LUISS

Department of Political Science

Course of Contemporary History

Indigenous Knowledge as a Driver of Sustainable Development: a Study on Māori Resource Management.

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Academic Year 2019/2020

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INTRODUCTION

One of the most unprecedented challenges of our time is constituted by climate change. Scientific evidence for warming of the climate system is unequivocal[1] and the current trend proceeds at a rate that is unmatched. This phenomenon is global in scale and impact all sectors of society, but countries with the lowest ability to adapt are more vulnerable to climate-change-related environmental hazards. Among these, indigenous people are the most exposed due to their location in high risk and marginalised environments and their resource-based livelihood. Their situation is exacerbated by a lack of consistent recognition of rights over ancestral land and sovereignty over natural resources within. Indeed, land titling and demarcation procedures are often arbitrary and concluded without duly taking into account indigenous customary law and collective property regimes. The absence of an appropriate legal security tenure is not the only factor perpetuating marginalisation and vulnerability.

The fact that modern adaptation and mitigation programmes, as well as their implementation remain strictly anchored on western scientific knowledge is yet another major threat. The paucity of references to the holistic worldview of indigenous peoples in sustainable development agendas impairs their resilience and weakens the access to their traditional resources. "*Indigenous peoples are facing these escalating pressures at a time when they already exposed to the significant stress from climate change and accelerated natural resource development in their traditional territories*[2]*"*. In such a troubled panorama, a comprehensive set of fundamental indigenous rights, duly implemented at national and local level is fundamental for the survival and flourishing of indigenous knowledge and related practices.

Recognising this concern, the paper attempts to answer the question of whether indigenous sustainable resource management could be a driving force for sustainability and conservation. It does so by providing contextualised evidence of indigenous knowledge benefits on the environment. How did indigenous peoples manage the complex linkages and interactions with nature while exploiting

[1] The Intergovernmental Panel on Climate Change. (2014). *Climate Change 2014: Synthesis Report.* IPCC, Geneva, Switzerland.

[2] Raygorodetsky, G. (2011, December 13). Why Traditional Knowledge Holds the Key to Climate Change? The United Nations University. Available at: *https://unu.edu/publications/articles/why-traditional-knowledge-holds-the-key-to-climate-change.html*

the surrounding environment? Was resource exploitation sustainable? What can be drawn from their management system for modern governance structure? [3]

Given the fact that climate has always been changing, though at a slower pace, the aim of the study is to investigate how indigenous communities have historically undergone a cultural adaptation and how their coping strategies can further contribute to the sustainability discourse. Indigenous communities are not mere victims of climate change. The knowledge of indigenous peoples is not a static set of traditions, but rather a dynamic system, confronted with environmental variability and unpredictability and collectively and continuously reshaped [4]. They have developed a resilient ecologic ethic able to effectively protect biodiversity and sustainable livelihoods, in a way that balance and intergenerational equity is ensured. This is mainly due to the fact that indigenous peoples have always identified themselves through their bond with the environment and moulded their customs and practices in accordance. Their relationship with natural resources is infused with spiritual and cultural importance, which transcends the mere economic value. Indeed, the way they understand nature is through a holistic perspective for which their own well-being is rooted in their capabilities to nurture their natural systems.

On the other hand, western conservation philosophies tend to separate humans from nature. There is a wide consensus among the scientific communities that anthropogenic intervention and especially ever-growing dependence on fossil fuel-based modes of production have been the main catalyst of such change. This has led to the belief that for the environment to be preserved or restored, people must be excluded. However, such a division is undesirable as ecosystems and social systems are interdependent, shaping and sustaining each other. Western science also classifies knowledge in separate clusters or disciplines and has highly specialised expertise in narrow domains. This reductionist perspective has proven unable to tackle complex transdisciplinary issues and that is why in the midst of a global environmental crisis indigenous knowledge is increasingly resorted to.

This study aims at demonstrating that the chronical failure of ecosystem-based management plans can be cured through the contribution of ancestral indigenous knowledge. It has been gradually accepted that "*the vastness and complexity of today's challenges require the mobilisation of the best available expertise*[5]*"*. The recognition of self-determined development paradigms moulded around

[3] Kahui, V., Richards, A. (2014). Lessons from Resource Management by Indigenous Māori in New Zealand: Governing the Ecosystems as a Commons. *Ecological Economics*, *102*, p.1-7
[4] United Nations Educational, Scientific and Cultural Organization. (2017). *Local Knowledge, Global Goals*. New York: Local and Indigenous Knowledge Systems, p.28
[5] Ibidem p.45

indigenous knowledge systems is most likely to complement western science, by virtue of their qualitative or holistic character. Today, it is increasingly recognised that partnerships or co-managements regimes between the two parties can bring novel solutions. However, for these synergies to work, top-down plans are not enough. A prerequisite for long-term sustainable planning is indeed putting indigenous knowledge systems on an equal footing, rather than "integrate" it into science, presupposing analysis and validation of this form of knowledge to be accepted. Western and indigenous science have distinct logics and cultural roots, and ignoring them would result in misinterpretation, devoiding participatory approaches of any significance. The challenge is hence to ensure that local and indigenous knowledge are included in contemporary science-policy-society fora on issue such as biodiversity and climate change assessment and management as well as natural disaster preparedness and sustainable development. Working either at local, national or international levels, the objective remains to foster transdisciplinary engagements and pilot novel methodologies to further understanding of climate change impacts[6].

This paper proposes a concrete example of the benefits of integrating indigenous knowledge in environmental legislation, by assessing Māori Resource Management in the New Zealand legal framework. Māori are a large indigenous group, located in Aotearoa, generally known as New Zealand. Focusing on their traditional society, the study want to demonstrate the positive relationship between sustainable development and inclusion of the Māori principle of stewardship and traditional sustainable practices. The country is indeed at the forefront of sustainable development, which a rich body of law guiding its implementation. According to the Sustainable Development Goals (SDGs) Index New Zealand ranks as one of the top nations oriented towards achieving the SDGs by 2030[7]. This is mainly due to the strong influence of indigenous ecological ethic in politics and society and the shared efforts to protect and restore native wildlife. The study will combine horal history with the available literature in order to examine traditional knowledge and awareness of climate change and related environmental risks. It is important to note that the author has participated in the Conservation Volunteers New Zealand's Living Heritage programmes in the Wellington Region, working alongside representatives of local tribes in restoring native plants of the coastline. On the other hand, her understanding of the Māori language is elementary, forcing the exclusion of monolingual documents.

[6] Ibidem p.45
[7] Sachs, J., Schmidt-Traub, G., Kroll, C., Lafortune, G., Fuller, G. (2019). Sustainable Development Report 2019. New York: Bertelsmann Stiftung and Sustainable Development Solutions Network (SDSN).

The current interest in the promotion of indigenous and local knowledge is relevant in three main dimensions. Firstly, the paradigm shift to holistic management will have a general beneficial effect on the ecological discourse, updating the fictitious dichotomy between man and nature with a more profound understanding of the environment. It will educate more capitalistic societies in viewing nature not as a commodity, but rather as the foundation for well-being and prosperity. Secondly, cooperation would consistently benefit indigenous communities, by ensuring some degree of territorial security, sovereignty over land customary resources. The rise of corporate globalization, neo-liberalisation and commodification of social and ecologic integrity pose serious threat on their ancestral knowledge and its system of transmission. It is only cooperation that could on one hand, safeguard their cultural integrity and on the other, stop further exploitation of their knowledge, practices and innovations. This means departing from economic and social systems perpetrated by colonialism and creating further disparities and alienation. Furthermore, indigenous peoples, as almost exclusively dependent on nature, will be the one to benefit the most from effective climate change mitigation or restoration programmes. Lastly, indigenous knowledge being the product of sustained interaction and adaptation with the surrounding environment, would be stripped out of its pragmatic significance if departed from its territorial context. This means that indigenous practices while having a tremendous potential locally, cannot be practically implemented elsewhere.

The first chapter adopts an historical approach in order to depicts the long development of indigenous right in international law. It will primarily focus on the relevant rights regarding sovereignty over lands and customary natural resources. The second chapter will then define sustainability and illustrate how indigenous environmental epistemologies could be instrumental for its achievement. This section will enumerate the ways in which indigenous knowledge contributes to the formation of new development paradigms where sustainability is not merely balanced out by economic interests. The third chapter abandon this general strand to introduce the paper's case-study on Māori Resource Management. It adopts an anthropological perspective for defining Māori identity and worldview. Finally, the fourth chapter illustrate the legal pillars that made possible the systematic implementation of Māori Resource Management in national development plans. This section also describes the recent national phenomenon of giving legal personality to culturally relevant natural features as successful compromise.

CHAPTER 1 – The Rights of Indigenous People under International Law

1.1 Who are Indigenous People?

There are approximately 370 million indigenous peoples living across 90 countries. They comprise less than 5% of global population and occupy almost 20% of the earth's territory[8]. Indigenous peoples represent as many as 5000 different cultures and are generally recognised as the descendent of the original inhabitants of their land before the arrival of European settlers. For centuries, first nations around the world have struggled against oppression, land alienation and stigmatization. Their knowledge has been systematically eclipsed in favour of Western science and its means for transmission impaired. They have faced the challenge of living in two worlds, in which the indigenous perspective has been considered for many years subordinate. This is why indigenous people around the world have come together lobbying for their rights, especially the ones regarding self-determination, access to ancestral land and preservation of their traditional knowledge.

In the past, the term "indigenous" was used with a derogatory connotation to define indigenous peoples as "outsiders" or "other" from the dominant society. In the 15th century, the Judaeo-Christian doctrine heavily influenced the process of colonization, by considering any act of aggression against aboriginals as "just wars"- as shown by France's promotion of its "*mission civilisatrice*", the English idea of the "*white man's burden*" or the Spanish attempt of converting "savages". This Eurocentric perspective found its justifications in the concept of *terra nullius* according to which the so-called "international others" were wrongfully considered as savages and nomad populations with a political framework too underdeveloped and decentralised to impose sovereignty over their territories. This is why, all the territories outside European influence were to be wrongfully considered vacant.

