimmerer (2015) notes that Eve was banished from the Garden of Eden for tasting its fruit and had to subdue the wilderness through hard, exhausting work. Although they regarded the same species (humankind), a distinctly different story stands at the base of their creation, shaping their identity and their future. Whereas humanity in the story of Eve is seen as the pinnacle of all living things and the oldest of them all, the Native American traditions often refer to humans as the younger ones. Subsequently, Sweetgrass is seen as an important species that is deemed worthy of protection by humankind and given special status within their community. Kimmerer (2015) summarises the difference as follows*: "One story leads to the generous embrace of the living world, the other to banishment. One woman is our ancestral gardener, a cocreator of the good green world that would be the home of her descendants. The other was an exile, just passing through an alien world on a rough road to her real home in heaven."*

A comparable phenomenon is observed in *The Nutmeg's Curse: Parables for a Planet in Crisis* (Ghosh, 2021), a book that aims to expose the origins of our climate crisis in the Western exploitative nature of colonialism. In this work, terraforming, ecological warfare and cultural differences between Western settlers and native inhabitants of North America are discussed, especially with regard to the perception of untamed nature. The indigenous people of the land had a strong connection to their own place in the world. Barboncite, a Diné (Navajo) leader, explained their attachment to the land as *"[w]hen the Navajo were first created, four mountains and rivers were pointed out to us, inside of which we should live, that was to be our country, and was given us by the first woman of the Navajo tribe"* (McPherson, 1992). For the Navajo people, the earth lived and breathed. It could speak to them, and it was seen as a living organism. Their view of nature was one in which, despite their reliance on nature (food, infrastructure, clothing etc.), there was mutual dependency. The settlers of European origin, however, had a contrary view of the land not yet cultivated. It was seen as a waste, a piece of land which was all but usefull. Therefore, the settlers viewed the indigenous people as inferior; they could not extract from the land what they could. What for the indigenous people stood for a thriving nature, and consecutively a thriving people, was viewed by the settlers as mere wilderness and something to be subdued. The inevitable clashes that occurred often had ecological aspects. Bison and natural resources were targeted to destroy the people depending on them. Similarly, the livestock of the settlers was often targeted when enacting acts of war. Not only do their cultures stand in stark contrast to each other, but also their perception of nature and the notion of what constituted 'wilderness' (Ghosh, 2021).

[1] *Abrahamic religions are considered to be religions centred around the worship of the God of Abraham and primarily entail the religious scriptures of the Quran, Hebrew and Christian Bible. All share a common history, namely the Hebrew bible (Old Testament). These religions originated from the Middle East, but in present times their influences can be found all over the world.*

A prominent indigenous group of South America were the Incas, establishing one of the largest empires on the American continent. One of the most widely spread Incan creation myth talks about Viracocha, an Andean God who is believed to have created a universe without light and inhabited by giants. As the giants disobeyed him, Viracocha created a flood that wiped out the giants and instead created beings to his own image. He gifted them light by creating the stars, the sun and the moon and send his own son to life with them to show them virtue (Margarita B Marín-Dale, 2016).[2] However, groups other than the Inca's also called this continent home. Much of modern-day Ecuador was part of the empire but of relative short duration and almost 5 centuries ago. (Moore, 2014). Additionally, the Incas often did not assimilate conquered peoples and instead incorporated them into the empire while often leaving existing structures intact. (Murra, 2023). The heritage of other indigenous people could thus developed and linger in many different ways. Within the various indigenous groups of the Andean region of Southern America, many of such myths of creation are present (Leeming & Leeming, 1994, UXL, 2009 and Barcan Elswit, 2015). Knowing that in Ecuador itself already over 14 different indigenous groups can be found, this does not appear to be without cause. (UNESCO, n.d.) Additionally, these important and impactful myths still carry importance in present cultural practices and are vital in exposing a way forward (Kimmerer, 2015). By this, the author indicates that the values adhered to in myths are reflected in current cultural practices and are vital for future development of the related group that practices the telling of them.

Development and sustainability scholarship is complimented with incorporating a vast array of dimensions into its pathway. In this process, the emphasis was placed on the '*external world of the discipline*' over the past 20 years, ranging from economic, social sciences to ecology and thereby firmly establishing sustainability as a concept. Despite this development, no substantial social changes have occurred that deviated the global trajectory from a harmful treatment of ecosystems. These external focus has neglected the inner worlds that lie at the core of this change and has received increasingly more emphasis (Ives, 2019). Another example of such an increase can be found in the relevant approach of Gray and Manuel Navarrete (2021) in which the leveraging of inner worlds and subjectivity are determined as key aspects of transformations in terms of sustainability concerns. Instead of emphasising technical innovations and contemplating behavioural interventions, "*working with people's inner worlds (e.g., emotional patterns, identities, values, beliefs, deep-held assumptions), as well as their mental models, is now seen as key for sustainability transformations."*

Not all literature defines culture as occupying a similar positive connotation in relation to sustainable prospects, however. John Clammer proposed a rather different view on current cultural implications.

[2] Many variations of this story exist, see the difference in the telling of this particular story between Leeming & Leeming (1994), Barcan Elswit (2015) and Margarita B Marín-Dale (2016) for example.

Clammer argues that our planet is in crisis. He is convinced that we have befouled our own nest to such an extent that conflict and war, biodiversity loss, ecological destruction, mass extinction and resource depletion induced by humans are rampant on a global scale. All of these phenomena, however, Clammer attributed to the dominant Western unsustainable culture of mass consumption and the treatment of the world as a resource that can be exploited (Clammer, 2016). At the same time, Clammer acknowledges that "culture may be seen as an essential component of sustainability [...] since a cogent argument can be made that our current one […] is not sustainable and cannot create an equitable world for future generations." A theme of duality that is not uncommon within the development spectre (Avery & Bergsteiner, 2016, Cherrier & S.W. Lee, 2023). Other scholars argue among similar lines and even attribute the current unsustainable trajectories (or in this context; cultures) as the driving force in turning the emphasis of sustainability scholarship to other themes such as inner worlds and subjectivity (Fische, 2007; Ives, 2019; Manuel-Navarrete & Pelling 2015; Steffen, 2015). Multiple perspectives and other forms of knowledge compared to the dominant Western discourse are required to shift the 'techno-scientific' knowledge systems. One effective way to accomplish this is by drawing attention to indigenous cultures and exposing Western individuals to Indigenous knowledge. This knowledge can be tasked as a lever for sustainability transformation, but such an approach is rarely investigated. Scholarship now increasingly focuses on these dimensions, in a transformative effort to find more effective change within the current discourse as handling global sustainability challenges could benefit from cultural transformations in the Global North (Gray & Manuel-Navarrete, 2021).

A deeper dive into this divide between the beneficial versus the negative consequences of cultures is required. This study does so but focuses on the existence of a ´culture of sustainability´ that inherently promotes incentives towards renewable energy and a sustainable approach to nature. This approach seems all the more potent as the need for a sustainable approach to the global energy sector has gained momentum in recent years. Instead of highly polluting energy sources, governments all over the world are targeting green energy as a substitution. They actively pursue these goals in an effort to stub global warming and the process of environmental change. Rather they seek to provide energy through means of renewable energy sources, sources that provide energy from natural processes that are replenished constantly for instance, solar energy, wind energy or biogas (OECD, 2012). Complimentary, renewable energy tends to provide effective solutions for energy concerns in rural and/or indigenous communities that connect to larger topological systems. Making use of sustainable and green energy sources is the most efficient way of tackling these deficits, and even different technologies can be incorporated independently but according to an adequate transition (Icaza, Borge-Diez & Galinda, 2022). Kimmerer (2015) herself already touches

upon the notion of the term 'green' and how its meaning has shifted from a green pasture to an advertising slogan. The author continues by arguing that it is not just land that is broken but our relation to it. Additionally, the author established that the perception of nature might be influenced by creation stories in indigenous Northern America, but it is not established whether this observation is true for other indigenous communities and how it might be linked to sustainability concerns.

1.2 Research aim

This thesis studies the existence of creation myths in the indigenous communities of Ecuador and examines whether or how such stories are told. It further examines if such myths influence contemporary cultural practices, and if so, analyses how the practices relate to sustainability concerns in the indigenous communities in Ecuador. This approach is relevant in the current shift of scholarship that emphases the inner world over the 'external world of the discipline' that received the majority of the attention over the past 20 years. Inner worlds instead focusses on emotional patterns, identities, values, beliefs, deep-held assumptions under which creation myths find themselves categorized. By doing so, true change is aimed to be obtained in the form of a shifting worldview that might bring forth major change which the previous focus on the outer world of sustainability failed to set in motion in key areas. Current literature might indeed increasingly focus on such aspects, but does rarely investigate a differentiating worldview, or the presence of a 'Culture of Sustainability' in relation to RE. To complement this, RE concerns in indigenous communities are investigated with the aim to clarify how they operate and what their function within the given community is and represents.

This paper thus continues to explore the duality of the power of culture by studying in what way indigenous people tell their myths of creation and how it might be connected to sustainable efforts. It aims to explore the relevance of myths of creation in remote communities of Ecuador and how they connect to sustainability concerns. To examine the link between cultural practices and sustainability concerns, the influence of cultural practices on the relationship between indigenous communities and contemporary renewable energy technologies is investigated. In doing so, this thesis explores the possibility that a different indigenous worldview might facilitate RE initiatives or vice versa. Might it aid in changing the dominant perception of the natural world and how so? The latter is aimed to be achieved by increasingly leveraging the inner world of people to such an extent that RE initiatives are finally viewed as what they are: essential for sustainable development. By exposing the dominant narrative to other forms of knowledge and different worldviews, the

perception of nature is aimed to be altered in such a way that greater sustainable development is deemed as desirable and thus bring forth real change.

1.3 Research question

In order to fulfil the research aim a research question and three sub questions have been established to guide the study. The main research question that is central to this paper is as follows:

In what way are indigenous myths of creation present in indigenous communities in Ecuador and how do they facilitate renewable energy concerns?

This question can be divided into several distinct parts that each contribute to answering the questions as a whole. This paper will therefore be divided across the same distinct questions, answered, wherever possible, individually and concisely. The sub-questions, constructed to operate as the guiding lines of this research, are the following:

- *1. Do myths of creation exist within indigenous communities in Ecuador, and if so, how are the stories told?*

- *2 How are the myths of creation reflected in the cultural practices of indigenous communities in Ecuador, and do they reflect a culture of sustainability within the communities?*

- *3. Are there any possibilities that indigenous worldview facilitate renewable energy projects or vice versa?*

1.4 Structure of the Thesis

This thesis comprises nine chapters. The first chapter introduces the general topic of the research and its problem statement. Moreover, it gives an impression of the general outline of the thesis, the aim of the research and the specific research questions. Chapter two presents the theoretical and conceptual framework. In this framework, the thesis builds on literature regarding myths of creation and the renewable energy question in relation to indigenous cultural practices. First and foremost, it exposes how the term 'culture of unsustainability' proves to be a rather limiting notion and

showcases why an enabling term such as ‘culture of sustainability’ can prove to be much more powerful in transforming our current cultural habits. Additionally, it conceptualises myths of creation, cultural practices, and renewable energy options. The third chapter provides an overview of the regional and contextual setting of Ecuador and how its population has been shaped roughly since colonial times. The fourth chapter regards the methodology of the research and explains the research approach taken and what research instruments and approaches were used in order to arrive at the collected data that this research builds on. The following three chapters present the research findings, e.g. the importance of myths of creation, the sustainable cultural practices dominant in the indigenous landscape of modern-day Ecuador and finally renewable energy concerns within indigenous communities. The final chapter further summarizes the findings and comes to a general conclusion of the research by answering the main and sub-questions. Additionally, recommendations are provided for further research.

CHAPTER 2 – THEORETICAL & CONCEPTUAL FRAMEWORK

Indigenous cultures have been predominantly built on the passing of knowledge through their communities, mostly through oral means like the telling of tales and teaching of the elders of the communities. Knowledge was stored in the collective minds of the people (Oosten & Miller, 2018). However, indigenous knowledge is often hard to fit into recent development notions such as the Sustainable Development Goals (SDGs)(Breidlid & Krøvel, 2020). This indicates the lack of indigenous knowledge in modern-day development practices, while simultaneously hinting at the importance of myths of creation. Admittedly, the interest in indigenous research methodologies has increased tremendously over the past two decades. This change occurred in literature both from indigenous and non-indigenous scholars alike. Common themes relate to the increased focus on relationality, connections and reciprocity. Furthermore *"relationality is spiritual in nature thus acknowledging spirituality as real and integral to knowledge-making. In this way, indigenous knowledge production distances itself from the so-called objective truth claims of Western, positivist epistemology and asserts the primacy of relationships in the constitution of subjectivity and even knowledge production"* (Breidlid & Krøvel, 2020). Other scholars argue among similar lines and distinguish an increasing emphasis within sustainability scholarship to less studied themes such as inner worlds and subjectivity (Fische, 2007; Ives, 2019; Manuel-Navarrete & Pelling 2015; Steffen, 2015).

2.1 Myths of creation and indigenous cultures of sustainability

Myhts of creation, at their core, are influential in shaping the past, present and future and how we view the world around us (Kimmerer, 2013). It is, therefore, vital to demarcate what encompasses a myth of creation. In *A Dictionary of Creation Myths* (Leeming & Leeming, 1994) a myth is defined as "*a narrative projection of a given cultural group's sense of its sacred past and its significant relationship with the deeper powers of the surrounding world and universe*." Among others, myths are defined by religious institutions in an effort to make sense of the cosmos, human life and nature (Ginzberg, 2014). This includes myths about creator deities even before the creation of the world, *"secondary deities who played a role in the creation process, as well as creation myths. — Myths of how the sun, the moon, and the system of the stars came into being, of how cosmic order was created out of initial formlessness and emptiness*" (Ginzberg, 2014). In whatever form, a myth is the essence of a people or culture, their shared ideas and arguably identity, or at the very least an indication of a shared identity in the form of a narrative. Furthermore, all myths are etiological in nature: they use symbolic narratives to explain the origins of things in a bid to overcome the lack of information or scientific knowledge (Leeming & Leeming, 1994). Creation myths situate themselves

in a particular subgenre of myths and have their roots in cosmogony (Leeming & Leeming, 1994). NASA states that cosmogony refers to the study of the origin of the universe or the study of the origin of the planetary systems. This differs from the study of cosmology by the implication of the study of its origin. Cosmology concerns itself primarily with structures and changes in the present universe (Bogner & McCormick, N.D.). Moreover, the word derives its meaning from the Greek word 'Kosmos:' genesis, order and birth. In this context, myths of creation are related to the understanding of how the cosmos was established. Comparing it to people, Leeming (1994) compares it to how families are preoccupied with their origin, so are cultures concerned with the need to know from where they originate and where the world they live in emerged from. In this view, it is not surprising that virtually all cultures across the world have creation myths. Yet despite this fact, this does not mean that the availability of knowledge in today's world eliminates the need for myths of creation. Suppositionally, they can even work together. As Leeming & Leeming state: "*[a] modern Hindu scientist might well subscribe to the "scientific" big bang theory of creation and in another part of his or her being have faith in the Hindu creation myth as a true metaphor for an ultimate reality that transcends science.*" Even behind these seemingly contrasting notions of scientific knowledge and creation myths, there is a shared desire throughout the world to face disorder. Both science and myths aim to make sense of the world, a 'collective dream of differentiation.' For myths, this means that certain universal or archetypal notions can be discerned. At the same time, however, every individual creation myth also highlights priorities and affairs pivotal to certain cultures. While Leeming & Leeming (1994) seem to focus on these shared traits, this paper explores exactly those features that make a myth of creation, and in the aftereffect the culture itself, unique. Ginzberg (2014) names three important myths by name that were prominent in American cultures: the mythological Inca creator deity Viracocha; the immortal, legendary feathered-serpent Aztec deity Quetzalcoatl; and the Mayan 'Feathered Serpent' deity Kukulkán.

Apart from creation myths, stories of origin exist. These stories are closely linked to myths of creation but encapsulate a particular dimension of the genre of myths altogether. As Leeming & Leeming (1994) already touched upon, people use myths as an effort to understand their place in the world, but also where they originate from. Whereas creation myths often have a cosmogonic origin and traverse beyond the scope of the inhabitable world itself, stories of origin do not. Stories of origin can refer to the stories that (a) a people or cultures tie to their arrival in a particular environment, place or even continent or (b) how their people as known today came into existence. This does not entail the creation of a place but does aim at the creation of a culture or people. This thesis emphasises creation myths since in the study area myths of this kind are more prevalent and are better contextualised as they are more prevalent in literature, (Leeming & Leeming 94). Both stories

of this kind, however, bring together two other valuable aspects in the form of communicative competence: "*cultural knowledge in the form of social values and behavioural norms and expectations, as well as traditional language*" (Turin, 2013). Especially social values and norms are vital for the extent of this research and an important reason why the focus is put on these stories. This can be connected to the inner world of indigenous communities and hence provides valuable knowledge as deep leverage points of transformation for the sustainability spectre (Meadows, 1999). While research on indigenous culture and knowledge on climate change is increasing, few studies document the perspective of these cultures on climate change. Even fewer studies regard their cultural convictions as a factor in the attitude towards green initiatives and the energy transition. Laura Cameron (et al., 2021) reinforces this view by exposing the lack of indigenous perspectives on climate change in the Artic and Canada. Perspectives that often house valuable insights and knowledge of indigenous-led understanding and solutions to address climate change and self-determination. In itself, this phenomenon is not atypical since most indigenous cultures are hard to justly study and or even to encounter. However, the roots of the problem appear deeper and more significant. Clammer (2016) states that *"in none of the foundational literature is the role of culture considered, either in the sense of examining the ways in which cultural patterns […] have contributed to the creation of unsustainable lifestyles, economic practices, agriculture and food systems and urbanisation, or in the sense of imagining future sustainable cultures."* As indicated, the sustainability scholarship is increasingly aware of this limitation. Yet despite this, indigenous is often used to confirm or even compliment Western techno-science in sustainable scholarship. Rarely is sustainability transformation research conducted from the point of view of indigenous people and their worldview (Lam et al., 2020). Cross-cultural learning can be a valuable asset in achieving that goal as it exposes a person to other cultures (Yamazaki & Kayes 2004). Interpreting myths of creation from the inner worlds of indigenous people is a step in the right direction. This paper aims to aid in this transformative process.