After years of indigenous mobilization, the term has now been empowered. The first legal definition for indigenous people was given in the "*Study of the Problem of Discrimination against Indigenous Populations*" by José Martínez Cobo, the Special Rapporteur of the Sub-Commission on Prevention of Discrimination and Protection of minorities. According to this document "*indigenous communities, peoples and nations are those which, having an historical continuity with pre-colonial societies that developed on their territories, consider themselves distinct from other sector of societies now*

[8] United Nations Department of Economic and Social Affairs. (2009). State of the World's Indigenous Peoples. New York: United Nations, p. 84-85

prevailing in those territories, or parts of them. They form at present non-dominant sectors of society and are determined to preserve, develop and transmit to future generations their ancestral territories, and their ethnic identity, as the basis of their continued existence as peoples, in accordance with their own cultural patterns, social institutions and legal systems[9]." It also states that "*on an individual basis, an indigenous person is one who belongs to these indigenous populations through self-identification as indigenous (group consciousness) and is recognised and accepted by these populations as one of its members (accepted by the group). This preserves for these communities the sovereign right and power to decide who belongs to them, without external interference*"[10].

A subsequent more exhaustive definition was given in the International Labour Organization (ILO) Convention no. 169 in 1989 in which indigenous people "*are regarded as indigenous on account of their descent from the populations which inhabited the country, or a geographical region to which the country belongs, at the time of conquest or colonisation or the establishment of present state boundaries and who, irrespective of their legal status, retain some or all of their own social, economic, cultural and political institutions*[11]". Likewise, the Working Paper on the Concept of "Indigenous People" links indigeneity with territorial occupation, voluntary self-identification with a distinct cultural identity and a condition of social marginalization. Lastly, The United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) identifies indigenous peoples as being the beneficiaries of the rights contained in the Declaration, without further defining the term.

The legacy of colonial conquest was supposed to be dealt with by offering colonized peoples an UN-supervised process of decolonization through which they could arrive at their preferred solution to their political status, whether they desired independence, integration into the colonizing state, association, or any other status in between[12]. Unfortunately, this was not the case as the choice was virtually in the hands of colonizers. Indeed, it was not given individually or collectively to indigenous peoples, but to all inhabitants of the territories demarcated by colonizers and its institutions, usually the legacy of European settlers. This is why, indigenous communities around the world started to develop transnational networks in order to transcend state boundaries and gain access to international fora. The Indigenous People's Movement, initially developed inside single states, started to gain a

[9] United Nations Commission on Human Rights. (1982). *Study on the Problem of Discrimination against Indigenous Peoples. Final report (last part) submitted by the Special Rapporteur, Mr. José R. Martinez Cobo*. New York: United Nations p. 379
[10] Ibidem p. 380
[11] International Labour Organization. (1989). Indigenous and Tribal Peoples Convention No. 169. Article 1.
[12] Pulitano, E., & Trask, M. (2012). *Indigenous rights in the Age of the UN declaration*. Cambridge University Press. p.36

global scope in the 60s with the so called "Indigenous Renascence". This *sui generis* movement has been described as a bottom-up global justice one seeking international acknowledgement and legal protection. Its main objective was the recognition of indigenous land rights and self-determination, in order for their distinctive culture and identity to survive as a separate entity from hegemonic states, only exceptionally advocating for secession.

These indigenous peoples' advocates, considered as marginalised actors in the global, regional and national panorama were effectively able to change the international legal framework with their constructive critics on its discriminatory nature. This was possible, because indigenous diplomacy intelligently articulated its demands inside the broader framework of human rights. In this way indigenous peoples' rights were derived from general human rights and even the most reluctant states were discouraged to publicly oppose. In short, indigenous peoples have been widely recognized as "peoples" capable of exercising the right to internal self-determination in recent decade[13]. The historical evolution of indigenous rights in international law leading to this outcome was a long and complex and culminated with the adoption of the UNDRIP.

1.2 The Historical Evolution of Indigenous Peoples' Rights in International Law

1.2.1 Fundamental Rights

The adoption of the Charter of the United Nations in 1945 constitutes the first fundamental step in the recognition of indigenous rights internationally. The Charter is based on the principles of dignity and equality inherent in all human being and expressively provides for the right of self-determination and self-defence as fundamental rights. The establishment of these principles was essential for the adoption of the Universal Declaration of Human Rights in 1948. Its member states committed themselves in the preamble to secure effective observance of the human rights contained in the document. Even though it is not legally binding, the Declaration has been either included in several national legislations or laid the basis for international law, treaties and agreements. Thanks to it, the conception of indigenous peoples as inferior or uncivilised was completely abandoned in favour of universal equality. Indeed, Article 2 of the Declaration expressively states that "*Everyone is entitled*

[13] Endalew Lijalem Enyew. (2017). Application of the Right to Permanent Sovereignty over Natural Resources for Indigenous Peoples: Assessment of Current Legal Developments. *Arctic Review on Law and Politics*, *8*(0), 222–245. p.227

to all the rights and freedoms set forth in this Declaration, without distinction of any kind, such as race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status. Furthermore, no distinction shall be made on the basis of the political, jurisdictional or international status of the country or territory to which a person belongs, whether it be independent, trust, non-self-governing or under any other limitation of sovereignty."

The Convention on the Prevention and Punishment of the Crime of Genocide is yet another step in the evolution of the international legal framework for the recognition of indigenous peoples' rights and the damages they suffered from colonization. Indigenous peoples were one of the most affected groups by extermination, forced eviction and land alienation caused by European settlers. The Convention describes genocide in Article 2[14] and prohibits it under international law. Likewise, the International Convention on the Elimination of All Forms of Racial Discrimination in 1965 guaranteed the enjoyment of human rights without discrimination on grounds of race, colour or ethnic origin. Similarly, The United Nations Convention against Torture and other Cruel, Inhuman or Degrading Treatment of Punishment 1987, establish that human rights are inalienable rights enjoyed by all human beings, who shall hence be free from torture and other inhumane treatment. Most importantly, the United Nations has explicitly condemned within these documents that colonialism and all related practices of discrimination and segregation as scientifically false and socially unjust.

However, it is only with the Indigenous and Tribal Populations Convention (ILO) 107 of 1957 that a legal instrument for the specific safeguard of indigenous peoples was devised. Indeed, Article 1 of describes the addressee of the Convention as *"(a) members of tribal or semi-tribal populations in independent countries whose social and economic conditions are at a less advanced stage than the stage reached by the other sections of the national community, and whose status is regulated wholly or partially by their own customs or traditions or by special laws or regulations; (b) members of tribal or semi-tribal populations in independent countries which are regarded as indigenous on account of their descent from the populations which inhabited the country, or a geographical region to which the country belongs, at the time of conquest or colonisation and which, irrespective of their legal status, live more in conformity with the social, economic and cultural institutions of that time than with the institutions of the nation to which they belong.*"

[14] *(..) any of the following acts committed with intent to destroy, in whole or in part, a national, ethnical, racial or religious group, as such: (a) Killing members of the group; (b) Causing serious bodily or mental harm to members of the group;(c) Deliberately inflicting on the group conditions of life calculated to bring about its physical destruction in whole or in part;(d) Imposing measures intended to prevent births within the group;(e) Forcibly transferring children of the group to another group.*

Even if the document is legally-binding to the countries that have ratified it, states are left with a large room for manoeuvre regarding indigenous peoples' issues. In fact, it is the state that have "*the primary responsibility for developing co-ordinated and systematic action for the protection of the populations concerned and their progressive integration into life of their respective countries*". This is why the ILO Convention no. 107 is often considered as just another form of paternalism rather than an effective legal tool and was amended in many states by the ILO convention no. 169. This is due to the fact that the document somehow affirms the euro-centric perspective according to which indigenous culture are at a less advanced state than European ones and hence the process of losing their tribal characteristics is inevitable. Nonetheless, it was a pioneering document that for the first time specifically addressed human rights of indigenous peoples and paved the way for subsequent legislation on the matter.

1.2.2 Indigenous and Tribal Peoples Convention 1989

The Indigenous and Tribal Peoples ILO Convention no. 169 was adopted in 1989 in order to remedy for previous inconsistencies. This Convention recognises past injustices and the need for indigenous participation in the political panorama as separate entities from their nation-states, whenever their interests are affected. The ILO no. 169 Convention was imperative in identifying indigenous peoples in international and national legal processes and was subsequently used as the working definition of indigeneity or the basis on which different specialised agencies have developed their own operational definition. It recognises for the first time the right of self-determination of indigenous peoples, together with other fundamental rights. Indeed, the Preamble clarify that the Convention " *[recalls] the terms of the Universal Declaration of Human Rights, the International Covenant on Economic, Social and Cultural Rights, the International Covenant on Civil and Political Rights, and the many international instruments on the prevention of discrimination, and considering that the developments which have taken place in international law since 1957, as well as developments in the situation of indigenous and tribal peoples in all regions of the world, have made it appropriate to adopt new international standards on the subject with a view to removing the assimilationist orientation of the earlier standards*[15]." The document also *"[Recognises] the aspirations of these peoples to exercise control over their own institutions, ways of life and economic development and to maintain and*

[15] Ibidem Preamble

develop their identities, languages and religions, within the framework of the States in which they live[16]" and *"[call] the attention to the distinctive contributions of indigenous and tribal peoples to the cultural diversity and social and ecological harmony of humankind and to international co-operation and understanding*". Moreover, Article 2 invests states with the obligation to restrain from any form of discrimination of violence against these peoples and to develop "*with the participation of the peoples concerned, co-ordinated and systematic action to protect the rights of these peoples and to guarantee respect for their integrity*[17]." Unfortunately, only 23[18] nations have ratified Convention 169, most probably due to nation-states' apprehension towards indigenous autonomy as a threat over their own sovereignty.

The right of self-determination is further articulated in the International Covenant on Civil and Political Rights (ICCPR) and the International Covenant on Economic, Social and Cultural Rights (ICESCR) adopted by the United Nations General Assembly in 1966. Common Article 1 declares that "*all peoples have the right of self-determination [and] by virtue of that right they freely determine their political status and freely pursue their economic, social and cultural development*[19]." Consequently "*all peoples may, for their own ends, freely dispose of their natural wealth and resources without prejudice to any obligations arising out of international economic co-operation, based upon the principle of mutual benefit, and international law. In no case may a people be deprived of its own means of subsistence*".

1.2.3 The United Nations Declaration on the Rights of Indigenous Peoples 2007

Nonetheless, the full recognition of indigenous peoples' status and correlated rights in international was only achieved with the adoption of the United Nations Declaration on the Rights of Indigenous Peoples. The UNDRIP was approved in 2007 with an overwhelming votes of 144 states in favour to only four against, by the United Nations General Assembly , putting an end to more than twenty years of debates over indigenous rights started in 1982 by the Working Group on Indigenous Populations- a subsidiary organ of the United Nations Commission on Human Rights. Since then, the four

[16] International Labour Organization. (1989). Indigenous and Tribal Peoples Convention No. 169. Preamble
[17] Ibidem Article 2
[18] Updated Ratification available at: https://www.ilo.org/dyn/normlex/en/f?p=1000:11300:0::NO:11300:P11300_INSTRUMENT_ID:312314
[19] ICCPR & ICESCR, Common Article 1.

countries voting against have reversed their position and now support the Declaration. The Declaration contained all the above-mentioned rights from previous international law and better articulates them in a comprehensive and detailed way. It establishes a universal framework of minimum standards for the survival, dignity and well-being of the indigenous peoples of the world and it elaborates on existing human rights standards and fundamental freedoms as they apply to the specific situation of indigenous peoples[20]. It is a "*symbol of triumph and hope*[21]", a "*milestone of indigenous empowerment*[22]" for its moral and political strength. This is mainly because, indigenous representatives were directly involved in every decision-making processes of the drafting of the document, as to provide full recognition and validity to their claims. Although the document is not legally binding per se, it can be enforced to the extent that its various provisions are backed up by conforming state practice and *opinio juris*.

Significantly, the UNDRIP includes the right of self-determination and the concept of indigenous sovereignty in a series of articles with the aspiration to preserve ancestral and traditional ways of life and indigenous knowledge systems. Firstly, Articles 3 declares that "*Indigenous peoples have the right to self-determination. By virtue of that right they freely determine their political status and freely pursue their economic, social and cultural development.*" Secondly, Article 4 circumscribes self-determination to matters of local and internal self-government. Thirdly, Article 5 protects their right "*to maintain and strengthen their distinct political, legal, economic, social and cultural institutions.*" The fundamental desire to safeguard their culture was also embodied in the prohibition of forced assimilation of indigenous people[23] and forced eviction and relocation[24] as well as the right to "*revitalize, use, develop and transmit to future generations their histories, languages, oral traditions, philosophies*[25]".These articles are especially important relating to the recognition of indigenous customary law, land rights, permanent sovereignty over natural resources and the phenomenon of land grabbing, which will be all discussed in details later in the paper.

[20] United Nations. (n.d.). United Nations Declaration on the Right of Indigenous Peoples. Retrieved April 24, 2020, from: https://www.un.org/development/desa/indigenouspeoples/declaration-on-the-rights-of-indigenous-peoples.html
[21] Rimmer, M. (2015). *Indigenous Intellectual Property: A Handbook of Contemporary Research.* p. 33
[22] Pulitano, E., & Trask, M. (2012). *Indigenous rights in the Age of the UN declaration*. Cambridge University Press. p. 42
[23] United Nations General Assembly. (2007). The United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP). New York: United Nations. Article 8
[24] Ibidem Article 10
[25] Ibidem Article 13

1.3 Recognising Indigenous Customary Law

For the principle of self-determination to be effective, international law must recognise the significance of customary norms and procedures of indigenous peoples as effective means of law. Customary law is the established pattern of behaviour that have been accepted by the community as law on the ground of undisturbed practice or common rule[26]. It includes practices, beliefs and conducts which have developed over time from accepted moral norms in effective regulations, with specific sanctions for non-compliance. Customary laws have been passed and adapted through generations by word of mouth and are not codified nor can they easily be codified- in contrast with written law in Western societies. Today, it is still the core of legal thinking and socio-economic systems in indigenous societies[27]. Indeed, these groups are most exclusively arranged according to communitarian traditions, which prefer collective property regimes, rather than private property. This is why, customary law can be considered an essential segment of indigenous culture and guarantee of cultural integrity. Therefore, indigenous peoples' legal systems, even if significantly different from standard systems, must be fully recognised and endorsed, especially in light of the commonly accepted principles of international law of non-discrimination and self-determination.

Moreover, customary law is especially relevant when talking about indigenous community-based systems of land administration. The main concern here is that land tenure would be measured according to individual ownership, rather than traditional collective or communal title in a way that severely impair the community in the exercise of their rights over land and natural resources. Prioritizing individual title would not be consistent with UNDRIP and undermine indigenous claim over land. In other words, the recognition of customary tenure rights is the basis for granting land rights and policies that do not take account of that are most likely to generate further disparities and alienation. For example, the Sustainable Development Indicator 1.4.2 'Proportion of total adult population with secure tenure rights to land, with legally recognized documentation and who perceive their rights to land as secure, by sex and by type of tenure[28]' devised to measure enjoyment of land rights is for the reasons stated above inherently fallacious.

[26] Golec Wojciech, P. (2012). The Significance of Indigenous Customary Law according to the International Law on Indigenous. Peoples. p. 96
[27] Ibidem
[28] Indicator 1.4.2: Proportion of total adult population with secure tenure rights to land, (a) with legally recognized documentation, and (b) who perceive their rights to land as secure, by sex and type of tenure. Available at: https://sdg.data.gov/1-4-2/

Western legal frameworks prefer written law emanating from a constituted political authority and customary law has fallen in disuse and treated as a secondary or inferior form of law. The international community has struggled in recognizing the validity of customs in relation with statutory law, principally because of old prejudices and power-relations. Likewise, states have implemented national policies of cultural assimilation and discrimination, resulting in the partial erosion of indigenous knowledge. However, the subordination of indigenous legal systems and the predominance of state law must be understood as a contradiction with the recognition of different peoples living in the same territory and their right of self-determination and that is why it has been consistently objected throughout the years.

Today, the issue of customary law in indigenous communities is specifically regulated by the ILO Convention no. 169 and UNDRIP. Firstly, article 8 of the ILO Convention no. 169 declares that "*in applying national laws and regulations to the peoples concerned, due regard shall be had to their customs or customary laws*" and that "*these peoples shall have the right to retain their own customs and institutions, where these are not incompatible with fundamental rights defined by the national legal system and with internationally recognised human rights*". Similarly, the UNDRIP recognises the coexistence of different legal systems within the territory of a single states and provides for the right to develop and conserve distinct political and social institutions, while also being able to fully participate in mainstream society. Indeed, articles 27 expressly declares that "*states shall establish and implement, in conjunction with indigenous peoples concerned, a fair, independent, impartial, open and transparent process, giving due recognition to indigenous peoples' laws, traditions, customs and land tenure systems, to recognize and adjudicate the rights of indigenous peoples pertaining to their lands, territories and resources, including those which were traditionally owned or otherwise occupied or used. Indigenous peoples shall have the right to participate in this process*". In other words, international law has recognised customary law as a prerogative of indigenous development and self-determination and tried to provide the legal instrument to protect it in different instances.

1.4 Establishing Sovereignty over Land and Natural Resources.

1.4.1 The Right to Land

Essential to the effective implementation of self-determination is the recognition of indigenous peoples' kinship with nature and natural resources. Their relationship with ancestral land goes beyond

mere economic interests as it is endowed with enormous cultural and spiritual significance. In other words, land is not conceived as a commodity that can be exploited, but rather an inextricable feature of tribal identity. Indeed, the word indigenous literary means to live within one's roots[29] and the popular understanding of indigenous peoples depicts them has the original inhabitants of the land which -even if sometimes historically inaccurate- mirrors indigenous cosmovision and collective consciousness. For these reasons the management of the surrounding ecosystem is conducted by indigenous communities under an ethic of stewardship and reciprocity and related ecological practices enhance sustainability and biodiversity. Indigenous holistic view and their oneness with mother nature and father sky is in sharp contrast with western perspective and its land rights framework. Therefore, one of challenges indigenous communities have faced is the recognition of their land rights and permanent sovereignty over culturally significant natural resources.

Indigenous peoples are gradually considered by international law "sovereign" of the natural resources located in their ancestral land and territories. These rights over lands and natural resources, *inter alia*, include the right to demarcate, own, possess and use, and to participate in the management and conservation of the territories that have ether traditionally occupied or used[30]. In the ICCPR and the Convention on the Elimination of all forms of Racial Discrimination (CERD) land rights are said to be manifestations of both the right to property and rights to culture and non-discrimination. Likewise, the Inter-American Court on Human Rights has located the indigenous right to property, communally held and without formal title, in both international human rights norms and the evolving indigenous rights framework[31]. On the other hand, the Supreme Court of Belize has identified indigenous rights as *sui generis* because rooted in the customs and traditions of the people concerned, rather than an established corpus of law[32].

Most importantly, the UNDRIP contains imperative provisions regulating land rights. Firstly, Article 25 of the Declaration affirms that *"indigenous peoples have the right to maintain and strengthen their distinctive spiritual relationship with their traditionally owned or otherwise occupied and used lands, territories, waters and coastal seas and other resources and to uphold their responsibilities to future generations in this regard*". Secondly, Article 26 recognises that indigenous peoples have the "*right to the lands, territories and resources which they have traditionally owned, occupied or otherwise*

[29] Etymologically, the Latin word "indigena" is composed of two words, "indi," meaning "within" and "gen" or "genere" meaning "root" from Longman Dictionary of Contemporary English.
[30] Endalew Lijalem Enyew. (2017). Application of the Right to Permanent Sovereignty over Natural Resources for Indigenous Peoples: Assessment of Current Legal Developments. *Arctic Review on Law and Politics*, *8*(0). p.223.
[31]Stevenson, S. (2008). Indigenous land rights and the Declaration on the Rights of Indigenous Peoples: implications for Maori land claims in New Zealand. Fordham International Law Journal, 32(1).
[32] Ibidem

used or acquired" and impose corresponding obligations on states to respect such rights. Thirdly, Article 27 sets out the guidelines for resolutions of claims over land for which "*states shall establish and implement, in conjunction with indigenous peoples concerned, a fair, independent, impartial, open and transparent process, giving due recognition to indigenous peoples' laws, traditions, customs and land tenure systems, to recognize and adjudicate the rights of indigenous peoples pertaining to their lands, territories and resources, including those which were traditionally owned or otherwise occupied or used.*"

The aforementioned corollary duty of states to consult indigenous peoples whenever they are directly or indirectly affected is a direct consequence of the overreaching rights of self-determination and participation. International Law has devised a normative framework for consultation based on the concept of Free, Prior and Informed Consent (FPIC), displayed in several provisions of the UNDRIP, ILO 169, The Convention on Biological Diversity as well as operational guidelines and national laws. But what does FPIC means exactly?