In the work of Peter Rudiak-Gould, we are able to see a distinct cultural approach to climate change, in which the grassroots Marshall Islanders, despite being aware of their marginal contribution to global warming as a whole, engage in self-blame and atonement when faced with resulting consequences of nationwide uninhabitability (Rudiak-Gould, 2014). Both Cameron and Rudiak-Gould emphasise climate change rather than a distinct culture of sustainability but do provide evidence of a much-needed shift that could provide new insights by targeting inner worlds in relation to indigenous sustainable concerns. Especially indicated by the potential of cross-cultural learning. Yet, the key theme of sustainability in this paper revolves around the notion of a 'culture of sustainability,' similar to that discussed in *Cultures of Transition and Sustainability: Culture After Capitalism* (Clammer,

2016). Here, culture is defined as *"having to do with identity, with dignity, with expression and hence with conceptions of selfhood, with notions of health and illness, with the human need to symbolise and to create and tell stories, and with the existential struggles embodied in religions."* Clammer makes a distinct connection between culture and sustainable development. This definition aligns with the concepts of inner worlds and poses a strong foundation of this study. However, Clammer's work focuses more on existing unsustainable traditions in cultures, whereas this study aims to unveil an inherent cultural sustainable factor due to a different relation with nature itself, extracted from the inner worlds of indigenous people. In order to achieve an understanding of this inherent cultural aspect, myths of creation from the Andean region of modern Ecuador will be investigated and cross-culturally examined through qualitative literature research. Moreover, these myths will be placed in both historical and modern-day contexts and be connected to cultural tendencies.

An approach that is closely linked to the concepts of inner worlds and CoS is that of Buen Vivir (or as called in the native language of Ecuador: Sumak kawsay). It translates to ´good living´ and has been a part of the internal policies of Ecuador since the reforms of 2008 when a new constitution was adopted (Saira & Dominquez, 2016). Buen Vivir does not only propose an alternative to the capitalist approach and its struggles but to the concept of development as a whole. Acosta and Abarca (2018) describe that powerful voices against the exploitative and destructive tendencies of capitalism have historically originated from the Global South, with a strong component appearing in the Latin-American theatre. Despite facing marginalisation, these voices come to the fore now, especially in times of crisis. At its core, Buen Vivir does not provide a blueprint or a set of policies, and even different interpretations can be found across the Andes region and the Amazon basin. Instead, Buen Vivir proposes constantly fluctuating and evolving guidelines and is more a philosophy of life with certain constants such as knowledge, codes of conduct and the relation with nature, not unlike many indigenous cultures (Acosta and Abarca, 2018). Its aim is thus to dismantle the concepts of development or at least raise important questions regarding it. However, since this thesis targets more the practices and beliefs that provide an intrinsic motivation towards sustainable practices, rather than an entire philosophy of 'good living', the cultures of sustainability approach derived from Clammer is more appropriate to truly distinguish different cultural aspects rather than a state of mind. Nonetheless, since its incorporation in the constitution of Ecuador and the prominence of the approach in the Latin-American area, it is an influential factor that needs to be taken into consideration.

In short, despite the enormous potential of indigenous knowledge, cross-cultural learning and the emphasis on other development strategies that seek to explore inner worlds or turn against rigid and limiting definitions of development, such approaches appear underutilised. As the sustainability

scholarship becomes increasingly aware of these limitations, this thesis explores those gaps by studying creation myths of indigenous populations in a bid to examine the inner worlds from their perspective. This might yield leverage points that can, in time, accomplish truly transformative transition in the sustainability field.

2.2 Indigenous cultures of sustainability and renewable energy

Previous discussed literature indicate the increasing focus on indigenous knowledge and other forms of insights into the concept of sustainability and its scholarship. Yet, the perspective of these cultures on climate change itself is often lacking. Few studies regard cultural influences as a factor in the attitude towards green initiatives and the energy transition. Clammer (2016) argues that in much of the foundational literature of sustainability the role of culture often is not considered. And despite the recent trend emphasising novel forms of knowledge, indigenous knowledge is often used to confirm or even compliment Western techno-science in sustainable scholarship. Rarely is sustainability transformation research conducted from the point of view of indigenous people and their worldview (Lam et al., 2020). Even less literature is available documenting indigenous perspectives on RE and its possibilities. At the same time, providing energy to remote or distant communities has been a question hard to answer across the developing world, and renewable energy provides tangible opportunities for those areas in need of energy solutions (Borge-Diaz and Galinda 2022). Hence it is key to understand how notions of sustainability and RE are developing in remote and indigenous communities.

RE does not only provide a platform for the use of different energy-related technologies, but it also proves to be the most efficient way of tackling those energy deficits in remote areas. This is a particularly interesting development since efficiency (mostly in relation to costs) is often regarded as one of the weaker points of renewable energy and its rise(Borge-Diaz and Galinda 2022). More often than not, prices are only starting to be competitive with government funding. Only in a few places, such as wind energy projects in New Zealand, where annual wind speeds are high, are projects being pursued without government interference (OECD, 2012). It becomes imperative to distinguish areas where those opportunities arise and how they can contribute to an increasing focus on RE, even within indigenous communities. In addition, RE needs to be explored as a viable route to pursue in all of the very different indigenous groups that can be found across the globe. Whereas some might prioritise sustainable approaches, other may not. Even more specific, one worldview might even favour one particular set of RE initiatives above others. By using cross-cultural approaches and observing such developments from the point of view of different indigenous groups, the development of RE within these worldviews is exposed.

This research finds itself in the midst of the current debate regarding the energy transition and the need for climate action. This paper acknowledges that, without question, global warming is a real challenge with far-reaching consequences. Thus, green initiatives are a need in the world to combat this rise in carbon dioxide production. Several steps towards reaching this goal have been taken, such as the European Green Deal. As the European Union defines it, *"The European Green Deal aims to make Europe climate neutral by 2050, boost the economy through green technology, create sustainable industry and transport, and cut pollution"* (European Commission, n.d.). In addition, other trends can be defined. The renewable electricity sector is growing at a rapid pace. Between 2005 and 2010 only, it has grown by 26% worldwide. In the present day, it even provides about 20% of the world's total power (OECD, 2012). Hydroelectric power, which is energy derived from water-powered sources, generates 84% of the world's renewable electricity. But other sources are not standing idly by. Wind has grown most rapidly, with solar photovoltaic energy grown at a rate of 50% (OECD, 2012). Indeed, these green alternatives do need to be sustainable and just, and possible neo-colonial tendencies to this development need to be researched extensively and erased from the root (savacool, 2020).

During the 2022 COP27 in Sharm El-Sheik in Egypt, the Latin American and the Caribbean (LAC) countries were predicted to see a 10.5% increase in jobs whenever an effective green transition could be accomplished, according to the Latin American Outlook that was presented there. Moreover, the green energy component of the energy mix is far higher than the global average (33% compared to a global 13%). This fact remains, even though technological advancements have not entirely reached the continent with regards to RE which are present in Europe (OECD, 2012). Other actions that are aimed at advancing green transitions for the LAC countries are also presented: a further steer away from fossil fuels and increased investment in low carbon fuels such as green hydrogen and biofuel, phasing out nature-harming subsidies and leveraging environmentally friendly taxes, promoting industrial and productive development policies with a focus on the blue economy and others (OECD, 2022). However, for the most part, the LAC countries occupy a fragmented position without a unified voice. The region has negotiated agreements within several different coalitions, but not within a larger unified body. Especially given the fact that the region is known for their active participation in international climate negotiations, there is a distinct lack of active Latin American coalitions.

2.3 Conceptual framework

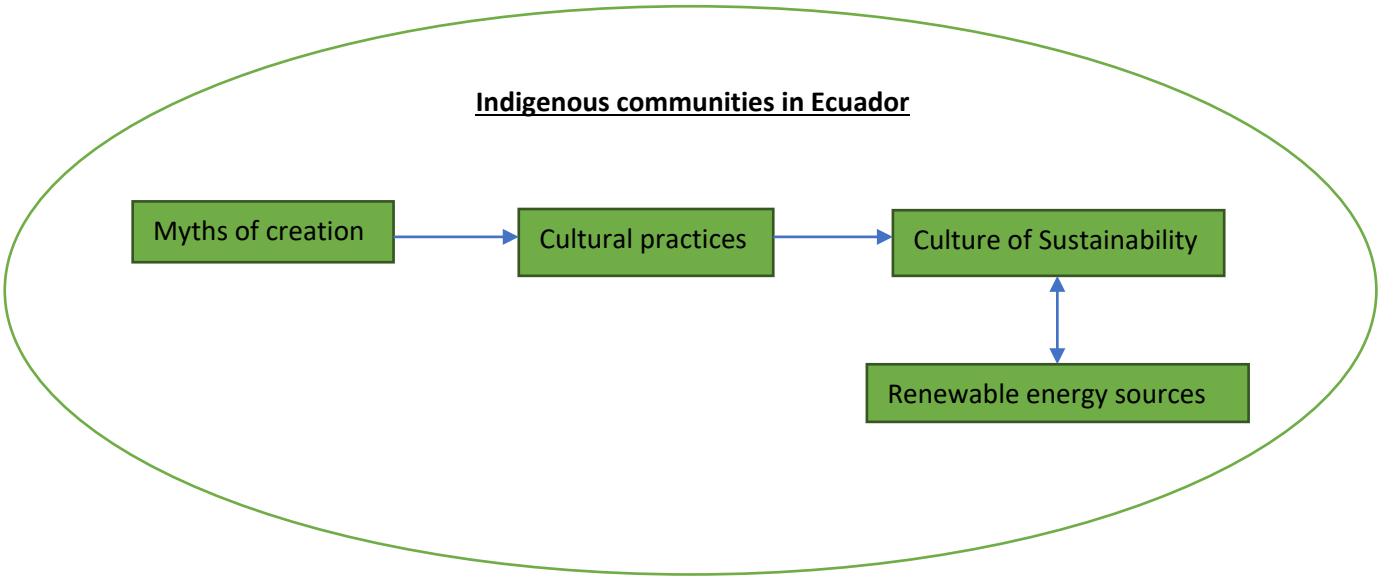
After a careful and detailed review of the literature, several factors stand out that aim to justly outline the scope of this research in a conceptual framework. The research aims to investigate the effects of myths of creation on sustainability concerns in remote and indigenous communities,

especially in relation to RE initiatives. Furthermore, the research focusses on how an indigenous cultures of sustainability might facilitate RE initiatives or vice versa. How do myths of creation change the relationship of the people of indigenous communities with nature, and in what way does this manifest itself? This is in turn mediated by the notion of a culture of sustainability. Myths of creation only have a limited (or in-direct) influence on RE projects. However, according to Leeming & Leeming and Robin Kimmerer, those stories are more directly influential for the shared identity and cultural practices of a community or people. This, in turn, can lead to a CoS through particular cultural practices.

A difficult part of the research regards the measurement of the influence of the myths of creation. The research needs to justly operationalise the conceptual idea into traceable (as far as possible) factors. As such, the first priority is to establish in what sense a myth of creation is part of the semi-modern population and what defines such a population. The history of a community can help identify the unnoticed cultures of sustainability that exist throughout the world. As previously mentioned, myths of creation contain a part of that history. However, defining what a community is or entails can be troublesome. In essence, these definitions are fluid and complex. Being aware of these limitations or complexities aid in the true understanding of a community. At the same time, it is imperative that a working definition exists. Flinn (2007) refers to a community as *"a group who define themselves on the basis of locality, culture, faith, background, or other shared identity or interest."* The same definition is used in this paper, especially when acknowledging that ethnicity is largely a matter of self-identification in Ecuador (Gregory Knapp, 2023). Within this definition, this research focusses on communities with indigenous roots in the country. Myths of creation from these indigenous communities and their workings are studied.

From such stories, a shared identity is found. This study aims to investigate a particular aspect of this shared identity in the form of a 'culture of sustainability' that is influenced by myths of creation. Mostly whether such a culture is traceable at all and how it manifest itself. Finally this study aims to expose how sustainable concerns (RE in particular) in terms of energy demand are developing in indigenous communities and how this interacts with a possible culture of sustainability. RE initiatives are defined in this paper as projects in which the maintenance, ownership and/or initiative itself originates from within the community." This relates to activities both in cooperation with recognised institutes and without. This study chooses to focus on those initiatives of exploring community heritage and, thus, cultural practices on the basis of people who define themselves as part of a community in relation to green energy initiatives (Flinn, 2007). In short, this paper will investigate and cross-examine myths of creation within indigenous communities of Ecuador in relation to RE as indicated below.

Figure 2.01: *The conceptual framework*



CHAPTER 3 – REGIONAL AND THEMATIC FRAMEWORK

This chapter provides an overview of the region in which the fieldwork and data collection took place and puts it in historical context. Firstly, by demonstrating the history of the region and its development over time, sense can be made of the ongoing cultural phenomenon and the situation of the indigenous population. To complement this, this chapter also provides the thematic framework of the paper. Secondly, this chapter couples the themes to the regional zone of research. Thirdly, it provides contextualisation for the population and situation of the indigenous people on the continent and Ecuador. Finally, it exposes the energy division of both the continent and the country and how it can be translated into RE opportunities.

The region of South America has housed many people in the last centuries. From the early urbanistic forms of social complexity in the Central Andean Highlands and the coast of Peru, to the Titicaca basin further South in which empires emerged from around 500 until 1500 CE (Moore, 2014). It is a region of extreme language diversity, with over a hundred different language families in the area alone (O'Connor & Muysken, 2014). Empires appear to be the exception rather than the rule on the continent, which provides a rich history of different peoples predating the illustrious Incan empire (Moore, 2014). To justly study the historical background of all the inhabitants of Latin America, their development through time and their accompanying perception of nature in relation to RE goes beyond the scope of this research. Even the extent of solely the indigenous cultural heritage is too broad to justly study for a research paper of this size. Additionally, we must be aware and note that the Incan empire was not one cohesive core of people but existed of many different cultural entities and that their occupation spanned different timelines, none truly extensive and a very long time ago. The arrival of the Europeans on the continent resulted in the conquest and exploitation of the continent in search of riches in the form of resources and land. The Spanish crown indeed set out to establish a commercial type of relationship with the native inhabitants. But by venturing away from this perception and into the structure of conquest, over which they had limited control, they enabled people like the conquistador Cortés to engage in a process hard to describe other than genocide. The cultures of the continent were annihilated, including their cosmology, writings, literature, lives and more (Ginzberg. 2014).

3.1 Ecuador

Despite the fact that the area of Ecuador was a part of the Incan empire, it was not for a particularly long period of time and roughly five centuries ago (Moore, 2014). Hence, traces of Incan mythology

might be erased altogether or can be intertwined with other cultures and their stories, especially since Ecuador is known for its cultural diversity. The country itself houses fourteen indigenous groups of people who have distinct and diverging cultural traditions. The indigenous population only makes up around a tenth of the total population of the country (UNESCO, n.d.) Some of which share a distant (at least partially) Incan heritage. Other estimates, however, go as high as 43% of the population as being indigenous and pose the importance and power of indigenous populations (Rapid Transition Alliance, 2018). This difference can be explained through the phenomenon of self-identification: whether someone indeed claims themselves to be indigenous. This makes it hard to give a just overview of the spread of the indigenous people in Ecuador. Figure 2.01, however, does give a clear impression of the diverse communities across the nation and the spread of the people *(page 25).*

According to UNESCO (n.d.), the capital of Ecuador, named Quito, was founded by the Spanish in 1543 on the ruins of an old Incan city, standing at an altitude of 2,850 meters. It possesses one of the best-preserved historic centres in the entirety of Spanish America despite the earthquake of 1914. That Quito is an important location for the indigenous population can be seen in the first of six declarations: the 1990 declaration of Quito of the Indigenous Alliance of the Americas, on 500 Years of Resistance. This degree formally listed that *"[t]he Continental Gathering "500 Years of Indian Resistance," with representatives from 120 Indian Nations, International and Fraternal organizations, meeting in Quito, July 17-20, 1990, declare before the world the following: The Indians of America have never abandoned our constant struggle against the conditions of oppression, discrimination and exploitation which were imposed upon us as a result of the European invasion of our ancestral territories"* (Cumbre Continental de Pueblos y Organizaciones Indígenas, 2007). Even more recently (June 2022) indigenous protesters have marched on the capital due to disagreements about the economic and environmental policies of the president (France24, 2022). A part of the dissatisfaction pointed to land rights and ownership. A big portion of indigenous land is highly coveted by developers and external investors, which has been an issue for an extended period of time in the country. Especially the question of how to produce "*concrete claims to legitimacy*" (Salazar, 1977, Smith, 2015 & Luque, 2018). In an effort to combat these issues the indigenous population have established 'The Confederación de Nacionalidades Indígenas de Ecuador' (CONAIE) and, with it, proposed the development of a constitution that recognised indigenous rights and enveloped the concept of Buen Vivir (Rapid Transition Alliance, 2018).