- *Free* implies that consultation processes are carried on without coercion, intimidation or manipulation.
- *Prior* implies that such processes are initiated sufficiently in advance of any authorization or commencement of activities and with respect of time requirements for indigenous consensus processes.
- *Informed* implies that satisfactory information on a range of aspects – purpose, nature, duration, size, pace, reversibility – on any proposed project are given to indigenous communities. Thus, States are required to carry on preliminary assessments and provide indigenous communities with primary reports.

Importantly, the UNDRIP clarify in Article 19 that "*states shall consult and cooperate in good faith with the indigenous peoples concerned through their own representative institutions in order to obtain their free, prior and informed consent before adopting and implementing legislative or administrative measures that may affect them.*" In this way the objective of consultation is genuine cooperation and joint management of issues that may interests indigenous communities and consent must be provided before any action is taken. Several other provisions in the Declaration requires state to obtain consent of indigenous people concerned in specific circumstances. Article 10 prohibits forced evictions from occupied territories and allow for relocation only in the presence of FPIC. When lands are damaged or forcibly confiscated without consent, Article 28 entitles indigenous communities to restitution or

other appropriate remedies. Lastly, Article 29 prohibits the storage or disposal of hazardous material on indigenous lands without FPIC.

Over the years International, regional and local *opinion juris* has substantially changed in favour of indigenous peoples' claims on land rights. For example, The Inter-American Commission on Human Rights provided practical application of the abovementioned conclusions in its judgment of August 31, 2001 of Mayagna (Sumo) Awas Tingni Community v. Nicaragua case in which it affirmed the existence of an indigenous people's collective right to its land. Indeed, "*it is the opinion of this Court that article 21 of the Convention*[33] *protects the right to property in a sense which includes, among others, the rights of members of the indigenous communities within the framework of communal property*". Similarly, the African Commission on Human and Peoples' Rights on the Centre for Minority Rights Development (Kenya) & Minority Rights Group International on Behalf of Endorois case on displacement of Endorois peoples- an indigenous community in Kenya- from their traditional land found that the government's forced eviction constituted a breach of their right. Likewise, the Report on the Human Rights Situation of the Sami people in the Sápmi Region of the United Nations Human Rights Council recognised that the Sami peoples' right to self-determination was impaired by the limitation on their role in decision-making processes in Parliament affecting their traditional lands.

1.4.2 The Right to Permanent Sovereignty over Natural Resources

The right to permanent sovereignty over natural resources (PSNR) is an inferable right from the wider framework of land rights, emerging as a reaction to the irresponsible exploitation of natural resources by colonial powers then, and foreign investors now, and the negative impact of development projects on the well-being of indigenous communities. The right of PSNR is generally described as the right to freely dispose and manage any kind of natural resources found on one's own territory- including the maritime space. PSNR is an umbrella right from which several procedural rights are emanated- the right to decide over resource exploitation and conservation, the right to grant leases and licences etc. It was developed in the early 1950s, in the period of decolonization, when newly independent states were asserting their sovereignty over natural resources found on their territories and previously

[33] *"Indigenous peoples have the right, without discrimination, to the improvement of their economic and social conditions, including, inter alia, in the areas of education, employment, vocational training and retraining, housing, sanitation, health and social security."*

exploited by colonizers. According to the right to PSNR, the doctrines of state succession and *pacta sunt servanda* were not applicable on previously colonized states, which were not obliged to honour concessionary rights acquired by foreign companies prior to the state independence regardless of their content. Newly constituted states were enabled to revise such concessions which would survive only at their express consent.

The right to PSNR, even if originally emerged as a political claim by newly independent states, has gradually become a widespread principle of international law applicable to all states as a constituent part of their sovereignty, political independence and territorial integrity. A series of international provisions now recognized it. First, UN General Assembly Resolution 1803 (XVII) of 1962 "Permanent sovereignty over natural resources" protected "*the inalienable right of all States freely to dispose of their natural wealth and resources in accordance with their national interests, and on respect for the economic independence of States*". Secondly, the UN General Assembly Resolution 3016(XXVII)16 of 1972 and United Nations Resolution 3171 (XXVIII)17 of 1973 specifically provides for States' right to permanent sovereignty over marine resources, subsequently recognised also by the United Nations Convention on the Law of the Sea (LOSC). Similarly, the Convention on Biological Diversity (CBD), which regulates both terrestrial and marine resources, explicitly recognizes the sovereign right of all States "*to exploit their own resources pursuant to their own environmental policies*".

This right's scope has been further widened as to include all peoples, and not only states, as its addressee and it consequently became a human right of all peoples. The right to PSNR has been incorporated in both the ICCPR and ICESCR, under common article 1, which declares that "*all peoples may, for their own ends, freely dispose of their natural wealth and resources without prejudice to any obligations arising out of international economic co-operation, based upon the principle of mutual benefit, and international law. In no case may a people be deprived of its own means of subsistence".* Similarly, article 25 ICESCR and article 47 of ICCPR reaffirm such right as a "*inherent right of people*". Debate over whether the right to PSNR was also applicable to indigenous peoples was based on the states concerns that application of the right of self-determination should have not been given to segments of the population as it would undermine state sovereignty. However, as previously discussed, limiting the right to self-determination to the entire population of states was restrictive for multicultural societies, in which indigenous peoples should have also been considered as beneficiary of such right. Indeed, self-determination is better understood as a continuing right that evolve with time in line with the international community's needs. Accordingly, indigenous peoples have been recognised unambiguously as holders of the right of internal self-determination.

Nonetheless, the meaning of the right to PSNR does not equate to the sovereign right of the state, but must be qualified by means of internal sovereignty. Indigenous peoples' sovereign right over natural resources cover the right to use, manage, conserve and control access to resources in their traditional territories. Such right manifest differently depending on the nature and type of resource under examination. When determining its scope some features must be taken into consideration; most importantly, whether the resource is culturally relevant to indigenous peoples[34]. Culturally relevant resources are characterised by a traditional attachment as they have indeed been systematically used by these communities in the past as main means of survival and source of cultural and spiritual practices. Indigenous people have full permanent sovereignty over cultural relevant resources found in territories traditionally owed or occupied. Accordingly, their powers are not only limited to consultation and participation, but include full authority and management over such resources. Accordingly, sovereignty over such resources should not be conceived in a strictly Westphalian sense, but rather as encompassing both states and peoples as right holders.

Indigenous peoples' right to PSNR is "*a collective right by virtue of which the State is obliged to respect, protect, and promote the governmental and property interests of indigenous peoples (as collectives) in their natural resources*[35]". In practice, the right of PSNR is expressed by indigenous peoples through the exercise of collective property regimes of natural resources and the FPIC is somehow an indirect recognition of indigenous sovereignty over natural resources.

1.5 The Threat of Land Grabbing

Despite the recognition of indigenous rights over the land and its resources, in the last decade a large acceleration in land investments has given rise to the phenomenon of land grabbing, which consistently impairs indigenous communities in the exercise of such rights. Land grabbing is described as "*the large-scale acquisition of land for commercial or industrial purposes, such as agricultural and biofuel production, mining and logging concessions or tourism*[36]". This is mainly done by foreign investors, rather than producers without duly taking in consideration consultation with local communities, compensation for forced eviction, compliance with environmental

[34] Endalew Lijalem Enyew. (2017). Application of the Right to Permanent Sovereignty over Natural Resources for Indigenous Peoples: Assessment of Current Legal Developments. *Arctic Review on Law and Politics*, *8*(0). p.222.
[35] Daes, E. (2005). Inidgenous Peoples' Rights to Land and Natural Resources. *Minorities, Peoples and Self-determination,* Martinus Nijhoff Publishers. p.87
[36] Gilbert, J. (2017). *Land Grabbing, Investments & Indigenous People's Rights to Land and Natural Resources: Case Studies and Legal Analysis*. IWGIA. p.11

sustainability and equitable access or control over natural resources and benefits[37]. The Tirana Declaration of the International Land Coalition further defines land grabbing as acquisition or concession of land either "*(i) in violation of human rights, particularly the equal rights of women; (ii) not based on free, prior and informed consent of the affected land-users; (iii) not based on a thorough assessment, or are in disregard of social, economic and environmental impacts, including the way they are gendered; (iv) not based on transparent contracts that specify clear and binding commitments about activities, employment and benefits sharing, and; (v) not based on effective democratic planning, independent oversight and meaningful participation*[38]".

In many ways, this phenomenon can be seen as the historical continuation of colonization and land alienation, rooted in the concept of "unoccupied" or "underproductive" lands. Large-scale industrialised agriculture and farming are still considered by many governmental and international institution the prerequisite for productivity. Investments in agrobusiness, mining and biofuel production, which have found their legitimation in changes in food consumption patterns- "meatification" of diet- and increased demand for energy in large economies. Indigenous communities, dependent on sustainable small-scale use of their natural resources are especially vulnerable to the effects of this global rush for land.

Such investments do not only deny indigenous people access to their traditional sources of food, but are also having a tragic impact on their ancestral land and its biodiversity. This is mainly due to government's negligence in recognising a protecting customary or community access rights to land of indigenous peoples so that, when investors negotiate a lease, they are systematically ignored. The United Nation Inter-Agency Support Group noted that "*the lack of formal State recognition of traditional tenure systems marginalises indigenous people further from the dominant society and leaves them more vulnerable to right abuses*[39]". Land-grabbing especially affects indigenous communities, whose land tenure system are usually based on traditional customary rights and therefore rarely recognised. Moreover, the complex legal framework surrounding land grabbing results in a general lack of clarity and transparency. It is indeed based on International Human Rights Law, International Environmental law, International Investment Law, investment regulations, contractual obligations, bilateral investment treaties and environmental agreements.

[37] Ibidem
[38] International Land Coalition. (2011). Tirana Declaration "Securing land access for the poor in times of intensified natural resources competition". Tirana, Albania. p.2
[39] Inter-Agency Support Group on Indigenous Peoples' Issues. (2014) Land, Territories and Resources. Thematic Paper towards the preparation of the 2014 World Conference on Indigenous Peoples. p.1

Because of this, it is imperative that States should review their legislation to ensure compliance with indigenous peoples' rights as set out in the UNDRIP and ILO Convention 169. Indigenous and local communities should be consulted and should provide its free, prior and informed consent before any decision with the potential of compromising them is made. At the same time, states should engage in and facilitate participatory framework as well as developing mapping of indigenous peoples' lands and databases in which to publish land deals.

CHAPTER 2 – Indigenous Knowledge as a Driver for Sustainable Development

2.1 Defining Sustainable Development

The discourse on sustainable development was initiated in the 1960s to grapple the environmental impact of industrial development in developed countries. For the first time, the existence of natural limits constraining economic development was seriously pondered on a global level. The Limits to Growth published in 1972 explained that technological innovation was increasing at a much slower rate than population level, pollution and resource depletion, in a way that was impossible to replenish the available finite resources. The implications were that unrestrained economic growth was impossible under the current planet's capacity. Thus, the anthropogenic impact is expected to further deteriorate natural resources until a new environmental ethic is employed and development practices take into account of ecological factors.

These concerns culminated in the first intergovernmental environmental Summit in 1972- the Stockholm Conference on the Human Environment- and the creation of the United Nations Environmental Programme (UNEP) trying to tackle major issues of environmental degradation. Similarly, the World Conservation Strategy (WCS) was published by the International Union for Conservation (IUCN), UNEP and the World Wildlife Fund (WWF) in 1980 asserting that "*conservation and sustainable development are mutually dependent*[40]". The aim of the WCS is the achievement of sustainable development through conservation practices, such as to maintain essential ecological processes and life-support systems, to preserve genetic diversity, to ensure the sustainable utilization of species and ecosystems. Here, conservation is defined as "*the management of human use of the biosphere so that it may yield the greatest sustainable benefit to present generations while maintaining its potential to meet the needs and aspirations of future aspirations*[41]".

However, the Strategy was an inevitable compromise between environmentalists and practitioners of development. It was the report of the World Commission on Environmental and Development, chaired by Gro Harlem Brundtland- also referred as the Brundtland Commission- issued in 1987 to

[40] International Union for Conservation of Nature and Natural Resources (1980) World Conservation Strategy: Living Resource Conservation for Sustainable Development. With the Advice, cooperation and financial assistance of UNEP, WWF and in collaboration with FAO and UNESCO. Introduction, paragraph 10.
[41] Ibidem Introduction, paragraph 4

give prominence to the concept of sustainable development for the first time. It is indeed still nowadays considered as the dominant paradigm for assessing environment and development issues[42]. The Brundtland Report "Our Common Future" defines sustainable development as "*the development that meets the needs of the present without compromising the ability of future generations to meet their own needs*[43]". According to this principle, development and environment are not view as adversarial values, but are instead "*inexorably linked*[44]". It does not solely claim that the environment cannot be protected when the economic interests are the only driving variables, but also that development is hindered by over-exploitation as they are linked by a "*complex system of cause and effect*[45]".

The Brundtland's desire for developing a global strategic framework over sustainability inspired the "Earth Summit" held in Rio de Janeiro in 1992, one of the largest gathering of world leaders. Indeed, The Rio UN Conference on Environment and Development (UNCED) is "*associated with the beginning of the participatory turn of global environmental governance*[46]" and produced a series of important documents, namely the Rio Declaration on Environment and Development, the Agenda 21, the Statement of Principles of Forests and two legally-binding conventions, the Convention on Biological Diversity (CBD) and the United Nations Framework Convention on Climate Change (UNFCCC).

Firstly, the CBD was designed as to promote conservation of biological diversity (biodiversity), the sustainable use of its components and the equitable sharing of genetic resources by protecting degraded ecosystems and endangered species. Moreover, the Cartagena Protocol on Biosafety and the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization were developed as supplementary agreement to the Convention on Biological Diversity to facilitate its practical implementation.

Secondly, the UNFCCC was created with the objective to "stabilize greenhouses gas concentration in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system" by setting non-binding on gas emissions. The parties of the Convention formally meet from

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[42] Death, C. (2010). *Governing sustainable development partnerships, protests and power at the world summit* . Routledge. p. 39

[43] Brundtland, G.H. (1987). Our common future - call for action. Environmental Conservation 14(4): 291-294. Chapter 2, paragraph 1

[44] Ibidem Chapter 1, paragraph 40

[45] Ibidem

[46] Bäckstrand, K. (2006). Democratizing Global Environmental Governance? Stakeholder Democracy after the World Summit on Sustainable Development. *European Journal of International Relations*, *12*(4), 467–498.

1995 in annual Conferences of the Parties (COP) to assess progress in climate change mitigation. In 1997, the Kyoto Protocol established legally-binding obligations for developed countries on reduction of gas emissions.

2.1.1 Sustainable Development Goals

Over the years, the UN has adopted successive agendas setting time-bound global goals. The proposal to set Sustainable Development Goals was first addressed in the United Nations Conference on Sustainable Development, Rio +20 in 2012. The goals were holistically conceived as to encompass the three dimensions of sustainable development- economic, social and environmental- in a balanced way. Indeed, the 2015 agreement on the SDGs[47] went beyond the agenda of the Millennium Development Goals and set a 2030 Agenda for eradicating poverty while also healing the planet. While the MDGs included limited and unambitious targets for environmental sustainability the SDGs Agenda is prominently focused on them.

Up until recently the mainstream development agenda was almost exclusively state-focused. However, the involvement of the civil society in sustainability practices has exponentially increased. Indeed, it is important to bear in mind that sustainable development is an evolving concept lacking a definition set in stone. As the Brundtland report declare, sustainable development requires "a *political system that secure effective citizen participation in decision-making*[48]". Integrating multiple knowledge systems into development processes improve socio-ecological decision-making towards the promotion of long-term sustainability[49] that often facilitates decision-making in ways that are diversified, risk-adverse and cost-effective.

There has been increasing attention on the contribution of indigenous ecological knowledge in areas such as sustainability, biodiversity, conservation and natural resource management and more recently also in climate change mitigation and environmental hazards prevention. Indigenous knowledge advocates for new bottom-up development paradigms able to assess their cultural understanding of

[47] United Nations. Sustainable Development Goals: Knowledge Platform. Available at: https://sustainabledevelopment.un.org/?menu=1300
[48] Brundtland, G.H. (1987). Our common future - call for action. Environmental Conservation 14(4): 291-294.
[49] Barrett, M. (2013). Enabling hybrid space: epistemological diversity in socio-ecological problem-solving. *Policy Sciences*, *46*(2), 179–197.

well-being and effectively implement their holistic view of the environment and the related stewardship management practices.

2.2 Indigenous Knowledge and Ecological Ethic

In order to survive and conserve the resource capital for future generation, indigenous people have employed several culturally defined methods of adaptation for the protection of places and natural resources and associated values. Eventually they all developed a unique system of knowledge, which displayed, up to a certain degree, a holistic view of the world, strictly rooted to the spiritual and societal importance of the land. Such indigenous knowledge systems are commonly referred as indigenous knowledge, which have been defined as "*the systematic body of knowledge acquired by local people through accumulation of experience, informal experiments and an intimate understanding of the environment in a given culture*[50]." They are usually flexible and complex systems matured as the cultural response to abrupt changes or harsh conditions. In fact, indigenous people have constantly negotiated with their surrounding environment and maintained their knowledge systems in dynamic evolution. Because of these strong contextual and cultural connections indigenous knowledge becomes an essential part of indigenous peoples' lives as it provides the necessary means of survival.

Indigenous people often exclusively depend on limited natural resources available within their ecosystems. Consequently, their cultural adaptation has significantly revolved around the environment. When observing culturally defined methods of adaptation and the relative system of knowledge of various indigenous communities across the world, it is not uncommon to find similarities[51]. This is because indigenous people are ecosystem people and they have historically faced the same challenge: how to fulfil a variety of needs and wants sustainably from limited resources available within the territory they lived in[52]. Despite that it is important to point out that a

[50]Rajasekaran, B., Martin, R., & Warren, D. (1993). *A framework for incorporating indigenous knowledge systems into agricultural research and extension organizations for sustainable agricultural development in India*

[51] Ulluwishewa, R., Roskruge, N., Harmsworth, G., & Antaran, B. (2008). Indigenous knowledge for natural resource management: a comparative study of Māori in New Zealand and Dusun in Brunei Darussalam. *GeoJournal*, *73*(4), 271–284. p. 272

[52] Kahui, V., Richards, A. (2014). Lessons from resource management by indigenous Maori in New Zealand: Governing the ecosystems as a commons. *Ecological Economics*, *102*, 1–7.

universal indigenous knowledge does not exist. Such systems are in fact locally bound and unique to the location in which they have traditionally developed and their associated practice would be void outside the spatial and cultural background in which they have evolved.

More specifically, indigenous knowledge is the "*complex arrays of knowledge, know-how, practices and representations that guide human societies in their innumerable interactions with the natural milieu*[53]". It is mainly founded on the idea that all components of the natural world are connected through kinship and reciprocity. Unlike western paradigms, indigenous peoples do not compartmentalized knowledge, but rather consider the surrounding environment as an interrelation of objective and spiritual or cultural features. Indeed, the boundaries between empirical and intuitive are permeable and these features co-exist harmoniously and complement each other. Many practices of habitat management, sustainable harvesting and recognition of spatial and seasonal distribution of plants and animal resources have been developed anchored in a worldview which can be considered holistic. This is why indigenous knowledge and related practices have been disregarded until recently, even if it is a "*complete knowledge system with its own concepts of epistemology, and its own scientific and logical validity*[54]".

Nowadays, we have entered in the geological epoch of Anthropocene where the dominant catalyst of change are human beings. The degradation of habitats and global acceleration in rates of resource use and landscape modification have given rise everywhere to what are usually referred as ecosystem-based management (EBM) plans. Progressively more people are "looking back" to those who have successfully practiced EBM in the past: indigenous people[55]. The dual nature of their systems of knowledge is increasingly considered one of the most effective way to implement EBM on the premise that social and ecological systems are deeply interconnected and co-evolve[56]. This is because, their traditional ecological knowledge encompasses sustainable natural management to assure both development as well as intergeneration equity, achieving a balance between exploitation and conservation of such natural resources.