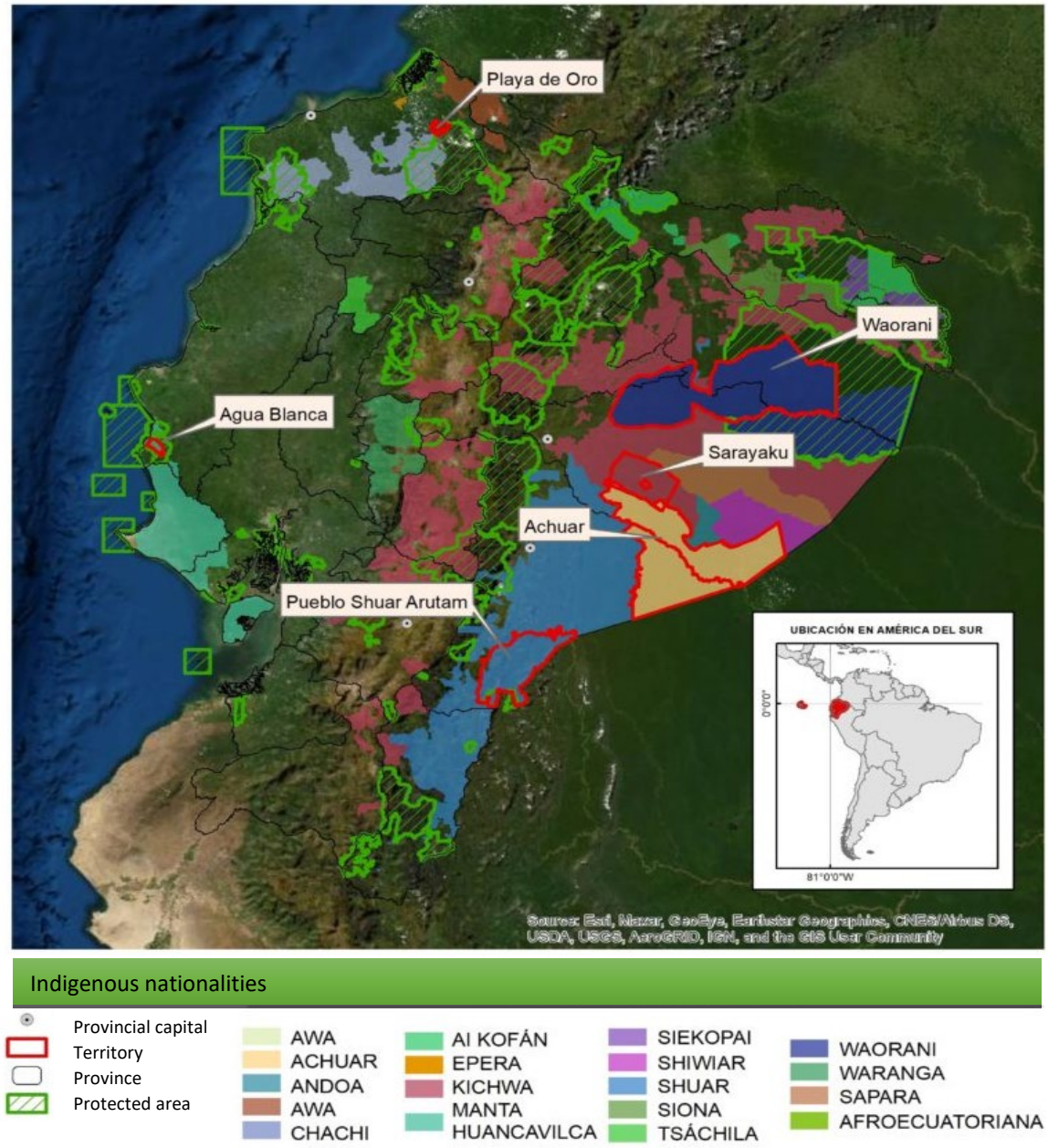


Figure 2.01: *The indigenous people of Ecuador, their living areas and protected areas as recognised by ALDEA: the Latin American Association for Alternative Development (ALDEA, N.D.).*

Similarly, concerns regarding energy and the supply thereof is a big issue for indigenous people in Ecuador and can often be found to be connected to land right struggles. The start of the 21st century accelerated this question through industrialisation and the use of fossil fuels. Fossil fuels are not unlimited and have negative consequences for the world. The extraction of these fuels often results in the destruction of, or at least partially impeding upon, indigenous land and negatively affects indigenous people across the entirety of the South American continent. Ecuador, as of 2022, is still

amongst the largest oil producing countries of the LAC area. Moreover, in 2021 their president has enacted a decree to privatize the countries oil production in an effort to continuously improve Petroecuador's oil operations (EAI, 2023). Issues of land rights and sustainability thus resurface, while current laws hinder development and promote private sector involvement (USAID, N.D.) despite promising developments such as the incorporation of the rights of the 'Mother Earth' in the constitution of 2008 of Ecuador (Jones West and Eisenstadt, 2019). As a result, it becomes increasingly important to find alternatives, such as green energy sources. Even if the issue of CO2 emissions (and the reduction thereof) bears financial consequences. Three-quarters of the population of Latin America considers climate change as one of the main global risks (Icaza, Borge-Diez & Galinda, 2022). But government progress is often slow. As a result, many indigenous communities already seek solutions of their own: programmes such as 'Power to the Protectors' aim to fight fossil fuel expansion through renewable energy. For instance, solar panels are installed in several Kichwa communities in the centre of the Ecuadorian rainforest that aid the communities ability to "*monitor their territory, denounce rights violations, and share their vision and story with the world*" (Mazabanda,2019). Sustainable solutions thus not only provide alternatives to the destructive nature of fossil fuels (both the use and extraction of those) but are also effective in aiding with the question of land rights.

These sustainable considerations are increasingly influential in the political spectre too. The government of Ecuador has drafted a national energy efficiency plan starting from 2016 until 2035 that aims to reduce costs and emissions of the country (PLANEE, 2017). This documents acknowledges the need for sustainable and renewable development in the sector to address climate change and the security of energy supply according to their constitution: "*The Constitution of the Republic of Ecuador, published in Official Gazette 449 on October 20, 2008, establishes the following in article 413: "The State shall promote energy efficiency, development and use of environmentally clean and healthy practices and technologies, as well as diversified, low-impact renewable energies that do not jeopardize food sovereignty, ecological balance of ecosystems and the right to water"* (PLANEE, 2017). That indigenous initiatives can be fruitful, can be showcased by their latest achievement; in August 2023 a referendum passed that halts the development of all new oil well in the Yasuni national park of Ecuador. The park is home to different indigenous groups and even has two uncontacted indigenous communities that live in isolation. This referendum means that approximately 726 million barrels of oil will remain in the ground of the park (REI, N.D.)

To put this in more absolute context, in 2020 the total energy production of Ecuador (33,769.52 GWh) consisted of 24,887.3 GWh of hydroelectric power, 584,64 GWh of unconventional energy sources (sources that do not emit greenhouse gases) and 8,288.58 GWh of non-renewable generated

power. Hydroelectric power is thus not only the dominant renewable power source but the dominant energy source of the country. Wind and solar power, as of 2020, were tied as second-place sustainable producers (Icaza, Borge-Diez & Galinda, 2022). Other sources still credit crude oil as the top energy provider at 63% with hydroelectric power at 34% (EIA, 2023). Nonetheless, this shows the tremendous potential and already achieved results of sustainable energy sources. As a result, the focus of this research will predominantly be on these three main sources. Additionally, RE also provides an opportunity to increase eco-tourism, by seeking to emerge tourists in a whole encompassing 'world of experience.' RE provides an additional aspect to green or eco-tourism in terms of energy, that does not stand out from the goals and objective of the experience itself. Thus, it adds to the overall experience (Lun, 2015). Yet, renewable energy also provides constraints. For instance, high initial investment for setting up solar plantations or panels makes solar energy a costly endeavour. High costs are also involved in the installation, operation, maintenance and repair of solar panels compared to other non-renewable sources of energy. As a result, initial investments take a long time to recover. (Mordor Intelligence, 2023 & Icaza, Borge-Diez and Galindo, 2022). And similar constraints are true for other renewable sources of energy in Ecuador, such as for wind and hydropower (PLANEE, 2017). A specific set of circumstances needs to be in place for RE initiatives to become a viable option in terms of, among others, financial orientation. Additionally, the necessary knowledge needs to be taught and available for such option to become viable in remote indigenous places, an aspect that initiatives such as 'Power to the Protectors' also seeks to provide.

CHAPTER 4 – METHODOLOGY

This fourth chapter presents the research methodology and the approach and design of the research. It also tackles the procedures and adaptations made during the fieldwork data collection process in Ecuador. More precisely, its moves into details about the research instruments, the sampling frame of the respondents in the field and the data collection and analysis process. In accordance with this, the chapter underscores the reliability and validity of the data collected and how ethical issues were considered and addressed. To sum up, the prominent challenges and limitations of the research are tackled, as well as how those were overcome and how they might impact the (further) research.

4.1.1 Research theory and approach

The context of the current study lends itself to a mixed methods approach, albeit with a strong qualitative inclination. Quantitative research is characterised as a deductive means of engaging with research, resulting in the creation and testing of theories and hypotheses. Qualitative research is demarcated as a deductive approach that gives more value to a holistic understanding, similar to the humanistic fields. However, another distinction can be made regarding the more and more common integration into the so-called mixed-methods research strategies (Bryman, 2006). A mixed method approach provides the benefit that it can both apply research on a grander scale through quantitative means while simultaneously tackling personal topics and approaching them in more detail. Both semi-structured in-depth interviews and a literature review form the base of this qualitative approach. It aims to gain a holistic understanding of the issues at hand while acknowledging that some issues, indeed, are too complex to truly decipher on this scale. The quantitative approach can be seen in the use of the survey for data collection. Despite this, the survey is not very broad and focuses on several specific aspects of the entire study, lending itself also partially to more qualitative aspects. Hence, there are definite traces of a mixed-method approach, but a qualitative inclination definitely holds sway. The in-depth interviews allowed me to cross-reference information with the surveys and attain more in-depth information and knowledge about the issues, stories and green energy uses. These were conducted with indigenous participants and were conducted in English or via a translator, at least to aid me in the process. Both the blueprints for the interview and survey have been discussed with my supervisor.

This research focuses on these particular aspects of the communities by engaging in in-depth interviews and participant observation of the communities to establish the nature and prevalence of such activities. Only in this instance, RE and other natural rehabilitation efforts are emphasised. The

interviews were set up through contacts and were aimed to be conducted with people that held related positions or were from indigenous communities/heritage themselves. A university professor in environmental engineering with field experience conducting research regarding radium, both in and outside of indigenous territories, provides academic insight for the study. Additionally, an indigenous mayor with ties to an indigenous rights organisation is interviewed to better understand the struggles and opportunities in the country and its political spectre. Furthermore respondents from indigenous heritage were interviewed. A code was created in order to investigate and establish common themes across the in-depth interviews. Similar codes and families of codes are thus applied across the different interviews, aiding to showcase in which interviews particular themes are dominant and which are not. For instance, a code tree of stories was created divided into creation myths and the absence of such stories, subsequently divided into concepts of practices, community, regional, and national related. To further dive into the specifics, a division was made between stories with a distinct natural element, those who display early forms of practices, and others. Similar code trees were made for cultural practices and RE-related topics.

Finally, people living in a city, a remote town or community with a known high percentage of indigenous population were surveyed. Such places were targeted to establish cultural traits, norms and values of the indigenous people and how this could differ from the rest of the country. The survey was conducted in twofold, in digital and written format (albeit later digitalised). Three areas were visited in which the survey was spread with a supposedly high percentage of indigenous more distant to the city. Such places were picked in an effort to potentially reach more indigenous people at once, while being relatively accessible (infrastructure wise). One example is Otavalo, a city located roughly 2 hours North from Quito and known for its indigenous population and their market. Largely, the energy provided to the homes was by the electricity of the grid, with cables visibly running throughout the city. No visible observations were made of RE, despite some mentions in the survey. However, there was a clear lack of energy provided to homes on the outskirts of the city. While such places are not necessarily remote indigenous communities, it provided a compromise between accessibility and indigenous inhabitants. Two similar towns, albeit on a much smaller scale, were visited with a similar purpose. This does mean that data from the survey is not directly applicable in the research for indigenous communities but merely as a starting point for further research. Respondents themselves could opt whether to pick a paper or digital format. Yet, indigenous people were hesitant to respond to these inquiries. Additionally, contacts from the university send the online format to associates living in communities to complement the data, largely in an effort to reach more people of indigenous heritage. Nonetheless, the response remained minimal. However, this is complimented by the interviews who did achieve a better indigenous response.

Figure 3.01: *The 75 respondents by gender.*

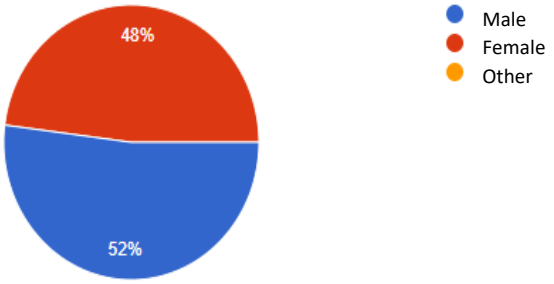


Figure 3.02: *The 75 respondents by age group.*

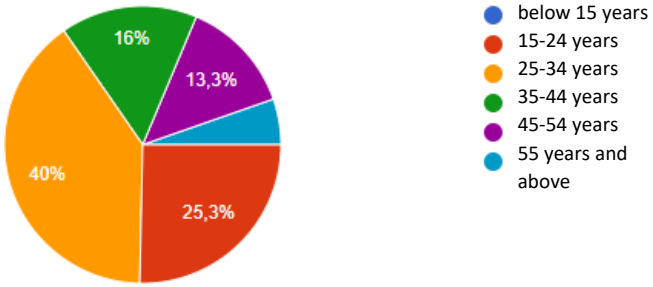
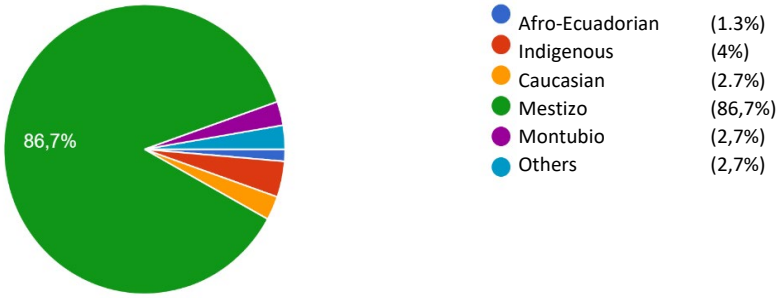


Figure 3.03: *The 75 respondents of the survey by ethnicity.*



The main goal of the survey is to gain insight in the myths of creation dominant in the country, with special emphasis on indigenous myths as this is the core of the research. By focussing on indigenous myths, alternative sources of knowledge are targeted to gain other insights into the sustainability concerns of both the indigenous people of Ecuador, but also the people across the globe. This focus is made to exploit the power of culture to combat the currently dominant unsustainable culture. The information found in the survey is used to supplement and aid in the in depth interviews. In essence, it provided starting information for the research to proceed from. Figures 3.01 to 3.03 above present more information regarding the respondents of the survey.

4.1.2 Research design

In an effort to establish the influences of myths of creation on cultural practices, qualitative research makes up a large portion of the first part of this thesis in relation to the first two sub-questions. These will largely regard the cultural aspects of the green transition and how traditional myths of

creation, if present, can contribute to the creation of a sustainable culture through second-hand literature and sources. This research establishes the specific myths of creation familiar to the region and how this differentiates from other cultures in terms of sustainability and the inherent relation to nature. But to complement this, fieldwork has been done on location. During the period of March 6th until the end of May of 2023, research has been conducted to establish the dominant narrative stories of the region and to assess what role they play in indigenous communities and their cultural practices. Also, it provides an insight into how much of the indigenous narratives are still present after the arrival and consequent destruction of the Spanish, and even from which cultural heritage these stories and myths stem. Likely, Incan heritage has been very much faded.

Other fieldwork was aimed at collecting information regarding the green initiatives and in what way, shape, or form the cultural heritage of the land and its people influences these initiatives. One approach to attain this information was to use a survey in order to reach a substantial amount of people to access their knowledge. Normally, this would not be a primary choice to come into contact with people on the outskirts of society or indigenous people since it is often hard to reach them. Yet, the approach was complimentary to other sources; a literature review, in-depth interviews and participant observation that each aided in getting a clear assessment of the situation. The survey was conducted in relation to three topics: myths, cultural practices and RE. Given the period of time that was occupied with doing fieldwork, a survey seemed most applicable to reach the highest number of respondents. Moreover, the topics did not appear as sensitive or very personal in nature, aside from exceptions per each individual. Of course, the nature of the survey was considered. Since the target respondents were (indigenous) people of varying cultural traditions and likely of a semi-modern nature, internet or digital means posed a possible interference. When only digital means were available, and the respondents could not access these means, the survey would have little to no use. At the same time, however, digital means do provide various advantages such as saving work, reaching more people and gaining an easy overview of the answers and statistics of the respondents. Hence, it was opted to continue with a mixed approach, providing both physical surveys and online. After physical surveys were taken, they were digitalised to file them with the online surveys and make use of the digital advantages previously mentioned. To gain a more in-depth knowledge of the issues, cultures and the relationship with nature of the respondents, in-depth interviews were included as a research instrument. This allowed me to obtain a more in-depth perspective on the issues at hand and also see points of view from both insiders and (somewhat) outsiders.

The study has been conducted in the region of the capital of Ecuador, Quito, that promoted a project linked to the Sustainable Development Goal (SDG) 13 of the Green Deal. An internship of 6 weeks at a foundation called ‘Fundación Integral a Favor de la Vida’ [Foundation in favour of Life] was

conducted as a part of this research process. The internship in Ecuador was conducted in cooperation with AIESEC, a student-led organisation that aids with international internships. The Quito-oriented branch established contact with the foundation in Favor of life, which is a Non-Governmental Organisation. The NGO and its project aims to contribute to the SDG by *"educating communities about climate change and building action plans to reduce critical factors affecting the environment"* (AIESEC, 2023). Moreover, the organisation works with several communities in the region that were contacted and observed to see if any relevant information could be obtained. This not only gave valuable insights into the cultural norms, values and practices but also exposed the view of the people towards green initiatives and climate change. Since the organisation is non-governmental, non-profit and of Ecuadorian origin, it provides insight into local approaches to green and sustainable initiatives. To complement this period of research, as the internship only engaged me for six weeks, the research was continued by researching indigenous communities, seeking contact with indigenous communities and indigenous rights organisations across the country and interviewing them. Halfway through the data collection period, an interim report was drafted with preliminary results and tasks completed and still outstanding. This helped structure the acquired data and allowed to proceed with more directional information. Once returned, all the collected data was processed, e.g. digitalised and transcribed, providing the base of data for this work.