It is not a simple coincidence that the richest regions in biodiversity have been the traditional homeland of indigenous peoples while the impoverished ones have undergone processes of

[53] Nakashima, D., & Roué, M. (2002). Indigenous Knowldge, Peoples and Sustainable Practice. *Encyclopedia of Global Enviornmental Change.* Social and Economic Dimonesions of Global Enviornmental Change pp 314-324. p.2
[54] Dais quoted Battiste, M., & Henderson, J. (2000). *Protecting indigenous knowledge and heritage : a global challenge* . Purich Pub. p.4
[55] Kahui, V., Richards, A. (2014). Lessons from resource management by indigenous Maori in New Zealand: Governing the ecosystems as a commons. *Ecological Economics*, *102*, p.2
[56] Ibidem.

industrialization. While modernization has standardized agriculture and livestock, indigenous people are the custodian of crop and domestic animal diversity. These positive outcomes are mainly attributed by the survival of indigenous knowledge and cultural practices, transmitted through generations. Indeed, indigenous knowledge is a "*living process to be absorbed and understood*[57]" and successful education initiatives are essential for knowledge transmission. Ecological practices, even if not intentionally devised for the purpose of sustainability, are highly contextual and instrumental in instances of risk management and environmental transformation. Some of these are diversification of resources, rotational farming, shifting cultivation, pastoralism, agroforestry. Similarly, intercommunity trade, weather forecasting and construction practices mitigate adverse effects of environmental changes and accelerate post-disaster recovery. Much of these practices are dependent on the recognition of customary systems of governance and land rights as the product of the interrelation among society, culture and the surrounding environment.

2.2.1 Participatory Approaches

Indigenous Knowledge has been compared with scientific knowledge, with the latter always in a position of privilege. Indeed, the development community tend to view it as a mere resource to be appropriated and exploited rather than a source of wisdom. It is usually only integrated to the extent to which it complies with scientific paradigms, while ignoring their cultural and spiritual context. However, the integration of the two could fills in the gaps of the other creating a new pluralist paradigm and researches have shown that participatory approaches are the most effective. The international community has accepted indigenous knowledge as both a driver and enabler of sustainability. The Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) identifies indigenous knowledge as '*major resource for adapting to climate change' and "increases the effectiveness of adaptation*[58]".

[57] Battiste, M. (2002). Indigenous Knowledge and pedagogy in First Nations educations: A literature review with reccomendations. Ottawa: Apamuwek Institute. p.15

[58]Intergovernmental Panel on Climate Change. (2014). *Climate Change 2014: Synthesis Report.* Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC: Geneva, Switzerland.

Arrangements varies greatly in terms of indigenous peoples' involvement and formal recognition of them as equals, but they are usually dismissive of indigenous knowledge. This is why development programmes are usually not beneficial for indigenous peoples, as they are structured around ideas of well-being that does not belong to them. The potential for real cooperation increased exponentially when indigenous peoples are accepted as co-managers and actively participate in planning, decision-making and governance. Indeed, most successful environmental plans are pluralistic courses of action that include joint-management and genuine cooperation between development actors and non-governmental groups, such as indigenous peoples. Indeed, to seek a way forward these two cultures must be viewed as complementary, rather than adversarial or in a hierarchical position. It is important to explore the "*linkages between sustainable development and indigenous knowledge, intended here as local knowledge of indigenous communities having its own epistemology and scientific validity and not as opposite to western knowledge*[59]".

2.3 Towards New, More Inclusive Development Paradigms

2.3.1 Culturally-sensitive Development Paradigms

Culture-sensitive approaches have shown concretely how economic and human rights dimensions can be addressed simultaneously, while providing solutions to complex development issues in an innovative and multisectoral manner[60]. These types of interventions advance a human-cantered approach to development, very likely to yield sustainable, inclusive and equitable outcomes. This is because, culture has the potential to broaden the scope of development approaches and make them more relevant to the needs of people, especially the marginalized groups. These ideas form the basis of indigenous people's resistance against development projects that, rather than benefiting them, further alienate local communities. These projects are constructed around Western and quantitative values, singling out other essential conditions of well-being for indigenous groups, such as sufficient food, strong values of caring, reciprocity and solidarity, freedom to express identity and to practise one's culture, and a safe and non-polluted environment[61].

[59] Magni, G. (2016). Indigenous knowledge and implications for the sustainable development agenda. New York: United Nations. p.3

[60] Reuter, T. (2015). Averting a global environmental collapse : the role of anthropology and local knowledge . Cambridge Scholars Publishing. p 235

[61] United nations Economic and Social Council. (2010). Permanent Forum on Indigenous Issues Report on the ninth

Mainstream development is not the optimal solution for addressing structural causes of inequalities as it is typically tailored around the dominant actors of the state and measured by narrow indicators of economic growth. This is usually referred as "development aggression" according to which some segments of the society are viewed as lacking proper development, which need to be imposed on them through top-down policies. This is especially true when facing large-scale project in traditional indigenous territories, which often result in forced displacement, land alienation and environmental degradation. Indigenous peoples were often viewed as passive recipients and victims of harms caused by development interventions.

2.3.2 Self-determined Development

However, since the adoption of the UNDRIP, indigenous peoples' holistic perspective has been central in the adoption of cultural-led development. This involvement is rooted in the concept of self-determined development, built around the rights of self-determination and FPIC protected under the Declaration. The United Nations Development Programme (UNDP) with its Social and Environmental Standards (SES) ensured that UN development projects are to be designed with indigenous genuine participation and in respect of their rights. Another international legal instrument advocating for self-determined development is the ILO Convention no. 169, with Article 7 stating that "*The peoples concerned shall have the right to decide their own priorities for the process of development as it affects their lives, beliefs, and institutions and spiritual well-being and the lands they occupy or otherwise use and to exercise control, to the extent possible, over their own economic, social and cultural development*". Similarly, at a regional level, the American Declaration on the Rights of Indigenous Peoples (2016), states in article XXIV that "*indigenous peoples have the right to be actively involved in developing and determining development programmes affecting them and, as far as possible, to administer such programmes through their own institutions*".

These ideas and the mobilization of the UN Permanent Forum on Indigenous Issues (PFII) have influenced the drafting of SDGs, which is now in line with UNDRIP. Among its priorities there is the development of disaggregated data collection whose categories must mirror the priorities and aims of indigenous peoples themselves. Importantly, qualitative data were used to assert counter-narrative of development and measure how indigenous communities perceived their rights as being implemented.

session (19-30 April 2010). New York: United Nations.

The workshop under the PFII on the topic of 'Indigenous Peoples and Indicators of Wellbeing', further emphasised the need to find "*a space between statistical reporting requirements of governments and representation of indigenous peoples' perceptions and understanding of well-being*" and "*to [work] with indigenous peoples to disaggregate data, as appropriate, or conduct surveys and to utilizing holistic indicators of indigenous peoples' well-being to address the situation and needs of indigenous peoples*."

2.3.3 The Example of *Buen Vivir*

The term self-determined development is also used to define indigenous peoples' own vision of sustainable and locally based process of development. One of the first localised visions of development recognised by the international community is the Quechua peoples' way of life of *Sumac Kawsay* or *Buen Vivir* - literally translated as good living. The *Buen Vivir* philosophy is community-centric, culturally-sensitive, ecological and emerged as an alternative development paradigm in Ecuador. It is focused, as many other indigenous cosmovisions, on keeping the balance between humans and their natural environment as *Pachamana* (mother earth) pervades and influences all things[62].

The *Buen Vivir* philosophy can be better explained as:

- A reconceptualization of what constitutes wellbeing, linked to the maintenance of balance and harmony with the natural environment.
- A reconceptualization of human relationship with nature, not limited to the concept of sustainability, breaking up the man:nature dichotomy.
- An alternative mode of development, criticizing the almost exclusive goal of economic growth in development programmes;
- A recognition of the deep values of indigenous systems of knowledge in the quest for sustainability.
- A claim concerning identity, multiculturalism, decolonisation and interculturality.

[62] Villalba-Eguiluz, C., & Etxano, I. (2017). Buen Vivir vs Development (II): The Limits of (Neo-) Extractivism. *Ecological Economics*, *138*, 1–11. p. 2

In this way *Buen Vivir* introduced a new discursive current on sustainability and paved the way for other indigenous cosmovisions to be legally recognised and effectively implemented in national policies. Indeed, Ecuador has adopted *Buen vivir* in its 2008 constitutions and explicitly implemented it in the Planes Nacionales para el Buen Vivir. The concept subsequently gained popularity and spread all around South America, evolving as a multicultural concept.

CHAPTER 3 – Indigenous Māori Knowledge and Perspectives of Ecosystems

3.1 Who are the Māori People of New Zealand?

Māori, the indigenous people of *Aotearoa*/ New Zealand, are increasingly involved in attempts to provide appropriate cultural response to environmental issues. The recent ubiquitous deterioration of New Zealand natural eco-system has intensified the attention of the public over land issues and natural resource management. Many Māori as well as *Pākehā* (non- Māori) now advocate for restoring and adopting traditional indigenous knowledge to manage New Zealand environment in a sustainable way. Unsurprisingly, there are multiple sites of ecological disaster where Māori groups are working, often in collaboration with others, in an effort to achieve aspirations around restoration and sustainability of their traditional lands, waters and other resources. The declining condition of New Zealand ecosystems principally affect Māori communities. On one hand, they have an undeniable spiritual and traditional connection whit land, for which people's cultural wellbeing is inextricably connected with the ecosystem wellbeing. On the other, they have strong economic interests related to the natural realm as they own a significant proportion of assets in the primary sectors: 50% of the fishing quota, 40% of forestry, 30% in lamb production, 30% in sheep and beef production, 10% in dairy production and 10% in kiwifruit production[63].

Many forms of Māori knowledge are consistent with science and have proven to be of great scientific values and their ecological knowledge has been effectively included in several New Zealand legislations and cooperative management plans at national, regional and local level. Even if Māori today are still in a relatively disadvantaged situation due to colonization, land alienation and stigmatization there are consistent indications of a renewed willingness on the part of the government to advocate for Māori rights. For example, with an increased importance of the Treaty of Waitangi, the birth of the Waitangi Tribunal, the endorsement of the UNDRIP in 2010 and many other initiatives, which will all be discussed exhaustively in the next chapters.

This paper presents New Zealand attempt towards joint management of natural resources with Māori tribal authorities as an extremely positive example. Māori view, for which earth is considered as a gift necessitating reciprocity on the part of the exploiters to maintain its sustainability, has effectively shaped public opinion in New Zealand and its environmental policies in the last decades. It will be

[63] New Zealand Foreign Affairs & Trade. (n.d.) Te Ōhanga Māori: The Māori Economy.

further discussed how the country has effectively provided for the prerequisites for such cooperation and what, which have been the benefits of blending Māori ecological knowledge with modern science in New Zealand and lastly what are Māori expectations for the future.