4.2 Ethical consideration

Since personal experience with research and fieldwork, in particular, is limited, there is a dire need to be aware of the limitations and positionality of a researcher. Whereas people are used to a certain way of living, a different setting can quickly give the impression of an already culturally different community. Yet it is apparent to become familiar with the cultural norms and values of the country before a meaningful insight can be gained regarding the difference between indigenous people and the other cultures present. Staying with a local family provided ample opportunity to become familiar with the everyday practices and norms and values of the country. Engaging with their social activities provided additional opportunities to do so and also allowed me to venture outside of the household setting. Yet, I need to be aware of the difference in the way of living, not only between my own and the local communities but also between the urban and rural. Differences between those two could be more significant or come to the fore than prior known or familiar with. To better allow for these distinctions to be made, several excursions were made to towns and hydro stations outside of Quito. This gave a view of the differences not only between my own world and that of Quito but also the varying perceptions of wealth, norms, values and living conditions between the rural and the urban.

Moreover, since certain norms and values are familiar, it must be taken into consideration that these might differ for other people and cultures and, therefore, not impose familiar norms and values and their possible judgement on the indigenous people. This would result in the creation of incorrect conclusions and, instead of clarifying the research, distort the image that this research aims to convey. Instead, positionality should be investigated, openly displayed and acknowledged so as to clearly communicate and establish own views and orientation. This entails a transparent approach that, instead of distorting the research, indicates clearly from which angle the data is viewed. This was aimed to be tackled by continuously questioning my position, contrasting whether something could be considered out of the ordinary for me or for the people and respondents that were engaged during this research. It entails a process of continuous re-evaluation and investigation in order to not, whether consciously but equally important, unconsciously, apply a judgement that is unfounded onto the data.

4.3 limitations and challenges

For the research to be valid, reliable and insightful, it appears imminent to not draw conclusions beyond the reach of the research and fieldwork and its applicable field of study. Therefore, the research needs to be aware of both its national as well as its cultural and geopolitical limitations. This research, therefore, limits itself to a specific region in the South of the Americas. As a result, the research is not applicable to the entirety of the continent, although it might prove to be insightful and aiding in further research. Even more so, since I am only able to visit a limited space within the targeted location, the research is only applicable to a limited degree. As mentioned, to thoroughly research the implications of the different cultures and myths of creation is beyond the scope of this research. However, it does provide an insight into the power of culture and the different inherent notions of nature and sustainability between cultures across the globe, or even within a country. This thesis serves to provide an entry into the changing power of culture and the novel focus on inner worlds within the sustainability landscape of development. It hopes to emphasis the concept of 'Cultures of Sustainability' linked with RE in the Andean region of Southern America, Ecuador. Additionally, due to a restricted number of indigenous respondents on the survey, the image might be skewed. Despite the fact that, indeed, the survey appears to be a rather truthful image of the country's population, its focus was on indigenous people and their views. The limited amount of indigenous people can be attributed to several factors. First of all, there are just 7% of people indigenous in the country. This means locating them is not an easy task, despite the fact that some communities were known for their indigenous inhabitants. Moreover, due to my own origin as a white European male, establishing rapport was, in some cases, harder than expected. Indigenous

people, once found, refrained from participation or were hesitant, to say the least. In combination with limited knowledge of Spanish (due to a shift in date of leaving as to why a course in Spanish could not be taken), some potential participants viewed the research as cumbersome. Hence, the research has limited indigenous applicability with regard to the survey. It was, however, slightly compensated by the indigenous people found willing to participate in the interview. The importance of this study, however, still lies in other forms of knowledge and knowledge collection. Indigenous forms of knowledge is emphasised in this research. Due to the many different and varying indigenous people in Ecuador, this study aims to open the dominant and Western narrative to indigenous alternatives in the sustainability spectre.

During the fieldwork, several issues were encountered that provoked changes to particular parts of the research proposal. First and foremost, the research opted to change out the original focus group discussion with a survey in both digital and written form. Language formed a bigger constraint than anticipated, which was the biggest driving force behind this change. For instance, in the organisation in which the internship was conducted, there would be two employees that could speak an intermediate level of English. Upon arrival, however, it was established that there was nobody who was able to do so. As a result, most of the conversation was conducted through google translate or basic Spanish. Furthermore, everyday life in Quito, apart from the host family who did really speak English adequately, little to no one did speak English. Of course, this was partially expected. But as the travel date was moved forward by a month, some employees of the organisation in Quito (AIESEC) stated that most people under twenty-five or thirty could likely speak a little to a reasonable level. This appeared not to be true. As hinted at, the knowledge of Spanish was reasonable in understanding the red line of a conversation but was lacking in truly speaking the language. This made communication for research purposes more difficult than anticipated. All the aforementioned obstacles, however, created the need to opt for a survey instead of a focus group discussion. This enabled the research to translate and prepare question prior to the actual survey. Time was taken to verify that the right questions were asked and understood. In addition, several people locally aided with the translation and made sure that it was understandable and coherent. When adding the fact that the survey is possible in both digital and written format, it provided more options to gain information for the research. Moreover, despite the non-indigenous[3] nature of the mestizos of the country, influences of the indigenous cultural aspects might be residing in their own cultural traditions and can be relevant for the research. This needs to be regarded as useful information. Especially so when considering that heritage is largely an aspect of self-identification in Ecuador.

[3] To be accurate, mestizo's are considered to be of a mixed heritage: of Spanish/European and native descent. The influence of indigenous practices might still linger, but could vary greatly per household, or even individual.

Another change that has been made is to slightly shift away from Incan origin stories and focus on myths of creation to whichever extent present in the country, with the Incan past and its myths in the back of the mind. Due to the fact that the initial option was to travel to Peru to engage in collecting data and doing fieldwork, the Incan stories of creation took a more central stage. However, political turmoil meant that Peru was no longer an option. Ecuador, however, shares a part of their past with the Incas of Peru, and even two similar languages of both nations have a common ancestry: Quichua and Quechua. Although scholars still do not agree whether one is a dialect of the other or that both truly can be regarded as different languages, their common heritage is without question. (Mur, 2023). After the survey, it appeared that only a few Incan myths of creation were known, and local myths and legends were more common. This meant a further shift away from the Incan past and focussed more on local myths of creation. However, since the research was inspired by Kimmerer's approach, the creation stories were important. The Incan past is thus discussed in order to provide historical context, after which an effort is made to uncover local myths of creation.

Moreover, some interviews with indigenous respondents have taken far less time than anticipated. Although similar questions (in terms of length, number of questions and topics) were asked to the professor at the University of Salesiana, the interviews with the indigenous or local people struggled to reach 30 minutes. Whereas with the professor, it was over an hour long. One exception was found, the indigenous mayor, who was keen to talk about his and his people's struggles. While an advantage from one perspective, it also limited the time remaining to ask questions which were more related to the research, as the interview appeared hard to steer in a certain direction. Not only my lack of knowledge of the Spanish language might be a hindrance to the conversation, but also other factors may apply. Additionally, we need to be aware of the professors point of view. Indeed he has studied the presence of Radon in both indigenous and non-indigenous areas and is aware political and cultural development, he is not of indigenous heritage himself. His observations are therefore interpretations of experiences and knowledge. This study opted not to mention several stories of creation to the local people to not bias them, yet this resulted in many respondents being unable to refer to any creation story. For two interviews, a translator, either in the form of an English husband or a student of political relations, was there to guide the interview. In this instance, language appeared to be no issue. Nonetheless, there is a need to be more aware of a position as a Western researcher and how a formal setting like an interview might bring up tensions, insecurity or unwillingness to talk about certain issues.

CHAPTER 5 - TRACES OF STORIES LONG GONE

This chapter exposes the tendencies present in the investigated areas of Ecuador of the practice of the telling of myths of creation and it what form this manifests itself. To do this justly, it is vital to have a clear overview of the respondents of the survey and interviews. The participants of the survey identified themselves overwhelmingly as Mestizo, someone of mixed Spanish (or more broadly European) and indigenous descent. Three respondents were of indigenous descent, with a further two of Montubio origin and two more of other descent, with only one respondent being of Afro-Ecuadorian descent. The indigenous population is sometimes also referred to as Amerindians and only makes up around a tenth of the total population of the country (Knapp, 2023). As far as the statistics of the survey go, this figure seems relatively in line. However, other estimates go as high as 43% of the population being indigenous and stress the importance and power of indigenous populations (Rapid Transition Alliance, 2018). As previously mentioned, Gregory Knapp (2023) explains that ethnicity is largely a matter of self-identification in Ecuador. This is also the reason why the survey stressed the participants to align with the ethnicity they felt they represented. As several people have made me aware, either through interviews, talks or observation, Western culture is in some places regarded to be something to be desired, and people tend to emphasise their European descent more than their indigenous descent. This statistic can therefore be misleading, yet it does show how the majority identifies themselves. Despite the fact that 43 participants of the survey claim to be familiar with important myths, only 22 gave an answer to the follow-up questions which asked the respondents to name them. This entails a significant discrepancy of a third, either due to misunderstanding the question or the sense of feeling familiar with the stories but not enough to name them specifically. In total, 6 people were interview regarding myths of creation. 4 of the respondents were indigenous and occupied various positions in society. One respondent was indigenous but had oved to Quito 10 years prior to the interview. 3 respondents were guides deep in the Cuyabeno reserve, of which one had no indigenous roots but had moved there as a kid and considered himself almost indigenous. One respondent of indigenous origin was a major of Cayambe and had worked, and still had close ties, to Pachakutik and CONAIE. Indigenous rights organisations that sought change through various mean, of which the political spectre was the most influential. Finally, the last respondent was a professor at the University of Salesiana in Cuenca who specialised in mathematics and environmental engineering.

When investigating the heritage that the Incas left in the country of Ecuador, certain prominent results come to the foreground. A lot of people in Ecuador view their Incan past as merely a phase of their country. Some took this even further and referred to the period as that of one of occupation. In

the Southern city of Cuenca, guides proudly told how the city famously defended itself from an initial Incan attack without a standardised army. History was destined to repeat itself with the Inca empire expanding rapidly, except that in the second confrontation the city was captured by the Incan people that travelled there from the South. Even more intriguing, the city itself sided with the Spanish and drove the Incas out of their town when the Spanish conquistador forces stood at their doorstep. Several notions were made in the town that reflected their prowess in this historical deed. Further North in the country, little to no Inca referencing can be found in the markets, clothing or towns.[4] These all refer to one of the indigenous groups of the country itself. Only in the more touristic areas poncho's could be found with images of Incan as well as native Ecuadorian warriors alike. Similarly, one of the few visible material reminders of the presence of the Incas are the ruins of Ingapirca, otherwise referred to as the Machu Picchu of Ecuador. It becomes apparent that not only the Incan past is little remembered, but if it lingered it is often paired with negative connotations and narratives.

If, indeed, there is little evidence of a dominant Inca cultural heritage in the area that is modern-day Ecuador, in what way did their myths of creation linger? The most prominent story, as mentioned, is that of Viracocha as a creator deity. Yet despite this strong connection to sacred natural elements, the creation myth of the Incas did not permeate the area of modern-day Ecuador. From all the 75 respondents of the survey, no single mention was made of Viracocha. This is in stark contrast to Peru itself, where the name stands at almost every information post at important (and touristic) Inca ruin.[5] Most of the guides or people spoken to were aware of at least several aspects of the creation stories of the Incan past. This was true despite whether or not they still believed it to be an accurate understanding of the world. In combination with the fact that most Ecuadorian people referred to the Inca period of time as an occupation or merely a phase, it becomes obvious that indeed the Incan creation stories, or even its cultural heritage as a whole, did not penetrate most of modern-day Ecuador significantly. Instead, it signifies an era of suppression and showcases how many indigenous tribes of the region were keen to side with the Spanish conquistadors once they saw even the slightest of opportunities. Instead, other myths took centre stage.

A myth that was prominent in multiple questions of the survey regarded the history or the legend of the Cantuna. This story entails a local legend in Quito that has, despite the questions asked, not much to do with the creation of land or the world. The myth is an interesting one since it clearly

[4] In terms of signs, artefacts, illustrations or even text referring to Inca customs, imagery or other. The only thing that comes to mind is the display of Inca related illustration on Poncho's. Yet an economic or tourist incentive is an equally reasonable explanation for this appearance.

[5] This became apparent after a period spent in Peru itself, where such myths and traces of them are far more prominent visible in the cultural practices and tourism sector.

shows the Spanish and native cultures clashing, something that is prominent in the country as of yet. Despite the fact that Francisco, the protagonist of this myth, could have been honest and avoided persecution, he chose to protect the secret of his native peoples, even despite the harm that overcame him due to his fellow native men (Webster, 2010). Nonetheless, the story lacks any particular connection to natural elements and is deprived of another natural inclination, while the questions refer to such myths. Other participants related the question to indigenous myths of creation like Pacha Mama [Mother Earth], the love story of the volcanoes Tungurahua and Cotopaxi. These are mentioned sparsely but do provide interesting narratives as creation stories with a natural element. However, the myths are either very limited in scope or too broad. For example, the love stories of the volcanoes Tungurahua and Cotopaxi led to the creation of another volcano and the crater lake of Quilotoa. They do, however, give human qualities to natural elements that show them as beings that are alive and an integral part of the environmental landscape which influences the view upon nature.

At the same time, some first mentions of myths of creation appear in the survey replies. A short reference is made to the belief that in some cultures, turtles were believed to hold up the world. One respondent related the question to the creator deity of Tezcatlipoca of modern-day Mexico. This mention appears rather out of place since the origin of this deity can be found in Aztec mythology (modern-day Mexico) and he is one of the two brothers that Moore (2014) interestingly did not mention. So, not only the fact that from a geographical perspective this deity is mentioned in a place far off from where its origins can be found, but it is also, at least according to Moore, the less important one. One myth that was noted and of Ecuadorian origin was the story of the city of Azogues, part of the civilisation of the aforementioned Cañari. A respondent of the survey conveyed the story of the myth as: '*[t]he legend says that in this Abuga [the name of a mountain] lived two unique brothers who were the only survivors of a great flood. These brothers had no way to survive (no food and no other civilisation) until one day, suddenly, a bunch of food and delicacies appeared in their cave. They later discovered that these delicacies were brought by two macaws who fulfilled their deepest wish, transforming into beautiful women with whom they could establish part of the Cañari civilisation.'*[6] This myth thus talks about the origin of the Cañari people while inextricably connected by natural elements. The macaws not only provide the Cañari with food to survive but even become the wives and, by extension, the founding mothers of the people. They are as much animal as they are human, and nature is very much a part of this.

[6] Whenever quotes are preceded and followed by a single quotation figure, the quote regards a translation from Spanish into English either by me or through a translator present for the interview. A quote preceded and followed by double quotation marks were giving in English and have not been translated. Word between brackets [] indicate a missing word added for comprehension or provide the translation of the phrase used.

Another myth that was described in detail by one of the indigenous respondent was the: *'[m]yth of the Moon and Sun. It was said that the moon was a woman and the Sun a man, they were spouses, and the Sun's food was a vegetable called "zapallo" (pumpkin). One day, while the moon was alone at home, she prepared lunch and cooked the pumpkins. However, after cooking them, she ended up eating all the pumpkins herself, not leaving any for the Sun. When the Sun returned home and saw what the moon had done, he abandoned her and went up to the sky. The moon followed the Sun, but she couldn't catch up. The Sun reached the sky during the day, and the moon arrived above during the night. And that's how the Sun rises during the day, and the Moon rises during the night.'* Although maybe less related to the environment in a direct sense, it refers to the cosmogony of the world, of how day and night came to be. It thus aims to explain the origin of the universe for the people that tell and believe these myths. Curiously, the two other participants of indigenous origin related the question to the myths of ´ the covered/veiled lady ´ [La dama Tapada] and ´the headless priest´ [El cura sin cabeza], which are mentioned by some non-indigenous respondents on a few occasions. Although interesting myths, neither relates to the creation of the land or to natural or sustainable practices.

During the interviews, this trend continued. Participants were only very sparsely aware of creation myths. Some even distinctly noted that the oral telling of stories and myths was a tradition, but that this had ended already before her own mother, and it seems to be a fading practise. As other respondents indicated both in interviews and the survey, myths were conveyed orally within the community. The respondent noted that: '*My parents and grandparents taught me the theory of evolution. We didn't learn the typical myths of the Shuar culture. For my generation and maybe my parents' generation, it's not something that they have really continued to pass down, those myths and legends that they have. But the Shuar community themselves, they have a lot of myths and legends.'* So despite the fact that the respondent was aware that stories were important and plentiful and that the transferring of those stories did happen, she acknowledges the fading nature of these traditions and even her own lack of knowledge in relation to these myths. Later in the interview, the respondent does mention the myth of the hummingbird that would only work on his little farm and the myth of the blackbird that would go out all day pretending to work while actually just pushing stones around all day. An important note to make, however, is that this was only mentioned after her husband, the translator, brought the myths up. No further details could be given when asked about those myths. In a different interview with local guides inhabiting villages in the Cuyabeno reserve in the Northeastern part of Ecuador, a respondent rather linked the question to the origin of his native village in the reserve. He said that *"the most important thing here is from a long time ago, when the*

people from the north came here and start[ed] with the activities, with the tourist[s] here. All around here was wildlife and we could see more animals here, it was more dangerous for people. Now we are living here [as farmers in the protected areas, rather than nomads], but not [as] our choice, right." The indigenous people even changed their names from nomads to farmers in their native tongue. Although this does not truly relate to a myth as established in this paper, it holds importance for the people themselves as this is the first story they feel connects with the questions.