3.2 Māori Indigenous Knowledge: Mātauranga Māori

Māori have a holistic approach with the natural world and its resources. They believe that an ecosystem is a dynamic complex of animate and inanimate components interacting as a single functional unit and consider that all living things are profoundly interconnected, interdependent. Consequently, people are not only dependent on the environment they live in, but they influence it through land use and management. Their kinships with nature derive from an amalgamation of both cosmogony and anthropogenesis, which serve as the foundation for many societal values and conveys important moral messages across generations. Such relationship is explained and ruled by what is generally referred as *Mātauranga Māori*, the Māori traditional knowledge system.

Mātauranga is defined as the knowledge or understanding of everything visible and invisible. In other words, *Mātauranga Māori* provides the basis for the Māori worldview. Much of this knowledge is locally or regionally distinctive and is based on and understanding of seasonal cycles and is passed down to future generation mainly in the oral form. *Pūrākau* [64] and *Maramataka* [65] forms of *Mātauranga Māori*, comprise codified knowledge and include a suite of techniques empirical in nature for investigating phenomena, acquiring new knowledge and updating previous one[66]. While, other forms conveying knowledge generated via scientific research through myth and legends are more susceptible to harsh criticism by the scientific community. Nowadays, many *hapū* (sub-tribes) and *iwi* (tribes) continue to live in tribal areas by traditional values despite land alienation, urbanization and land degradation.

[64] Hikuroa, D. (2017). Mātauranga Māori-the ūkaipō of knowledge in New Zealand. *Journal of the Royal Society of New Zealand: Special Issue: Finding New Zealand's Scientific Heritage: From Mātauranga Māori to Augustus Hamilton. Guest Editors: Simon Nathan and Rebecca Priestley*, *47*(1), 5–10.
[65] Ibidem
[66] Ibidem

Māori values derives directly from *Mātauranga* and the one listed above will be instrumental in the understanding of Māori environmental perspectives[67]:

- ***Whakapapa*** is a cognitive genealogical framework connecting every being via descent from ancestor.

- ***Mana whenua*** represents territorial rights, authority or jurisdiction over the land and its natural resources and *taonga*[68]. It does not equate to ownership, but rather responsibility to govern and manage the territory.

- ***Kaitiakitanga*** is the core of Māori stewardship or guardianship of the environment.

- ***Manaaki*** means to support, take care of, give hospitality to, protect, look out for - show respect, generosity and care for others.

- ***Utu*** is usually wrongfully traduced as vengeance, but it is mainly concerned with the maintenance of balance through reciprocation both with other individuals and the environment**.** The general principles that underlie *utu* are the obligations that exist between individuals and groups. If social relations are disturbed, *utu* is a means of restoring balance.

- ***Mauri*** is the life principle or vital essence inherent to all animate and inanimate things. It is the essential quality and vitality of a being or entity.

- ***Tapu*** means to be sacred, prohibited, restricted, set apart, forbidden, under divine protection.

- ***Noa*** means to be free from the extensions of *tapu*, ordinary, unrestricted, void.

- ***Tikanga*** is the customary system of values and practices that have developed over time and are deeply embedded in the social context. It is also referred as the first law of *Aotearoa*/New Zealand.

[67] For more insightful information consult Māori Dictionary. Available at: https://maoridictionary.co.nz/
[68] Treasure, anything prized - applied to anything considered to be of value including socially or culturally valuable objects, resources, phenomenon, ideas and techniques (Māori Dictionary).

3.3 Māori Anthropogenesis

Mātauranga is the product of an anthropological development, whose origin is traced back to Polynesian migrations from the norther-eastern Pacific to New Zealand between AD 800 and AD 1300. These migrations were planned, deliberate and purposeful as the scale of the endeavour in terms of cost, technology, the number of participants involved imply prior knowledge of the destination and strong, well-defined motives. In other words, someone knew New Zealand was there and according to legends this was *Kupe*. New Zealand settlers soon developed their own culture and became known as a distinctive people, the Māori.

When Captain James Cook first reached New Zealand in 1769 most of the coastal areas were inhabited by Māori and their population was reported to be more than 100.000[69]. This is because, during the colonisation of *Aotearoa*, migrants adopted a systematic and coordinated strategy for the exploration of New Zealand and the establishment of a network of viable communities linked by regular interaction[70]. Māori first settled in the Bay of Plenty, Northland and Gisborne regions and other warmer parts of the North Island and then moved progressively into southern areas.

After the initial migrations a second phase took part: the expansion and rapid change phase, in other word, the becoming of Māori. This second phase was characterized by exponential population growth, intensification of agricultural activities, decline in availability of moa and seals, development of centralized political activity in the form of *whanau* (family units) *hapū* (sub-tribes) and *iwi* (tribes) and lastly development of warfare. Due to increasing scarcity of land and population growth more advanced societal systems and centralization of power were required to better manage resources. In the Evolution of the Polynesian Chiefdoms said that Māori society displayed a particular stage of socio-political development, the 'chiefdom' or complex ranked society. Polynesian societies were structured hierarchically and characterized by stratified layers. In other words, they are pyramidal societies, with *Rangatira* (chiefs) at the top, *Tutuā* (commoners) in the middle and *Taurekareka* (war-slaves) at the bottom. There is a tendency for these systems to become more complex and layered over time and given the fact that New Zealand is the youngest, it is also the less structured.

[69] Phillips, J. (n.d.) History of Immigration. Te Ara The Encyclopedia of New Zealand. Available at: https://teara.govt.nz/en/history-of-immigration/print

[70] Kahui, V., Richards, A. (2014). Lessons from resource management by indigenous Maori in New Zealand: Governing the ecosystems as a commons. *Ecological Economics*, *102*, 1–7.

Māori environmental ethic was based on a tribal network of interrelated hierarchical groups and the governance over natural resources was in nested tiers. *Whanua* was nestled within a *hapū*, which in turn was nestled within the larger political organization of the *iwi*. In doing so, policies could be made as locally-appropriate as possible, while also being able to address wider-scale problems[71]. Indeed, territorial authority was achieved and asserted by the leadership of the ruling *iwi*, but the actual occupation of the land and the access to its resources was held by *hapū, whanau* and individuals who exercised *mana whenua*. Each of these groups accessed their apportioned resources but were also supported by a system of reciprocal exchanges with other areas, which served the survival of the iwi at large[72].

New Zealand comprises two islands, which varies greatly in terms of both whether and natural resources available. While the South Island is characterized by a subtropical climate and was densely populated by Māori; the North Island's climate was sub-Antarctic and Māori population was largely dispersed. Such low population density, harsh environment, uncertainty and abundance of land generating high level of biodiversity were conducive to this particular communal ownership of natural resources managed by *Rangatira*[73]. *Rangatira* rights were asserted by means of *whakapapa*- the knowledge of tracing out the descendent of living and non-living, material and immaterial phenomena. Chiefs' place at the top of the pyramid is guaranteed by their genealogy, which is considered "better" than anybody else's. In other words, *whakapapa* glue together the system and is the most important factor regarding the establishment of leadership.

However, tracing back *mana whenua* and *mana moana* (authority over wetlands and waterways) is an extremely difficult matter and it has been acknowledged several times in Waitangi Tribunal Reports. Interconnections among iwi of *Aotearoa* are complex and intertwined and claims can easily overlap. Moreover, *whakapapa* alone is not enough for *Rangatira* and *iwi* to exercise authority over the land. The political legitimation of a tribal group was secured by continued occupation (*ahika*) in such a way that the surrounding ecosystem became effective part of the tribe and vice versa[74]. On this regard, the establishment of *marae* (purpose-built meetings houses) or decorated posts served as the

[71] Ibidem
[72] Williams, J. (2004). `E pakihi hakinga a kai: An examination of pre-contact resource management practice in Southern Te Wai Pounamu (Thesis, Doctor of Philosophy). Retrieved from http://hdl.handle.net/10523/5198
[73] Kahui, V., Richards, A. (2014). Lessons from resource management by indigenous Maori in New Zealand: Governing the ecosystems as a commons. *Ecological Economics*, *102*, 1–7.
[74] Mead, Sidney M., 2016. *Tikanga Māori : living by Māori values* . Wellington, Aotearoa, New Zealand: Huia Publishers.

symbolical manifestation of *iwi*'s authority[75] and marked the boundaries for resource systems of different groups[76].

Place names are also considered pivotal in the attempt to create *mana whenua* as they effectively locate traditional knowledge in place and time. The land is transformed in a living encyclopaedia in which place names function as mnemonic devices[77]. *Mātauranga Māori* is present in the environment, in the names imprinted on it; and in the ancestors and events those names invoke[78].

3.4 Māori Cosmogony

Traditional narratives, each of which embodied an ecological message, were used to teach and pass on Māori environmental ethics or constructs. Creation narratives are explanatory of the spiritual bond between Māori and the land and introduce pivotal myth-messages concerning ecological values. Two aspects are fundamental to this cosmogony: the personification of natural phenomena and *whakapapa*. The former, combined with metaphorical language, enabled Māori to clothe explanations and meaning in poetic imagery[79]; while the latter traces back the origin of all Māori people with the separation of *Ranginui* (sky father or the male principle) and *Papatūānuku* (mother earth or the female principle), the single divine ancestors.

From Ranginui and Paptuanuku arose many offspring. They are: *Tāne-mahuta* (god of the standing forest), *Tangaroa* (the god of the sea and all sea creatures), *Tāwhirimātea* (god of the winds and all other meteorological aspects), *Tūmatauenga* (god of warfare and human affairs), *Rongo-mā-Tāne* (god of agriculture, responsible for the cultivated food) and *Haumia-tiketike* (god of the uncultivated foods). In most versions[80] the two primeval parents were originally clung together in a tight and amorous embrace. In between of the *atua* (gods) there was perpetual darkness and the numerous

[75] Kawharu, Merata, 2000. *Kaitiakitanga: a Maori anthropological perspective of the Maori socio-environmental ethic of resource management.* The Journal of the Polynesian Society, pp. 349-370.
[76] McDowall, R. (2011). *Ikawai : freshwater fishes in Māori culture and economy* . University of Canterbury.
[77] Wautischer, Helmut, 1998. *Tribal epistemologies : essays in the philosophy of anthropology* . Aldershot; Brookfield USA: Ashgate.
[78] *Kei raro i ngā tarutaru,ko ngā tuhinga o ngā tupuna: Beneath the herbs and plants are the writings of the ancestors.*
[79] Roberts, M., Norman, W., Minhinnick, N., Wihongi, D., & Kirkwood, C. (1995). Kaitiakitanga: Maori Perspectives on Conservation. *Pacific Conservation Biology*, *2*(1), 7–20.
[80] The reader needs to be cautioned that these cosmogonic trees could vary from tribe to tribe as Maori population is highly heterogenous and dispersed.

progenies started growing dissatisfied and plotting against their parents for freedom. The children eventually decided that their parents needed to be separated in order for the world to know the full light of day. After some failed attempts, *Tāne-mahuta* was able to separate them standing on his hands – usually portrayed as roots anchored to the mother hearth- and pushing Ranguinui away in the sky with his feet – portrayed as branches. With the separation, the archetypal state of darkness (*Te Pō*) was hence replaced by the time of emergence, light and reality, the dwelling place of humans (*Te Ao-marama*)[81].