Professor Tony Viloria, from the University of Salesiana, Cuenca, PhD in mathematics and physics and involved in environmental engineering and the study of radon in building materials and the ground, noted something important in this regard. He studied radon both outside and inside indigenous territory and remarked that *"what we call indigenous myths, for them is the reality. […] When [the indigenous people] say that Earth is alive, that river is alive, we laugh about that. They know that if they treat bad […] the river will die or the life in the river will die, and they will also suffer about that. They know that if they poison the Earth, the Earth will not give them back food. […] It is not a myth; it is a reality. The earth is alive. The river is alive."* It is vital to acknowledge this, both to understand how myths are viewed and how this might impact the given answers. This can, moreover, be linked back to the depiction of the earth as 'Mother Earth' and the love stories of, for instance, the volcanoes. Of course, this is an interpretation of the circumstances. From the perspective of a researcher and not directly from an indigenous point of view. Of the remaining answers, there are some noticeable examples of creation myths that, in essence, were not the aim of the research. For instance, the big bang theory and the theory of evolution, which are mentioned in several instances and would be considered a more science-oriented approach to the term ´myth of creation´. Similarly, some participants referred to the creation of the earth in 7 days or to Adam and Eve, a very biblical approach to the question. Additionally, 75% of the respondents believed that the teaching of these stories held an important place in their community, in whatever form the notion of myths and stories was interpreted. A large majority agreed that these were retold at present times and also felt that these were as important in present days as in past times. Despite the validity and importance of those stories mentioned for the people of Ecuador, this paper explores myths of creation with an indigenous background. These stories are, therefore, not studied in more detail.

CHAPTER 6 - LINGERING CULTURAL PRACTICES AND THE INFLUENCE OF MYTHS

"[T]he indigenous population, they have another way of living, way of thinking. The relation between the indigenous population and the environment is a lot different from the relation of the city people and the environment," according to Professor Tony Villoria. *"[T]he people that live in the city, our environment is not real. What do I mean by artificial environment? You can leave the water running in your kitchen […] for 2, 3, 4 months and you won't feel any difference in the city environment. You can leave the light on in your room for the time you want, and you won't feel any difference in your environment. And that gives us an impression, a very false impression, that behaviour doesn't damage the environment. But, the indigenous people, they know that that is not true."* Tony Villoria describes what from his perspective entails a different point of view and, more comprehensively, a divergent reality for the indigenous population. This chapter explores what cultural practices are present in the indigenous community that might signify such a different reality and attempts to retrace the origins of practices encountered.

Over 60% of the respondent of the survey believed that within their culture or community, specific cultural practices stood out from the rest of the world. At the same time, however, more than half of the respondents did not consider such practices as important in their daily life and close to 70% could live without them in a similar fashion, both within their community and within their country. The respondents of indigenous origin, however, were more unified in their response. All believed that they had important cultural practices in their community that stood out from the rest of the world and without which they could not live their lives in a similar fashion. They all agreed that this definitely holds true for their life within the community, whereas two-thirds concurred it to be true for their life within the entire country. It indicates that the respondents of indigenous descent see their practices as having a greater value in their life. This, however, tells little to nothing about what such cultural practices entail and in what kind of form, shape or duration such practices take place. It, however, permits us to imagine a difference between the respondent of indigenous heritage and those without in relation to cultural practices, in whatever shape they might be facilitated. Yet to truly gain insight into the practices referred to, they need to be explored in more detail.

When asked if they could give examples of such important practices, one indigenous respondent mentioned the importance of family, while another related the question to the practice of 'carnaval' [carnival]. The final indigenous respondent went into more detail and answered: *'Crops, harvests, working the land, taking care of the forest.'* All of those latter examples are tightly bound to the natural environment and relate to the people's dependency on it. Carnaval in Ecuador is of Roman Catholic descent, indicating a Spanish influence in the country. Especially when it is mentioned by

one of the indigenous people in the survey, it is clear that the extent of the Spanish influence is great. However, the celebration has many indigenous rituals woven into it, becoming a true blend of both cultures (Alvear, 2022).[7] The questions of the survey following this, in relation to cultural practices, see all indigenous respondent answer identically: all acknowledge that their daily habits and cultural practices are passed down on them by their parent, that myths of creation or other myths have influenced the way they experience their lives through daily habits, the habits of their parents, and even shaped the habits and practices of today. In the interview, slightly more nuanced answers were presented. One indigenous respondent mentioned that the major differences between her old life in her community and that of her life in the city could be found in the preparation of the food. She said that *'the Shuar people still hunt a lot. They get their food from the forest, and they cook on fire. They don't cook on gas or stoves or electricity.'* The conversation continued by noting that *'it's better for the world, better for the planet to cook on wood, on fire. Because […] there is not so much environmental damage.'* This is an interesting note in relation to different cultural habits, especially since it aligns very closely with the answer of the respondent from the survey, which ties such practices to working the land and protecting the forests. When asked about in what way such practices were passed down, through stories, parents or anything alike, the respondent noted that *'Yes, it is passed down in, in myths and legends too. We have a legend about the hummingbird who would only work for like a short day in his little farm and the [myth about the] Blackbird, who would go out all day, come back late but was actually just pushing stones around and wasn't actually working. So, there's definitely myths and legends that's shared among the families that showed the values of life in the community.'* From the context can be derived that the stories showcase a scenario in which the environment is only burdened to the extent it is capable of, or at least the extent of extraction from nature. The specifics of the two stories, however, were unfamiliar to the respondent.

The guides of the Cuyabeno reserve talked about their cultural practices in a similar manner. For instance, one respondent noted that searching and studying animals was something he used to do. But not only for himself, other people at schools or universities could benefit from going to the forest. However, not everything was permitted anymore. The protected area of the reserve meant that, in some places, fishing was forbidden. He said: *"Yes, [we are] protecting nature."* Another indigenous guide added: *"No fishing."* They also stated that this was one of the reasons why the Siona people of the reserve were no longer nomads. They could only hunt at certain places, and as a

[7] The guest family at which the stay during the first six weeks of the internship took place, explained the festivities and showed some images of how the festivities were conducted as well. Traditional clothing and costumes were used in many parades, as the festivities combined a festivity from indigenous cultures and tied it to catholic celebrations. This happened with more festivities throughout the year.

result being nomads was less viable. At the same time, however, they did acknowledge that "*a lot of people study for biology, for [the] conservation of a special animal"* in the reserve. In a sense, they are thus aware of the fact that protected areas limit their options, as well as aims to preserve a part of their cultural traditions. A protected area means that they can hunt and look for animals and work the land in traditional manners while at the same time encroaching on their ability to do so in their previously familiar nomadic ways or in the area of preference in the reserve. Additionally, they mentioned that "*the Amazon is very important for the conservation, this protected area for the, the conservation of the different nationalities, for the culture. In the reserve live five nationalities: Sequoya, Siona, Shuar, Quechua and Cofán. Different nationalities, different cultures, different traditions and different language for example."* They were unable to tie a story or myth to their practices, however. What comes to the fore, most predominantly, is the caretaking of the forest through means of cultivation and hunting. At the core, this might seem contradictory, but most practices showcased in this section seem to understand and tie conservation with their means of production. In other words, there is a clear sense of co-dependency between the indigenous people and their environment.

This view was more firmly established in the communities themselves, especially in the Cuyabeno reserve, where ecotourism was a big source of income. A prominent example is one of the guides, who took a detour with his boat and all the customers on board to grab a plastic bottle out of the water, one of the very few that were seen on the 4-day trip in the forest. Taking care of the environment can thus be considered a cultural practice that is inherent to these communities, despite a lack of direct connection to the myths and stories. Another cultural tradition that is thus closely related to this is the practice of cultivation. Arguably, these are two separate practices, but they seem to merge into a singular practice within the communities. An example of this is given by Tony Viloria: *"If you have only one product in a very great tension of land, the nutrition in the land get less, less and less and that's why we have to use fertiliser. If you go to the indigenous people ….we can learn how to grow, how to do it in a clever way. They don't get land and grow only one product, no, they mix it. And they've rotate it. Of course, the big companies cannot do this because it doesn't give enough money. But the indigenous people don't think about that. The indigenous people say we don't need a lot of money; we need a lot of health; we need the something that we can give to our children."* He hints at a clear intrinsic motivation for the different cultural practices and how they relate to the future prospects of an individual, community or country at large. However, the indigenous people themselves might experience this differently, or even use practices like crop rotation due to pragmatic reasons instead of taking care of the environment. His point is however strengthened by the fact that over 80% of the respondent believed that practices and habits

particular to their own culture did impact their view on sustainability and their relationship with nature, of which the indigenous respondents agreed 100%. In a similar fashion, all indigenous respondents agreed that myths and tales affected their view on sustainability as well, whereas the total percentage of the survey this number dropped significantly to 47,3%.

The respondents that did not identify themselves as indigenous related the question regarding important cultural practices often to the practice of carnival. One respondent noted that *'there are certain practices carried out in Ecuador that define us as Ecuadorians, especially certain festivities like Carnival. Although Carnival is celebrated in other countries as well, here, we celebrate it in a unique way that binds us together as a nation.'* Both for indigenous and non-indigenous respondents, carnival appears as an important cultural practice. Another mentioned practice was that of *La Quema del Año Viejo* [the burning of the Old Year]. The respondent explained this practice as having Valdivian roots and was practised by creating dolls that would resemble a sick person. The doll would be broken by whoever had the illness in a ritual to overcome the disease. According to other sources (Amy et al., 2021), the practice is conducted slightly differently. At new year, the misfortunes of the old year in the form of life-size dolls are burned at midnight. Interestingly, some respondents of mestizo or Amerindian origin mention 'dances and mythological representations' and 'Speaking Quechua.' For some respondents who distinguish themselves as having Amerindian descent rather than being truly indigenous, indigenous traditions are considered to be important cultural practices.

In the interviews with a respondent from Shuar heritage another practice was discussed: *'One of the practices that the Shuar are famous for, they don't do anymore, but they used to, is create the shrunken heads, the Tsantsa's.'* These shrunken heads were made from the heads of slain enemies in battle. This process aimed to trap the soul in the body, hence why the eyes and mouths were also sealed. The heads were then displayed on poles and in specific houses (Poeta, 2022). This entails a fascinating albeit somewhat alien practice but lacks a clear relation to a distinct sustainable culture and omits natural elements. At the same time, not all mentioned practices of indigenous origin were sustainable. Since the village of the Shuar people was located on a main road, each week a garbage truck would collect the trash. During this description, the respondent acknowledges that a lot of people are used to different materials: *'a lot of people have the custom of throwing trash in the pathways or throwing trash in the rivers, because before they didn't have plastics. They didn't have things that didn't biodegrade.'* The respondent gives examples of leaves as being used for plates and clothing, which, as being natural materials, would be broken down by natural elements. However, since *'there hasn't been a big drive in educational measures, they've treated plastics in the same way'*. Indicating clear signs of a mixture of customs and values that do not always work well together. This is something the respondent seems to establish herself as she noted that the village has

transitioned into using different materials, but not yet in a novel way of thinking. The respondent made comments such as *'before the highway was properly paved'* and explained that the government was involved in gifting building materials and building houses for the community since 2004, albeit not of great quality. It even proved to be the turning point for the community to convert to using gas for cooking. This seems strongly in line with Professor Villoria's view on this way of living: '*The big companies are getting very rich with, with our way of living today, you know. When we spend more energy, when we use more energy, they get richer also.'* In other words, by increasing the reach of the infrastructure of the country, the indigenous places might be more prone to use other ways of fulfilling their needs. At the same time however, the needs of the people need to be met. If providing gas and electricity has been a question of concern in this community, providing those facilities needs to be seen as a positive development.

Consequently, it is imperative to realise other struggles the indigenous people face that might affect their ability to hold onto their own practices and norms and values. Guillermo Churuchumbi, former and first indigenous major of Cayambe, national coordinator of Pachakutik[8], speaks about these issues: '*When I was 17, I went to a white mestizo school. When I studied there, I was discriminated against. However, later I reclaimed myself as indigenous, which made me feel strong and confident. At 18 years old, I stopped cutting my hair because before indigenous people were forced to cut their hair in order to work in the big farms, for exploitation basically. And that's why I do not cut my hair anymore.*' The racism in the country might skew people away from their tradition and force them to seek other means and methods to fulfil their needs. He also talks about the issues of 'extractivism' and mining, which he claims to be apparent for most indigenous people in Ecuador. Such issues forces the people to adapt and overcome and might shift their former 'indigenous' traditions into a form more closely related to that of the rest of the country. Moreover, such issues, as indicated before, pose a treat to land rights of the indigenous population. This became even more apparent when in the city, a lot of people had little to no positive views about indigenous people. Often, they were categorised as a disturbing force that had too much power and were the main instigators of strikes and protests. Yet, reality often indicated a different situation altogether. A reality in which the indigenous people indeed struggled with their rights and living conditions more so than any other group.

As Professor Villoria believies: *"Do the indigenous people have the power to influence the city people, the big companies? No. No, they don't have that power. And they don't have that power because we*

[8] The Pachakutik Plurinational Unity Movement, or better known as simply Patchakutik, is a political movement that was formed in 1996 and had strong ties to CONAIE. By creating this political movement in 1996 CONAIE aimed, for the first time, to actively embrace an electoral strategy in the quest for indigenous representation and rights (Mijeski, 2011).

will never give them that authority. Authority to tell us how to live. Because for the city people, they are ignorant." The truth will likely be found somewhere in between those extremes. All in all, the results definitely expose traditions which are linked to indigenous roots. However, most showcase a blend of traditions and cultural practices from across the country, seemingly increasingly so as indigenous communities become more and more exposed to the dominant practices of the majority of the country. The links to myths of creation, however, are often faint and not very outspoken in the mind of the indigenous population.

CHAPTER 7 – THE FACILITATION OF RENEWABLE ENERGY INITIATIVES IN INDIGENOUS COMMUNITIES

As highlighted in the previous chapters, there are practices in indigenous Ecuador that can be considered sustainable, albeit with only a limited linkage to indigenous myths of creation. Caring for the environment seems intertwined with cultivating the land and, in most places, a thriving nature means thriving people. A part of the Amerindian population even deems indigenous myths and language as important cultural practices on their own, giving importance to the native people who used to be seen as '*a folklore people, like [having] a symbolic nature*' according to Guillermo Churuchumbi. As stated before, Icaza, Borge-Diez and Galindo (2022) see renewable energy as a tangible opportunity for remote areas in need of energy solutions, a characteristic that indigenous communities often seem to reflect. They even regard it as the most efficient solution to energy questions, which is a particularly interesting development since efficiency (mostly in relation to costs) is often regarded as one of the weaker points of renewable energy (OECD, 2012). This chapter showcases the results of the research regarding an indigenous worldview on RE initiatives and simultaneously the effects of RE on the indigenous worldview.

As shown in Figures 4.01 and 4.02, two indigenous communities visited during the research used solar panels as a means to (partially) facilitate their energy needs. The first image (4.01) shows a house located at the starting point of the hike to Mount Chimborazo, at around 4600 meters high. In combination with more houses located at a lower altitude, providing entrance into the reserve or protected area that is Mount Chimborazo, these were the facilities found on the hike. The local indigenous people either inhabited these houses or created facilities in them, ranging from toilets to markets and museums. In the market, local lama cheese that was made in a traditional indigenous way was sold, amongst others. These facilities were run, at least partially, on solar energy provided by the government according to the information present at the mountain. Little information is found how the establishment of the solar panels came to be installed here. However, in Ecuador, the placement of solar farms and power plants are seemingly randomly distributed in the territory, indicating no adequate criteria for their location of their placement (Villacreses & Martinez-Gomez, 2022). Several signs indicated the belief and goal to make the place sustainable in order to preserve the landscape and were linked to their solar farm. Most likely, it can be traced to sustainable initiatives and preservation of the environment. Moreover, since it is a tourist attraction, it aids by conveying the message of the eco-tourism industry and contributes to encompassing the visitor in the green world.

Image 4.02 shows an indigenous community of Siona heritage located in the Cuyabeno reserve and their solar plant. This community runs entirely on the solar panels shown in the picture, which the community purchased with the help of the nearby located lodged. From this installation, electricity was distributed amongst the couple of houses that made up the community. Interestingly, the houses ranged from being built with modern materials such as concrete, while others were constructed in traditional fashion using local wood. As the village is used as way of providing a view into the life of the indigenous people, they have arranged with the local lodges to get compensated. The solar panels is one of the examples of compensation received from the community of lodges in the area. This way of working both aided the goals of the lodges and their ecotourism, as well as aids the community as they now have a novel way of providing for themselves. This is further aided by the fact that many guides for the lodges have ties to the indigenous communities present in the reserve.

Figure 4.01: *Solar panels installed in the indigenous community located at Mount Chimborazo, in the centre of Ecuador.*

Figure 4.02: *Solar panels installed in the indigenous Siona community located deep in the Cuyabeno reserve in the North-Eastern part of Ecuador.*

The lodge in which I was located also used solar panels for the majority of their energy needs. One of the guides mentioned in the interview that the use of solar panels "*is very good for saving nature. It is [much more] easy*" and connects to the inherent mission of the lodge and the conservation programmes. Consequently, they also informed that *"these [work] together, the generator and solar panels. For example, in the kitchen, they need more electricity than the solar panels so far. They need the generator to help for all the working here."* In addition to this, the guides explained that the generator needs gasoline to function and that the trips to the nearby town limit them in the amount of gasoline they can take. Supplementary, the boats use gasoline, which results in the need for more journeys to the town. Using solar panels can aid in mediating such trips by cutting down on the amount of gasoline needed for the generator. Finally, connecting to energy from the grid was mentioned as being a cumbersome and difficult task, especially with many possible points of failure when running through the dense forest of the reserve. This holds especially true when considering that the journey to the lodge and the community is at least two and a half hours by boat. Any real infrastructure for such projects is lacking.

The interview with the respondent of Shuar heritage exposed a rather interesting development. In her village, which she left for Quito almost ten years prior, the community had received solar panels from the government in an effort to aid them in their energy needs. She, however, explained that this process did not have the desired effect and outcome. *'In 2013, the government gave solar panels to the community, but no one really used them. They never used them from the beginning because it was something new and they didn't give any training or any way to do it. They just gave them the solar panels. They didn't set it up.'* Despite the intentions, the solar panels that were gifted by the government appear to be a waste of money and effort. To make matters worse, most of the members of the community have opted, as previously mentioned, to make use of gas instead of cooking on wood or using other resources. So, despite there being a need for energy and even the provision of solar panels to the community, the financial and practical consideration in favor of gas outweighed the option of solar panels. The transitions were, according to the respondent, more financially and practically motivated than cultural. It is far easier to cook on gas than to collect wood in the forest, despite the fact that the foods have a better flavour when cooked in traditional ways. Likely, the paving of the road to the village played a role in this as well, as it provided the infrastructure for projects and development like these to happen.

Even later, it became clear that the respondent and her husband regarded this process as non-beneficial and even thought it was a way for the authorities to gain more influence and non-indigenous people into the area. Her husband mentioned that indigenous land can only be inherited or bought by indigenous people. However, when someone of indigenous heritage married someone

who was not, the land became free for purchase. This hints as the encroachment of indigenous land in their community through other means than outright buying of the land. However, the effects are rather similar; indigenous land lost to non-indigenous influences.

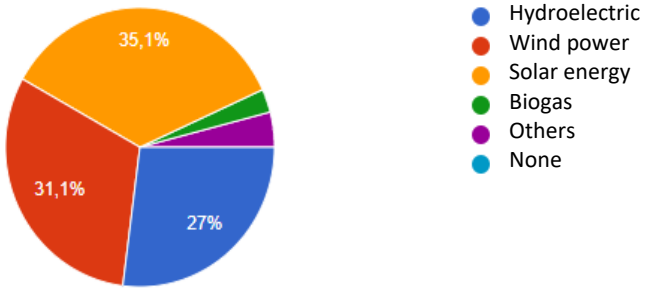
When asked about the relevance of green energy options in his line of work, for example, in relation to mining, Professor Tony Villoria stated, *"Well, we know now that the alternative sources of energy such as wind, the geothermal, the solar energy, they are not enough stable. Not for the actual way of living. And I think we have to combine to be more suitable for our way of living."* He continues, *"if you ask me what do I think? Which would be the better option for us? […] I think that the new nuclear energy is an option nowadays".* It is important to note that this answer was in relation to energy on a broader scale, more in line with a national energy question rather than directly related to remote local communities. Across the nation, solar panels itself are hard to find. More specifically, in the two indigenous communities were actually the only places in which solar panels were encountered during this research. It seems to be used in only very limited and specific use cases. This does appear in line with the previously stated energy distribution, according to Icaza, Borge-Diez and Galindo (2022), in which solar and wind energy are on the rise but only through government-backed farms or in specific, high yielding circumstances. However, given the fact that the equator runs through the country, resulting in the prevalence of high temperatures (especially on lower altitudes away from the Andean Mountain range) and the lack of seasons as known in places more distant to the equator, the lack of solar panels does seem striking. Hydro-generated power, however, was plentiful, with over five hydroelectric facilities located already within an hour of the place of residence in Quito itself. This aligns very much with Borge-Diez's indication that hydropower is not only the dominant renewable energy source in the country but dominant for the entirety of the energy sector.

Furthermore, almost half of the respondents of the survey were aware of sustainable efforts in their community in relation to everyday problems. 61% acknowledged that within their own household, such efforts were made, whereas an overwhelming 82% had a positive attitude towards more sustainable initiatives in their area, with the remaining respondent indicating a neutral attitude. None of the respondents, thus, appeared negative towards such developments. 97% deemed sustainable efforts as vital in the modern world. Most respondents answered gas and electricity as the type of energy sources that were used for daily activities. In a handful of instances, gasoline was mentioned, either in relation to a car or motorcycle or to a generator related power creation. At a similar rate, respondents referred to hydroelectric or water-related energy sources. This is unsurprising, given the percentage of electricity created through this means in the country. Three respondents answered solar energy, who did consider caring for the environment as a reason to use such sources of energy. Finally, one of the indigenous respondents answered, "Gas, habeces a leña:

costumbre cultural ” [gas and firewood, a cultural traditional]. The other two respondents of indigenous origin referred to gas since it was included in the house they lived in.

Most, if not all respondents to some degree, contributed to the use of these particular energy sources to be available, cheap or cost-effective, or simply needed to fulfil the basic needs. Only in very few instances, such as the three mentions of solar energy, included taking care of the environment or sustainability as a reason for their choice of energy source. It becomes clear that in a developing country like Ecuador, choices are limited or even non-existent. The first and foremost care seems to come from fulfilling basic needs. Moreover, according to the information gathered by the survey the answers of indigenous respondents, regarding energy choices, seems fairly in line with other respondents. Although some respondents do seem to take sustainability into consideration, their cultural background varies to such an extent that no clear line can be drawn. Figure 4.01 shows the division of familiarity with green energy choices; the answer relates to the source they are most familiar with. This seems to be a bit more skewed when compared to national figures in which hydroelectric is the most dominant source of energy. Solar energy is most familiar to the respondents, whereas wind-generated power follows closely in second place and hydroelectric energy is third. Although the differences are not great (35,1%, 31,1% and 27% respectively) and familiarity does differ distinctly from simply being the biggest generator of energy, it is relevant to the study, especially as the other types were so little encountered in the field.

Figure 4.03 *Familiarity with renewable energy sources (Hydroelectric, wind, solar, biogas, other or not familiar).*



Finally, over 85% of the respondents agreed that renewable energy sources in specific would be of importance for future sustainability on the earth. Amongst others, dominant themes in the responses as to why this was the case were: reducing the use of fossil fuels, preventing from depleting finite resources, limiting pollution, improving the lives of future generations and corporate greed. Moreover, a fair number of respondents also claim that a big impact on their view on RE is connected to the unknown nature of the development. Scepticism

remains about the long-term effects, the effectiveness of the RE sources and government aims, amongst others. Such sentiments are important to be heard, despite the fact that the majority does believe that it can have a positive effect on the grander question of global sustainability. One particular response from indigenous origin stood out: *'On the social level, sustainability promotes the development of individuals, communities, and cultures to achieve a globally adequate and equitable level of quality of life, health, and education.'* This response aligns well with previous statements made by Professor Villoria and showcases the interconnectedness of sustainable practices with quality of life and health within and, in this instance, indigenous culture or community. To add to this, half of the respondents agreed that without myths of creation different choices would have been made in regard to natural and sustainable practices. For the respondents of indigenous nature, this figure rose to 100%.

Signs can thus be found that indigenous communities see potential in RE initiatives and actively pursue them. Especially in more remote communities, the question of energy shifts since availability is limited. In such instances, along the lines of Icaza, Borge-Diez and Galindo (2022) RE initiatives provide a tangible solution. In this case, indigenous communities seem to emphasise solar solutions. Whenever other sources are available and more cost effective and practical, sustainability seems to be of low concern, even when aid in whatever form is provided. Data is lacking from non-indigenous remote communities and their solution in order to cross examine these developments. Especially since Ecuador is still a developing country, availability and basic needs seems to be key driving factors.

CHAPTER 8 - HOW A CULTURE OF SUSTAINABILITY CAN AID IN A BROADER PERCEPTION CHANGE OF RENEWABLE ENERGY INITIATIVES, A DISCUSSION OF FINDINGS

Chapter eight untangles the importance of myths of creation in the light of the creation of a CoS and its consequent effect on RE initiatives and vice versa. After having investigated myths and RE context from a more theoretical viewpoint (chapter 2) as well as engaging in field research to gain contextual and practical experience, this chapter looks at the actually experienced influences of such stories for RE initiatives from an indigenous or local perspective. The previous chapters established that, indeed, in some instances, myths of creation were familiar practices for people, ranging from biblical to scientific approaches. Indigenous practices relating to such stories, however, appear to be limited and fading. Norms and practices in indigenous communities do show a tendency to include other aspects compared to participants of non-indigenous origin, often relating to land cultivation and land protection in a similar manner. The two concepts are intertwined in their view, whereas these appear to be two different entities altogether for non-indigenous respondents. Moreover, indigenous RE initiatives seem to focus on solar energy options and are largely driven by availability, viability and cost-effectiveness over the long term. Indeed, sustainability does play a role in the process, especially for communities more distant from proper infrastructure and who are more involved in eco-tourism. Indigenous communities that are better connected to the country's infrastructure seem to shift away from traditional means and embrace more short term cost-effective and ease-of-use energy provisions. This chapter intends to tackle the sub-questions stated below and formulate answers to them.

- *How are the myths of creation reflected in the cultural practices of indigenous communities in Ecuador, and do they reflect a culture of sustainability within the communities?*

- *Are there any possibilities that indigenous worldview facilitate renewable energy projects or vice versa?*

8.1.1 Experienced knowledge of myths of creation and their impact on the creation of a Culture of Sustainability

The results showcased that, indeed, myths of creation seem to be a fading practice, especially so in relation to Incan mythology and, to a lesser extent, also for indigenous myths. From the angle of the Incan myths, however, this can be traced back to one predominant reason. The Incan empire was

one that was established surprisingly quickly and covered a vast amount of land for a limited amount of time. When compared to the Aztec Empire at its peak, the Incan Empire ruled over almost three times as much land at its highest point of expansion. However, as rapidly as the empire emerged and established itself, the Spanish conquest made it disappear in a similar fashion. Much of modern-day Ecuador was part of the empire at its height, but this was of a relatively short duration all the same (Moore, 2014). Indeed, more indigenous people sided with the Europeans. The European foreigners, eager to break the Incans' hold in the area, were keen to accept. This also makes sense when noting that the Incas often did not interfere too much with conquered peoples but rather just incorporated them into the empire (Murra, 2023). They merely created strategic colonies on a few occasions. Besides, the Incas were far from the only tribe of indigenous people occupying Ecuadorian land and its surroundings. The country nowadays houses over 14 different indigenous groups and thus has a grand history of cultures and myths enriching the country, and this number has only diminished since the Spanish arrival. This largely explains why the Incan influence appears to be minimal to non-existent for the respondents of this interview.

However, some noticeable and important myths of creation of indigenous origin were referenced. The story of the Cañari, in particular, provides an interesting narrative and seems to depict similar stories to that of Noah in the bible and the story of Gilgamesh. However, there are key differences. The Cañari brother that fled the flood encountered macaws, which provided food and drinks, who became the wives and, by extension, the founding mothers of the Cañari. As mentioned, they are as much animal as they are human, and nature is very much a part of this story in ways that differ from, for instance, the bible. In this instance, Noah took it upon himself to gather a pair of all animals in the name of God. This divergence entails, much like Kimmerer (2015) exposes, a difference in the way that the world is viewed. Whereas in this instance, the world is repopulated together with nature in the form of the macaws, in the story of Noah the world is repopulated by design of the humans (through God). Noah allowed a pair of each animal to survive. The Cañari people, interestingly, sided with the Spanish when the opportunity arose to drive out the Incan occupiers (Murra, 2023). This gives an indication of why such a story might be mentioned and linger, while the story of Viracocha is not.

Nonetheless, from the myth of the moon and the sun (page 37) comparisons can be drawn to the Incan mythology of Viracocha. According to the legend, in the time before the Inca, the lands were dark, and as such, no light and no day existed (Margarita B Marín-Dale, 2016). Viracocha emerged to create the earth and the sky and left everything dark. The beings before the humans were undefined but did anger Viracocha. Therefore he emerged and turned the first beings and their lord into stone. He then emerged once more, out of a lake with a great number of people, towards the next lake. At

that place, he created the sun, ordered it to follow him and thereby created the day. Later he created the stars and the moon (Margarita B Marín-Dale, 2016). Other accounts tell variations of this story with approximately the same message (Kolota, 1996). However, in this story, the sun follows Viracocha, creating day and night. Although the sun followed Viracocha, whereas in the story of the respondent the moon followed the sun, a similar phenomenon occurred. This could indicate Incan influences on indigenous stories. Additionally, Quechua elders believe that the water flowing from the mountains (agua unu) not only fertilises their fields but also the blood of the Wamanis (protective mountain deities). An interesting distinction is made by Marin Dale (2016), stating that native Andeans make a distinction between 'normal' rainwater and is considered the work of the Christian god, whereas sacred water that flows from the vein of Father Mountain is a gift from the Wamanis. Marin-Dale continues to state that *"[n]umerous Andean myths about the origin of maize, potatoes, yucca, and other crops draw a parallel between blood— death, burial, or human sacrifice— and the birth of certain crops and plants. It is as if the blood from the body parts or sacrifice of the victims becomes the sacred unu water, the fertilizing blood or creative life principle which gives rise to agriculture and native flora."* Like in the story of the Skywoman, as described by Kimmerer, there are obvious links with natural elements that change the perception of nature and showcase the interconnectedness of humans and nature. And like many responses, even here a connection can be found that incorporates a Christian aspect with indigenous mythology, similar to the festivities in Ecuador that combine important festivities and sees practices merge.

Yet only very few respondents were aware of these mythological stories altogether, which makes their relevance or impact only limiting influential. A part of this can be ascribed to the Spanish arrival on the continent. To an extent, this meant the annihilation of the indigenous people in *"'a radical conglomeration' of active Spanish elements that managed the extensive and violent colonization enterprise in America both latently and openly. This enterprise included war and robbery; enslavement and exploitation; a constant "democlestic" state of punishment; dehumanization and political delegitimization; and a depressive combination of cultural annihilation, memory deletion, and a rigid, often violent, inculcation of a completely new culture"* (Ginzberg, 2018). The cultures of the continent were annihilated, including their cosmology, writings, literature, and lives and were replaced by those of Hispanic origin. Through this indoctrination, it is not a stretch to see the Spanish cultural legacy, in the form of Christian beliefs, intertwine with the local indigenous myths and stories. Even more so, it entails an effort of the indigenous peoples to hold on to their cultural practices by transforming them into more normative festivities. Nonetheless, arguments can be made that such indigenous culture is fading and hence not distinctive enough to attribute them with the quality of a CoS while withholding these qualities from the non-indigenous cultural practices.

In modern-day Latin America, the people of the continent are no longer ruled by the Spanish Crown, nor did they really leave Spanish influences behind them altogether. The Spanish language and Spain's Hispanic culture are dominant, and the population has skyrocketed compared to the period that presupposed and trailed immediately after the Spanish conquest. According to the World-bank, as of 2022, there are over 650 million people living on the continent. 4.7% of them are living below the poverty threshold of $2.15 a day, and 46,5% of the continent is covered by forest. However, when comparing this with the figures of 1990, almost 7% of the area covered by forest has been lost in just 30 years (Worldbank, 2022). This immediately touches upon another issue that the research exposed that is true for the continent but simultaneously for Ecuador itself: the encroachment of indigenous land and communities. As some interviews exposed, indicating by statements as 'before the highway was properly paved', increasingly more indigenous communities face the threat of losing land to infrastructure, non-indigenous people or to the authorities, for instance, due to extractivist activities and mining as indicated by former major Guillermo Churuchumbi. More studies have indicated similar developments happening. Communal land on the coast of Ecuador was seen as a relatively lucrative tourism zone and as a non-state-controlled land, it could only be sold whenever the majority of community members agreed to such proposed changes. This is similar to earlier mentioned means of selling indigenous land and meant land that was highly coveted by developers and land that was constantly being challenged by external investors, fuelled by *"the slippery question of how to produce concrete claims to legitimacy"* (Smith, 2015). Similar observations were made in other works, already as early as 19977. (Luque, 2018 & Salazar, 1977).

Nonetheless, this study revealed signs of different cultural practices compared to respondents of non-indigenous nature, which at the very least shows signs of a CoS in the indigenous communities. First of all, the respondent each had their own way of answering the questions regarding important habits. However, a common impression that the respondent gave was the interconnectedness of cultivation (farming, hunting or other means) and 'taking care of the forest,' relating in a broader sense to the protection of the environment. A clear sense of mutual dependency was established that aligned with statements made by both Kimmerer and Clammer. Despite that myths seems to have little effect on cultural practices today due to different factors, some respondents were aware of stories of norms and values influenced by them, especially those of indigenous origin. The use of firewood, some distant myths and practices such as taking care of the forest were mentioned in line with questions regarding myths of creations, like Kimmerer exposed in her work. Moreover, as Clammer (2016) stated, culture has to do *"to do with identity, with dignity, with expression and hence with conceptions of selfhood, with notions of health and illness, with the human need to symbolise and to create and tell stories"* While simultaneously acknowledging that *"culture may be seen as an*

essential component of sustainability." Since it was established that the indigenous people have a different sense of health, both in terms of their own and their surroundings, this notion holds true for the communities of Ecuador. Moreover, the fact that the Cuyabeno reserve was acknowledged as both limiting and as a way to preserve their way of life indicates a deep understanding of their dependency on nature and the interconnectedness of their lifestyle, even in today's vastly altered setting.

At the same time, the limit of the research needs to be acknowledged. Only a few respondents of indigenous nature in the survey mean that every answer needs to be placed firmly in context. All three could be anomalies in research with a greater indigenous response. Of course, the answers are supplemented with literature and interviews conducted with indigenous respondents, all whilst conducting the survey with people on the fringes of cities and/or in towns with known high populations of indigenous people. Yet, the fact remains that only a very limited number of respondents identified themselves as indigenous, making it hard to draw distinctive conclusions. Moreover, due to this fact, a lot of respondents related their questions to their personal beliefs, surroundings and social context. Although interesting responses were given that even showcased the blend of cultural practices that are present in modern-day Ecuador, this warrants the necessary scepticism regarding the applicability of some features of this research. In essence, a lot more factors could be found for the limited awareness of myths of creation. Even more so, more respondents might have translated into a higher familiarity with such stories, which could convert in a higher yield of affected cultural practices or affected in vastly different ways. Additionally, more time and knowledge of the language would have allowed for a deeper dive into the communities, which would have enabled a greater gathering of data regarding the indigenous communities.

8.1.2 The influence of indigenous worldviews on RE initiatives and vice versa.

RE in Ecuador is not a new concept. Quite the contrary, as the majority of the country's energy needs are generated by hydroelectric power. However, a big part of the energy need is still fulfilled through natural gas and the winning of oil, as indicated by a lot of respondents to the survey and interviews and the fact that Ecuador is still one of the top producers of oil in the LAC area. Among others, reasons for the use of such sources were indicated as being cost-effective, available & easy to access. Moreover and even more practical, they are needed for the fulfilment of basic needs. The cost of fossil fuels in Ecuador in 2019 ranges from $40/MWh to 150$/MWh[9] and has very little room for further cost reductions due to the maturity that is established in the market. Hydroelectric, in comparison, was estimated at $50/MWh in the same year, being very competitive and with more

[9] MWh stands for megawatt hour and equals 1,000 kilowatts of energy generated per hour.

capacity for reduction (Borge-Diez, 2022). The International Renewable Energy Agency (IRENA, 2020) estimates that in 2020 the global weighted average levelized cost of electricity (LCEO) of solar generation fell to $0.039/kWh (translating to $39/MWh). This difference can be attributed to the global average and its particular focus on solar power and might be considered to be higher with regard to Ecuador itself. However, other restraints exist that explain why RE sources are not used more despite being so cost-competitive at a levelized cost of electricity.

High initial investment for setting up solar plantations, or on smaller scale solar panels, proposes a major restraint for the use of solar-generated energy in Ecuador. Furthermore, installation costs as well as operating, maintenance and repair costs, are high, especially compared to other sources of energy that are well-established. This creates a position in which the payback period and risks are high (Mordor Intelligence, 2023 & Icaza, Borge-Diez and Galindo, 2022). In other words, only in particular scenarios do RE initiatives in the form of solar panels (as was the single experienced form of RE in indigenous communities) become a viable option in terms of financial orientation. Apparently, even when solar panels are provided by the government, the incentive is not automatically large enough to translate into operating solar panels within a community that is, in this instance, well-connected to other means of energy and relatively reliable infrastructure. Of course, the fact that no training was given, or skills were present that could aid in this process played a role too. This means that the cost of installation, maintenance, repair and the costs associated with gaining the needed skills and know-how outweighed the use of solar panels, and longer terms benefit both financially, communally (independence) and environmentally. A CoS was thus not apparent, or at the very least not apparent enough, to warrant a change of behaviour.

But as Icaza, Borge-Diez and Galindo (2021) already declared, renewable energy provides tangible opportunities for remote areas in need of energy solutions, proving to be the most efficient way of tackling energy deficits in such areas. This means that, most likely, due to the lack of proper infrastructure and other sources of energy facilitated close by, initial costs would have been high either way. Although maybe not compared to RE sources, it might prove to be more viable due to its lower running costs. Moreover, since such areas are more remote, independency and fewer points of failure (such as connecting to the energy grid through the forest of a reserve or up a mountain slope to almost 4600 meters high) might be more valuable and less costly than conventional means of energy. Combined with independency is also the aim of monitoring their lands and property, in which solar panels could be of importance. Closely related to it is accessibility. Remote places that lack the proper infrastructure for conventional energy have fewer options to pick from and might even have to resort to the use of a generator, such as in the Cuyabeno reserve. This also has higher initial investment and limited use/power generation. Especially when noting that the boats need the same

fuel and trips to the nearby towns for supplies are limited, more factors are involved in the decision to opt for RE initiatives in the form of solar panels. Yet, in both instances in which the indigenous communities make use of solar panels, an argument can be made for the existence of a CoS and its influence. In both instances, particular references could be found to the preservation of nature and the explicit choices made to opt for solar panels. Their dependence on eco-tourism is an inherent part of such choices, as indicated by the following quote: *"[d]estinations are increasingly trying to stand out by combining tourist attractions with experiences, meaning multifunctional establishments – which in German literature are summarised under the umbrella term Erlebniswelten (worlds of experience). In particular, when presenting technical or scientific topics – such as renewable energies – 'worlds of experience' can constitute a promising opportunity to attract visitors"* (Lun, 2015). Using RE is thus also a way to increase attraction for tourists that seek to emerge themselves in a 'world of experience.' Nonetheless, there remain signs that acknowledge the interdependence of the indigenous people and their natural surroundings, often mentioned in connection to land cultivation.

All in all, there are varying reasons with different importance that will contribute to whether or not RE initiatives will become feasible for a given indigenous community. Most importantly, cost-effectiveness and accessibility play a dominant role in the emergence of RE initiatives. However, a CoS present in communities, especially in those located more remotely that have a hard time accessing energy sources nonetheless, that are involved in eco-tourism, that are less influenced by other norms and values and practices and have a greater dependency on their immediate natural environment, can be seen as influential in its own right. In a similar manner, RE initiatives also provide opportunities to monitor indigenous land and their rights to it and might influence the COS in indigenous places.

8.2 Reflections on findings – assumptions vs. outcomes

Prior to the research, several assumptions were made that would allow the research to obtain its goal and proceed with the gathering of data. First and foremost, the influence of the Incan empire that covered a large part of modern-day Ecuador appeared to be significantly less apparent, if apparent at all. As discovered, rather than being a visible part of their history, the people of Ecuador refer to the period more as one of occupation and even pride themselves, in some instances, on the fact that they sided with the Spanish conquerors to drive out the Incan occupiers. At the same time, this occupation and violent obliteration of indigenous culture resulted in a similar absence of indigenous myths. At least in the context of this research. Some indigenous stories could be retold, but in most instances, in very little

detail with likewise few literature to supplement the stories. This made the task of connecting the myths of creation to cultural practices much harder to accomplish. Not given the fact of the absence of such connections but rather the fact that the knowledge of such stories appeared quite minimal and did not provide ample room to make such connections. This could be due to the limited respondents attracted for this study as also a limited knowledge of Spanish that hindered the establishment of rapport. However, in several instances, such connections could be made and a minor view into practices related to myths of creation could be discovered. Yet, due to the limited familiarity with these myths and the limited response of respondents identifying themselves as Indigenous, their applicability remains minimal.

Both myths of creation and cultural practices were interpreted in a wide range of possibilities. Ranging from scientific approaches to religious approaches in the case of myths, as well as ranging from practices simply stated as 'family' to very specific notions of Carnival and taking care of the forest. The assumption was made that in the context of this research, such questions would be more closely related to the given context of myths and nature. However, even in interviews, answers could vary greatly, and the concepts were interpreted in a more personal manner than the topic was thought to be. The use of RE sources in indigenous communities did appear rather consistent with presupposed literature. Icaza, Borge-Diez and Galindo (2022) have been cited in a multitude of instances but did state, and rightly so, that RE initiatives provide tangible solutions in remote communities. This was observed in two out of the three communities involved in this research in the form of solar panels. Although a multitude of reasons can be ascribed to the selection of RE initiatives in remote areas, evidently, such initiatives do come to fruition when the circumstances are right.

CHAPTER 9 - CONCLUDING REMARKS AND RECOMMENDATIONS

This research, despite its best aims and intentions, has to acknowledge its limitations in several aspects. To justly study the historical background of the indigenous inhabitants of Ecuador, their development through time and their accompanying perception of nature in relation to RE goes beyond the scope of this research. The extent of just the Ecuadorian indigenous heritage in the country is too broad to justly study for a research paper of this size and resources. This paper does, however, continue a much-needed drive into indigenous knowledge and their vision of the natural world. In 2016 Clammer stated that "*in none of the foundational literature is the role of culture considered, either in the sense of examining the ways in which cultural patterns […] have contributed to the creation of unsustainable lifestyles, economic practices, agriculture and food systems and urbanization, or in the sense of imagining future sustainable cultures."* Yet in recent years the topic of sustainability within the development spectre has gained moment and transcended the external word of the discipline that was dominant in the 20 years prior. Instead, it focuses increasingly on the inner worlds of people and focusses on the cultural aspects that Clammer argued was missing from the foundational literature. This is mostly due to the fact that no significant change has manifested during the period in which the sustainable development scholarship focussed on the economy, ecology, social sciences or other grand narratives (Ives, 2019). This thesis provides a steppingstone to continue this novel route taken, incorporating indigenous culture in imagining future prospects, aided by the term 'Cultures of Sustainability'. Especially since such cultures, as demonstrated by Kimmerer (2013), inherently have a very different notion of and relation to nature that is worth exploring in other geographical dimensions. One example of just how effective this new emphasis can be is already present in the country itself in the form of the incorporation of Buen Vivir into the constitution of Ecuador. This promotes other aspects, such as the environment and the wellbeing of the individual within the social context. Another example of such an emphasis can be found in the relevant approach of Gray and Manuel Navarrete (2021) in which the leveraging of inner worlds and subjectivity are key aspects of transformations.

In order to challenge the dominant Western discourse, multiple perspectives and other forms of knowledge are required. In essence, to change the 'techno-scientific' knowledge systems is to emphasise indigenous cultures and exposing Western individuals to Indigenous knowledge (Gray & Manuel-Navarrete, 2021). This thesis thus focusses on indigenous knowledge through myths of creation and their accompanying cultural practices. As a result, it exposes how novel technology and initiatives such as RE in the form of solar panels, are viewed and propose opportunities in indigenous communities. Essentially, they provide workable solutions in remote indigenous regions for energy

concerns and might even provide aid in monitoring their land and the possible encroachment of it. Additionally, it seeks to emphasise the destruction that has taken place in the South American countries, or the continent in that regard, since the arrival of Europeans on the continent regarding cultural aspects. Many indigenous people still struggle with the recognition of their people and are still trying to overcome the devastation that their people have faced. Indeed, increasingly more organisations appear on the political playing field that fight for the hard-needed rights of the indigenous population, such as CONAIE and Pachakutik. Additionally, national indigenous organisations are providing solutions of their own and pursue new technologies such as RE on their own, since government progress appears random and at times, slow. Yet, sustainable living is not always a primary concern. This thesis also exposes the need for many people to fulfil their basic needs trumps sustainable concerns and solutions, even when aided in the process. Practical and economical drivers are often more apparent than other concerns and might hinder sustainable development if not properly addressed simultaneously. The latter is true for both remote and/or indigenous communities, as for the entire population of Ecuador. Hydroelectric generation is indeed a major factor in the country, but so is crude oil and the mining thereof. The recent referendum rejecting the expansion of oil extracting from indigenous land proves that the population is increasingly aware of the effect of oil in the country, yet Ecuador still is one of the major producers of the LAC countries. Hence, more action is required.

A different view of the indigenous culture and their knowledge is vital. Even more so, to investigate how we can learn from it. Information on myths of creation is scarce. Not only are the myths fascinating to hear and investigate, but it also provides an insight into the cultures that engage with and use them. As such, it provides a lot of ground for research to be done in regard to such myths. During this research, it was noted that for South American cultures very little different literature exists on myths and stories. Indeed, works do exist that cover these topics but often regard similar and more well-known myths and legends. Variation between such works is thus limited. Further research is therefore vital to be conducted on the existence of different Cultures of Sustainability across the globe and the relevance of creation myths. Indeed, Kimmerer makes a convincing case for the existence of such cultures and their impact on cultural practices in today's world. However, this research only scratched the surface of the opportunities that can be explored in relation to this concept in combination with the recent emphasis on inner worlds. Many more countries or indigenous cultures can be explored with a similar objective. Moreover, this perspective on nature and its role in the dominant unsustainable culture of the Western world, as established by Clammer, can prove to be vital as drivers of change. It allows us to challenge our own perception of nature and how to justly incorporate it into our society in a way that emphasises the interconnectedness and

interdependency of humankind and nature. Even a little shift in these viewpoints are important developments in the journey to sustainable practices.

In terms of policy, the research shows that tendencies are apparent in indigenous communities to favour sustainable practices whenever feasible and other factors allow for it. However, simply providing solar panels without proper training or arrangements appears counterproductive. Not only are high initial investments made, but they are never recovered if improperly applied. Instead, such initiatives need to be created together with indigenous or remote communities. It is imperative to not only make accessible the necessary knowledge for the maintenance and installation of RE initiatives but also to involve the local populations directly. RE initiatives provide ample opportunity for job creation, knowledge exchange and education. This holds especially true for communities, whether of indigenous nature or not, that seem to have little to no decent infrastructure connection. Instead of aiming to connect them to such structures at greater costs, efforts should be made to make them independent and self-sufficient. This is true for their energy supply as much as their other basic needs. When aiming to do so, a case can be made to appeal to their dependency on their natural surroundings and how RE initiatives can aid in the desire to maintain that important balance. However, when pursuing such routes, questions of land ownership and rights need to be addressed beforehand, and such initiatives need not be ploys, or appear as such, in order to encroach on indigenous land. Rather, mutually beneficial agreements can be made that fairly benefit both the state and the inhabitants, and even might aid indigenous population in monitoring their lands.

When the Spanish conquest occurred, many indigenous people lost a link with their heritage. Ginzberg eloquently states the importance of this event: *"When this link was destroyed, something essential in the life of the indigenous population was lost forever to their detriment"* (Ginzberg, 2018). Yet, in many instances, albeit covered by the dominant Hispanic culture, such links can still be found. If we expand this scope, such links might still be hidden in many indigenous populations across the globe. The task remains to explore those hidden links, see what we can still learn from these cultural practices and how they might affect our view of nature for the better.

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Kimmerer, Robin Wall. 2015. Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge and the Teachings of Plants. First Paperback edition. Minneapolis, Minn: Milkweed Editions. pp.3-10.

Kimmerer presented in this work the idea of linking myths of creation to cultural practices and other cultural phenomena. In this work, the distinction is made between the Western view of the world in the story of Adam and Eva and that of the Skywoman, who thanks her life to nature instead of conquering it. This work thus laid the basis for the research into myths of creation as a starting point for a cultural heritage that is more susceptible to sustainable practices and green energy.

Clammer, J. R. 2016. Cultures of Transition and Sustainability: Culture After Capitalism. New York: Palgrave Macmillan. https://doi.org/10.1057/978-1-137-52033-3.

This work by R. Clammer provides the key framework for this study's research. Its concept of a 'culture of unsustainability' is used as a pathway into the research for indigenous cultures of sustainability. It defines what such a culture entails and how these cultural norms, values and practices have lasting and clear effects on the surrounding natural world. However, the author omits in his work the existence of other sustainable practices. This is where the paper aims to compliment the work and showcase the existence of a 'culture of sustainability'.

Icaza, Daniel, David Borge-Diez & Santiago Pulla Galindo. 2022. ¨Analysis and proposal of energy planning and renewable energy plans in South America: Case study of Ecuador¨. In Renewable Energy. Volume 182, Pages 314-342, ISSN 0960-1481, https://doi.org/10.1016/j.renene.2021.09.126.

This work establishes the value of RE-generated energy sources in remote areas that aim to fulfil their energy needs. It provides an insight into how RE initiatives can aid in such questions and the associated costs that are, or even would be involved in particular scenarios. Their research corresponded to energy questions in remote areas and proved a solid foundation for this thesis.

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ANNEXES

Annex 1: interviews conducted with accompanying blueprint of the semi-structured interview questions.

Interviews with indigenous people

1. Indigenous guide 1, in the Cuyabeno reserve.
2. Indigenous guide 2, in the Cuyabeno reserve.
3. Non-Indigenous guide 3, in the Cuyabeno reserve.
4. Indigenous woman, originated from a Achuar community in the East.

Interview Sample:

Age:..... **Ethnicity:**..... **Gender:** ..... **Date:**.....

Introduction	**Probes**
1. What does a day in your life look like?	Daily activities, work in/around house, family.
2. How do you feel about the current state of life in Ecuador?	Prosperity, wellbeing, safety.
Myths and related	**Probes**
3. Are you aware of any story of creation of the land of this area or a myth regarding the creation of the earth? How do these stories unfold?	Both local and global, of the entire earth or merely a country or region
4. How do you know about these stories?	Parents, family, communities etc.
5. Can you name other important myths or tales of your upbringing or your culture? Please explain.	Tales of harvest, life, fishing, hunting, fertility or anything.
6. In what way did these stories influence your life?	Did they become holidays, or important dates in the year etc.
Cultural practices and rituals	**Probes**
7. Would you say that there are certain customs or practices that are unique to your household, or even culture that differ distinctly from the rest of the world?	Ways of behaving, respect, decency, treating people,

Why so?	animals, nature, food.
8. Do you feel like these practices are important aspects of your life, and in what way?	Do you attach a lot of value to the practices, how important are they.
9. Are there aspects of these practices that you would consider to be beneficial for the globe? Why so?	Aiding other people, relieving poverty or the environment
10. Do you believe that a part of these practices are the consequences of the myths and stories of creation? Please elaborate.	Tales and traditions passed on, similar to the stories.
11. Can you see distinct aspects of those stories back in your everyday life? And in what way?	A similar practice, a holy flower or similar.
Green or/and sustainable initiatives	**<u>Probes</u>**
12. Are there any green or sustainable initiatives in your community and how do they look?	Plant, farming, energy, garbage disposal
13. In what way do you feel that myths and the related cultural tendencies have an effect on these sustainable initiatives?	Do myths tell similar tales or examples of sustainability?
14. What kind of energy sources do you use in your daily life? And why do you use those energy sources?	Cooking, lighting, etc. Availability, practical
15. Do you believe that the selection of energy sources is influenced by cultural factors?	Think of heritage, stories and practices.
16. Are you familiar with green energy options in the country? Can you name a few?	Biogas, wind, hydro, solar, other?
17. Do you feel that those options are important for the future of the Earth? and how do you think we as humans should proceed?	To combat degradation, resource extraction, global warming
18. Do you believe that myths and tales have had an impact on the view of people upon the recent trend in green energy in the country? And in what way?	Indirectly, practices through tales, views through stories or connection with nature

Interview with political representatives

1. Guillermo Churuchumbi, Indigenous mayor of Cayambe and involved in Pachakutik, a political indigenous rights organisation affiliated with CONAIE.

Interview Sample:

Introduction	**Probes**
1. What is Pachakutik and how is it connected to CONAIE?	Primary tasks, speciality, involvement socially, politically, current situation
2. What function do you occupy in the Organisation? And what is your own background?	Speciality, function, education and more.
3. What kind of activities are you involved in?	Managements, sponsors, political activities etc.
4. How does the organisation maintain itself? How is it funded?	Income, connections and affiliations.
Education and Cultural practices	**Probes**
5. Since you have been the mayor of Cayambe, how does that influence your position? What is the most important topic in today's world?	In your own experience, what is most prominent.
6. Did your period as mayor bring certain issues to light or were you already aware of those?	Real life or hand on experiences in the field.
7. How are traditional indigenous practiced passed through to the next generation? Are there specific educational institutes?	school, programmes, organisations or NGO's?
Indigenous myths of creation	**Probes**
8. Are you aware of any important traditional myths?	what is their significance, why is it important, and what make up a myth or story? Think of Wyracocha
9. In what way were these stories transferred to you?	Stories, parents, families or local communities.

10. What is the function of such stories, and in what way did they or their function change over the past years?	Educational, explanation, entertainment or other.
11. Can you feel a distinct difference between the stories of the people in Ecuador (and their culture) and the stories more heavily influenced by the inca culture such as Peru?	Where do they differ, why do they differ, do you feel there is a distinct difference? A different view upon the shared Inca history?
12. Since there are over 14 different indigenous cultures in Ecuador, how do you unify their interests? And how do they differ in their cultures, and as a result, in their goals and aims?	Differences between them, the encroachment of the mestizo´s? Governmental influences?
Green energy and indigenous culture	**Probes**
13. What types of energy sources are dominant in Ecuador and why so? What reasons are usually tied with the choice of energy source?	different energy sources, how familiar are you with it?
14. How are these energy sources distributed, generally, to the people?	General electricity grid.
15. Can we observe a distinct difference between the energy use in indigenous communities and the people in the urban areas?	In what specific way, different energy sources or even usage of the available sources?
16. Do you believe that the different indigenous cultures within the country can create different practices that impact the choice of energy source?	Through their view on nature?
17. Do indigenous myths of creation, directly or indirectly, the usage of energy sources and in what way?	-
Concluding questions	
18. How do you feel or believe that this cultural tendency of indigenous population can be of influence in the sustainability issue and the survival of the earth in the future?	Future prospects, learning opportunities?

Interview with university/research staff

1. Professor Tony Villoria

Interview sample:

Introduction	**Probes**
1. What function do you occupy in the University?	Daily activities, speciality
2. In what kind of research have you been involved in the past few years at the University?	sustainable efforts, cultural practices, communities, governmental
Environmental engineering and sustainability	**Probes**
3. Since you are a teacher of environmental engineering, what do you feel like, currently, is the most important topic to discuss?	In your own experience, what is most prominent.
4. Do you feel like sustainability and environmental degradation are prominent topics in Ecuador?	From the public, government, institutions, universities
5. Is green energy is a relevant factor to this issue in Ecuador, and does it receive the right amount of attention?	From the public, government, institutions, universities
Indigenous relation to these issues	**Probes**
6. In your experience, is the issue of environmental degradation or destruction more pressing for the indigenous population?	talks, conferences, privately
7. Does the indigenous population have a different view on this issue, and in what way does this come to realisation?	Do they act differently, value different policies, etc
8. How is the usage of green energy in indigenous communities? Can you see a difference with the rest of the population? If so, in what way?	More or less, what types

9. Does the indigenous population have power in relation to shaping solutions for these issue?	Politically, socially, culturally

Myths of creation	**Probes**
10. What cultural practices are prevalent in indigenous communities?	That are different, noteworthy, in your experience
11. Do you believe certain practices play a role in their view and relation with sustainability and green energy? why?	Shape certain habits of certain costumes or beliefs
12. Does this also extend to their relationship with nature in itself? How?	More towards green aspects
13. Are myths of creation, for example, influential in the shaping of these cultural practices?	The cultural practices, how do they come to be.
14. As a result, are those myths and stories, whether direct or indirect, influential for the different views and approaches towards sustainable measures? And how to green energy sources in specific	-
15. How do you feel or believe that this cultural tendency of indigenous population can be of influence in the sustainability issue and the survival of the earth in the future?	Future prospects, learning opportunities?

Additionally, interview request for the University of Salesiana, Cuenca:

Dear Vice Chancellor Victor Moscoso Merchan,

My name is Yannick van Hattem. I am a student of the master´s program International Development Studies of the Utrecht University. The research work that I am carrying out is about the power of culture in relation to myths of creation and the subsequent view on green energy. I need to interview experts in the area of cultural practices and green energy / sustainable practices, and I consider the opinion of Dr. Viloria Avila Tony important. Therefore, I request your authorization to interview Dr. Viloria Avila Tony and attach his opinion to the final report of my research work.

Thank you for your help.

Yours sincerely,

Yannick van Hattem

Annex 2: sample of the oral certificate of consent used for the interviews.

Title of the research project: *The enabling power of Culture: The Green Transition in Ecuador*

Objectives of the study: This research aims to investigate the power of culture through myths of creation. Such myths and stories can shape cultural practices, which can create a specific culture of sustainability in relation to green energy sources. This research aims to see if indeed such a culture is present in Ecuador that stands out from the rest of the world, and whether it provides an opportunity to promote a different relation to nature for humanity to become greener and more sustainable.

Researcher/research team: Yannick van Hattem, University of Utrecht. Through AICESEC and the Foundation in Favor of Life.

A: The participant orally confirms that he/she has:

- Received and read the information regarding the research, or it has been read to him/her.
- Understands that the location of the project will be known and that he/she will be referred to as "a member of the community", ¨university professor¨ or similar in publications.
- Has had the opportunity to ask questions and that any questions have been answered to the participant's satisfaction.
- Understands that his/her participation is voluntary and that he/she can withdraw from the study at any time without any need to justify the decision.
- Understands the information provided related to data privacy, data storage, and publication.
- Understands the rights associated with the information provided.

B: Oral consent to use personal data

- The interviewee consents voluntarily that the following personal data may be publicly used:
- Ethnicity
- Age
- Job title / status in community

C: Confirmation of age

- The interviewee is either over 18 years old or above 16 years old and a guardian gave consent to participate in the interview.

Participant number: _____

Print Name of Researcher/person taking the consent: _____

Signature of Researcher /person taking the consent: _____

Date: _____

Annex 3: online/physical survey

English:

Questionnaire Master Thesis research

The influence of tales, myths on green energy
and the creation of a ´culture of sustainability´.

Dear participant, thank you for taking the time to fill in this survey. My name is Yannick van Hattem, and I am currently studying International Development at the University of Utrecht, in the Netherlands. I am conducting research regarding the power of culture and cultural practices in relation to sustainable practices and green energy options and would like to know your experiences. The survey consists of 34 questions and will take no longer than 10 minutes to complete. This survey will be taken anonymously; no answers can be traced back to any person and no one will be identifiable in the research itself. No answers are wrong!

Any question that makes you feel uncomfortable, you can leave open. Thank you for your participation.

- By checking this box I agree to take part in this research and give consent to use the answers given as data in the mentioned thesis.

Date: _____ Number: _____

Background Information

1. What is your gender?
- male
- female
- Other: …….

2. What is your age?
- under 15
- 15-24
- 25-34
- 35-44
- 45-54
- 55+

3. I identify myself as belonging to the following Ethnic group:
- Afro-Ecuadorian
- Amerindian / Indigenous
- Caucasian

- Mestizo
- Montubio
- Other, namely: ……

Tales and myths of creation.
The following questions will regard your experience with the tales and myths of your communities and more broadly of the country. In what way have you experienced them and how familiar are you with them.

4. Are you aware of any tale or myth of the creation of the world (or the local region)?
   - yes
   - no

5. *If the previous answer was no, continue to question 6.*
   Can you tell me about this story?
   - yes:

     ……..

     ……..

   - No

6. Are you familiar with any other important tales or myths ?
   - yes
   - no

7. *If the previous answer was no, continue to question 8.*
   Can you name these myths (or important characters)?

   - …….
   - …….
   - …….
   - …….
   - no

8. Do you feel that the teaching of (these) tales and myths occupies an important place in your community?
   - yes
   - no

9. In my household these stories are retold every now and then, even today.
   - I agree
   - I disagree

10. Are these teachings as important now as they were in the past?
   - yes
   - no

Cultural practices

The following questions will ask about practices or habits that you feel like are particular to your way of life and the relation to the myths of creation or other prominent tales.

11. Are there certain habits or practices that are particular to your culture or local communities that stand out from the rest of the world?
   - yes
   - no

12. Do you consider these practices important aspects of your everyday life?
   - yes
   - no

13. Could you live in the same way without these practices?
   - yes
   - no

14. Could you live in the same community without these practices?
   - yes
   - no

15. Could you live in the same country without these practices?
   - yes
   - no

16. Could you provide a couple brief examples of these important practices?

- ……
- ……
- ……
- ……

- no

17. My daily habits and cultural practices are passed down on me from my parents.
    - I agree
    - I disagree

18. Myths of creation or other myths have influenced the way I experience my life through daily habits
    - I agree
    - I disagree

19. Myths of creation or other myths have influenced the way my parents have experienced their life through daily habits.
    - I agree
    - I disagree

20. These myths have influenced the way practices and habits look today.
    - I agree
    - I disagree

Sustainable initiatives and green energy sources

The following sections deals with your experience of and with sustainable initiatives and green energy sources. In what way, shape or form did these exist in your life and how did they develop?

21. Are there efforts in your community to create sustainable solutions to everyday problems, such as food, water, power or other issues?
    - yes
    - no

22. Are there similar efforts within your own household?
    - yes
    - no

23. how would you feel about more / other sustainable initiatives in your area?
- positive
- neutral
- negative

24. Do you believe sustainable or green efforts are needed in today's world?
- yes
- no

25. What kind of energy sources are do you use on a daily basis, for instance for cooking, lighting etc?

- ---

---

26. Why do you use that or those particular energy sources?

- ---

---

27. Would you consider your selection of energy sources as being influenced by your cultural heritage? If so, in what way?

- ---

---

28. Which green energy sources are you familiar with?
- Hydropower
- Wind
- Solar
- Biogas
- Other, namely: ……..
- None

29. Do you believe that green energy sources in specific (such as solar, wind, hydro, biogas or others) are the future in terms of sustainability for the planet?

- yes
- no

30. If questions 26 was answered with no, please proceed to question 28.
Why do you feel green energy can be the future in terms of sustainability?

- ……

  ……

  ……

  ……

  ……

31. What has had the most impact on your view on sustainable and green practices?

- ……

  ……

  ……

  ……

  ……

32. Practices and habits that are particular to my culture have impacted my view on sustainability and my relationship with nature
    - I agree
    - I disagree

33. Myths of creation and tales have affected my view on sustainability and my relation with nature
    - I agree
    - I disagree

34. Without these myths of creation, I would not make similar choices with regards to nature and sustainability
    - I agree
    - I disagree

Thank you for your cooperation. This is the end of the survey.

Spanish:

Cuestionario Investigación Tesis de Maestría:

La influencia de cuentos, mitos y prácticas culturales en fuentes de energía verde y sostenible.

Estimado/a participante, gracias por tomarse el tiempo de completar esta encuesta. Me llamo Yannick van Hattem y estudio Desarrollo Internacional en la Universidad de Utrecht, en los Países Bajos. Estoy llevando a cabo una investigación acerca de la relación de la cultura y las prácticas culturales con respecto a prácticas sostenibles y opciones de energía verde, por lo que me gustaría conocer sus experiencias.

La encuesta consta de 34 preguntas y no tomará más de 10 minutos en completarse.
Esta encuesta se realizará de forma totalmente anónima. ¡No existen respuestas incorrectas! Si alguna pregunta le hace sentir incómodo, puede dejarla sin responder. Gracias por su colaboración.

- Al marcar esta casilla, acepto participar en esta investigación y doy mi consentimiento para utilizar las respuestas dadas como datos en la tesis mencionada.

Fecha:..... Número:.....

Información de Antecedentes

1. ¿Cuál es su género?
- masculino
- femenino
- otro: ……

2. ¿Cuál es su edad?
- menor de 15 años
- 15-24 años
- 25-34 años
- 35-44 años
- 45-54 años
- 55 años o más

3. Me identifico como parte del siguiente grupo étnico:
- Afro Ecuatoriano
- Indígena
- Caucasica
- Mestizo
- Montubio/a
- Otro, especificar: ……..

Cuentos, mitos e historias de origen

Las siguientes preguntas se referirán a su experiencia con los cuentos y mitos de sus comunidades y, en general, del país. De qué manera los ha experimentado y qué tan familiar está con ellos.

4. ¿Conoce algún cuento o mito acerca de la creación del mundo o de la región local?
   - sí
   - no

   Si la respuesta anterior fue no, continúe con la pregunta 6.
5. ¿Puede contarme acerca de esta historia?
   - sí: ……

     ……..

     ……..
   - No

6. ¿Está familiarizado/a con otros cuentos o mitos importantes?
   - sí
   - no

   Si la respuesta anterior fue no, continúe con la pregunta 8.
7. ¿Podría nombrar estos mitos (o a sus personajes importantes)?

   ……..

   ……..

   ……..

   ……..

   - no

8. ¿Considera que la enseñanza de estos cuentos y mitos ocupa un lugar importante en su comunidad?
   - sí
   - no

9. En mi hogar se vuelven a contar estas historias de vez en cuando, incluso hoy en día.
   - Estoy de acuerdo
   - No estoy de acuerdo

10. ¿Considera que estas enseñanzas son tan importantes en la actualidad como lo eran en el pasado?
    - sí
    - no

Prácticas culturales

Las siguientes preguntas se referirán a las prácticas o hábitos que considera particulares a su forma de vida y su relación con los mitos de creación u otros cuentos prominentes.

11. ¿Existen hábitos o prácticas específicas dentro de su comunidad/cultura que destaquen del resto del mundo?
    - sí
    - no

12. ¿Considera a estas prácticas como aspectos importantes dentro de su vida cotidiana?
    - sí
    - no

13. ¿Podría vivir de la misma manera sin estas prácticas?
    - sí
    - no

14. ¿Podría vivir en la misma comunidad sin estas prácticas?
    - sí
    - no

15. ¿Podría vivir en el mismo país sin estas prácticas?
    - sí
    - no

16. De forma breve, ¿podría proporcionar algunos ejemplos de estas prácticas importantes?

    - ……..
    - ……..
    - ……..
    - ……..
    - no

17. Mis hábitos diarios y prácticas culturales son transmitidos por mis padres

- Estoy de acuerdo
- No estoy de acuerdo

18. Los mitos de la creación u otros mitos han influenciado la manera en que experimento mi vida a través de hábitos diarios
    - Estoy de acuerdo
    - No estoy de acuerdo

19. Mitos de la creación u otros mitos han influenciado la manera en que mis padres han experimentado su vida a través de hábitos diarios
    - Estoy de acuerdo
    - No estoy de acuerdo

20. Estos mitos han influenciado la manera en que las prácticas y hábitos se ven hoy en día
    - Estoy de acuerdo
    - No estoy de acuerdo

Iniciativas sostenibles y fuentes de energía verde

Las siguientes secciones tratan sobre su experiencia con iniciativas sostenibles y fuentes de energía verde. ¿De qué manera, forma o modo existen en su vida y cómo se han desarrollado?

21. Existen esfuerzos en su comunidad para crear soluciones sostenibles a problemas cotidianos, como falta de alimentos, agua, energía entre otros?
    - sí
    - no

22. ¿Hay esfuerzos similares en su hogar?
    - sí
    - no

23. ¿Cómo se sentiría si existiesen más iniciativas o iniciativas distintas con respecto a la sostenibilidad en su área?
    - positivo
    - neutral
    - negativo

24. ¿Cree que los esfuerzos sostenibles son necesarios hoy en día?
    - sí
    - no

25. ¿Qué tipo de fuentes de energía utiliza en su día a día? (p. ej. para cocinar, iluminación, etc)

    - ---

---

26. ¿Por qué utilizas esas fuentes de energía en particular?

- ---

---

27. ¿Considerarías que la selección de tus fuentes de energía está influenciada por tu patrimonio cultural? Si es así, ¿de qué manera?

- ---

---

28. ¿Cuáles fuentes de energía verde conoce?
    - Hidroeléctrica
    - Eólica
    - Solar
    - Biogás
    - Otra, a saber: ……..
    - Ninguna

29. ¿Cree que fuentes de energía verde (como la solar, eólica, hidroeléctrica, biogás entre otras) son el futuro en términos de sostenibilidad para el planeta?
    - sí
    - no

Si la pregunta 26 fue respondida con no, proceda a la pregunta 28.

30. ¿Por qué cree que la energía verde puede ser el futuro en términos de sostenibilidad?

……..

……..

……..

……..

……..

31. ¿Qué es lo que más ha impactado en su opinión sobre las prácticas sostenibles y/o verdes?

……

……..

……..

……..

……..

32. Prácticas y hábitos que son propios de mi cultura han impactado en mi opinión sobre la sostenibilidad y mi relación con la naturaleza.

- Estoy de acuerdo
- No estoy de acuerdo

33. Historias de origen, mitos y cuentos han afectado mi opinión sobre la sostenibilidad y mi relación con la naturaleza
- Estoy de acuerdo
- No estoy de acuerdo

34. Sin estos mitos e historias de origen, no tomaría decisiones similares en cuanto a la naturaleza y la sostenibilidad
- Estoy de acuerdo
- No estoy de acuerdo

Gracias por su cooperación. Este es el final de la encuesta.