While *Ranginui* was relegated in the meanders of the sky with *Tāwhiri-mātea* and became a stranger for his children, Papatūānuku remained on the earth for nourishing and sustaining her offspring. One of her children, *Tāne-mahuta*, fashioned the first human being, *Hine-ahu-one*, from which all Māori people are descendants. In other words, Māori origins can be traced back to numerous ordered genealogical webs connected to the figure of *Papatūānuku.* For this reason, land is usually identified as the source of human creation, from which Māori were born, nourished and to which they will eventually return. In "Ki te whaiao : an introduction to Māori culture and society" Tania Ka'ai writes: *"It is as if the world were conceived of as a vast an interlinking family tree, from the remotest states of darkness and void, to the teeming descendants of Tū-mata-uenga, Tāne, Tiki, Io-wahine, and Hine-ahu-one*[82]*".* This story clearly illustrates an essential aspect of the Māori world view: that all living things- animate or inanimate- are related by genealogy and ultimately link to *Ranginui* and *Papatuanuku*.

In *Tribal Epistemologies: Essays in the Philosophy of Anthropology* Helmut Wautischer reflects on the fact that epistemologically the word *whenua* means both land and placenta at the same time and how such meaning metaphorically represents Māori strong and sentimental connection with their land. At the same time, the term *hapū*, other than referring to a tribal group, also means pregnant. Logically, the dual meaning of these words together with Māori customary practices, such as the burial of the *pito* (umbilical cord) or of the *whenua* (placenta) in the land, symbolically represents the motherly essence of nature and the idea that all humans are children of *Papatūānuku.*

That is why Māori do not hold sovereignty over the land, for that would be tantamount to claiming authority over *Papatūānuku.* It can be said that Māori resource management is not based on the concept of property, but rather stewardship or guardianship, the so-called *Kaitiakitanga*. Indeed, *mana whenua* only relates to decisions about resources and form the basis for all the responsibilities incumbent in *Kaitiakitanga*. As

[81] *Iti kore, kite pō, kite aomārama*: out of the nothingness, into the night, into the world of light.
[82] Ka'ai, Tania., 2004. *Ki te whaiao : an introduction to Māori culture and society* . Auckland, N.Z: Pearson Longman. p.10

every son has social obligations towards his parents, man has therefore obligation to promote welfare of Mother Earth. To Māori, land is part of the living body of the tribe. Humans are a part of nature; they belong with all other things to the environmental family or *whanaungatanga*. The following *whakatuaki* (Māori proverb) eloquently summarize Māori relationship with land:

"*Ko papatuanuku to tatou whaea*
Ko ia te matua atawhai
He oranga mo tatou
I roto i te moengaroa
Ka hoki tatou ki te kopu o te
whenua"

"The land is our mother
She is the loving parent
She nourishes and sustains us
When we die
She enfolds us in her arms."

3.5 Māori Environmental Epistemology: Kaitiakitanga

The aforementioned environmental epistemology sharply contrasts with Judeo-Christian view, which seems to permeate the western conservation paradigm. According to Christianity, man has been created to be superior to the rest of creation and to have its resources at his/her own disposal. This perspective is extremely anthropogenic and has established a man:nature dualism for which, even today, sustainability must always be trade-off for economic interests.

On the contrary, Māori perspective is an ethnocentric one, in which there is no dichotomy between man and nature. Indeed, Māori are unable to conceive themselves as separated to their natural surroundings and nature is considered an essential feature of their identity. While, the classic property right paradigm provides an intellectual typology of possession, Māori worldview represents an integrated normative concept of knowledge that deals with the interaction between human and ecology. Their conservation ethics is based on a kin-centric world view in which one's mauri or life

force is linked to the mauri of all others to whom he/she is related[83]. From such kinship obligations were derived and conceptualized as *Kaitiakitanga*.

The concept of *Kaitiakitanga* lies at the heart of Māori ecology. Narratives of a shared origin with all parts of the universe link people and ecology, encouraging responsible stewardship. This nexus of beliefs served as the basis for Māori sustainable resource exploitation practices, thanks to which they were able to extract resources from the environment without unduly depleting it. *Kaitiakitanga* is literally translated as guardianship and oblige every generation to act as a custodian of the land. This practice does not only arise obligations towards the earth wellbeing, but also provides for posterity by ensuring that a viable livelihood is preserved and passed to future generation intact. The spiritual link with land negates ownership, but provides for the responsibility to not alter the *mauri* (life principle)[84]of the surrounding ecosystem, that collectively form one's *whakapapa* (genealogy). In other words, resource exploitation has to occur in a fashion that does not compromise the integrity of the system. *Kaitiakitanga* was also flexible in nature and able to hone management practices to local conditions.

Those who actively exercise *Kaitiakitanga* are known as *kaitiaki* (guardians) and are invested with the responsibility of managing resources in a sustainable way. Their decisions are based on "*the inter-generational observations and experiential understandings of Mātauranga Māori or traditional tribal ecological knowledge [...] this process ensures the active engagement and retention of bio-cultural information and ecological management practices into the future*[85]". Even if *kaitiaki* are endowed with specific duties, *Kaitiakitanga* is a community-based concept, which involves the totality of the *tangata whenua* (people of the land or indigenous people). Consequently, the environment is managed as a common property and all individuals participate in modifying operational rules[86].

For common property regimes to properly function a certain degree and kind of mutual monitoring and enforcement must be present. That is why, Māori society has codified environmental values into the wider social system by means of *Kaitiakitanga*. The combination of intimate familiarity with nature, social regulation and ritual control created a deep-seated inter and intra group morality that

[83]This explains why iwi refer to the landscape in the same way as they refer to other humans.
[84]Mauri can be conceived as an environmental indicator.
[85] Paul-Burke, K., & Rameka, L. K., 2015. K*aitiakitanga - Active guardianship, responsibilities and relationships with the world: Towards a bio-cultural future in early childhood education.* Singapore: Springer. p.1
[86] Kahui, V., Richards, A. (2014). Lessons from resource management by indigenous Maori in New Zealand: Governing the ecosystems as a commons. *Ecological Economics*, *102*, 1–7.

disincentivized rule breaking[87]. For example, the rate of harvesting needed always to be adjusted according to changes in the rate of the regeneration of the harvested specie, to guard against gradual depletion of *mauri* and possible extinction of resources and counter any imbalances in the system.

If degradation occurs, the *kaitiaki* emanate immediate measures to regulate spatial and temporal access to the resources, such as *rahui* (temporary ritual prohibition or reserved areas), *wāhi tapu* (long-term ritual restrictions), *noa* (unrestricted areas) and most importantly *tapu* (temporary sacred restrictions). Individual violation of such restrictions resulted in the punishment of the entire kin group, in order to force accountability of individuals to their wider network. Historians have noted that incidence of *tapu* and other proscriptive conservation measures increased over time - before New Zealand colonization - meaning that low ecological damage was not just the result of population and technological limitations, but rather of the effective implementation of *Kaitiakitanga*. Resource management systems were able to adapt and intensify according to population growth and resource scarcity. Moreover, Kaitiakitanga is the main explanatory factor for Māori success in sustainable management[88] and mirrors modern tenants of adaptive management, aligning with the principles necessary for robust Common Property Regimes[89]. This analysis exposes Kaitiakitanga as an extremely positive example of governance in terms of sustainability, but how can it be assimilated in modern ecosystem-based management and in the wider legislative framework of the country? In the last decades, New Zealand has been able to provide a relatively satisfactory answer; becoming one of the first countries in the world to successfully include indigenous knowledge in its legislation and implement cooperative plan for restoration and resource management.

[87] Wautischer, Helmut, 1998. *Tribal epistemologies : essays in the philosophy of anthropology* . Aldershot; Brookfield USA: Ashgate.
[88] Kahui, V., Richards, A. (2014). Lessons from resource management by indigenous Maori in New Zealand: Governing the ecosystems as a commons. *Ecological Economics*, *102*, 1–7.
[89] Ostrom, E. (1990). *Governing the commons : the evolution of institutions for collective action* . Cambridge University Press.

CHAPTER 4 – Māori Resource Management in New Zealand Legislation

4.1 Indigenous People's Rights in New Zealand

The starting points for understanding and partnership were constructive engagement and dialogue. Many frameworks have been postulated with the goal to put on an equal footing Māori qualitative or non-monetary measures with quantitative or monetary ones. Māori, has we have seen, have developed numerous efficient customs for managing and protecting the environment.

On this regard, New Zealand has recognised Māori cosmological view of nature as an ancestor and associated *Matauranga* in its legal framework on several accounts. Over the years, there have been three cases where natural entities - Mount Taranaki, Te Urewera and the Whanganui river - gained legal personhood and are lawfully represented by their *kaitiaki*. In doing so, New Zealand has recognized in law what Māori had been insisting all along: nature is a living being worthy of rights, powers, duties, and liabilities of a legal person.

Interestingly enough, many policies have been initially devised for better advocating indigenous rights' claims and not solely for environmental purposes. Indeed, they were the product of a reconciliation journey, seeking remedy for the Crown's breaches of promises. In doing so, the government tried to enhance mana whenua and return traditional control to Māori.

New Zealand saw in the principles of *Kaitiakitanga* a way to bridge ecology and social sciences and implement it in several policies and plans. While humans are still given legal control over nature, it is done so within a framework of humans as guardians of nature's interests[90]. The method devised in order to better protect indigenous rights to land could be certainly used cross-sectionally to provide a healthy environment for everyone. Although economic evaluation techniques are still the predominant choice for assessing an ecosystem's wellbeing, the contamination with *Matauranga* has enabled a common language to be used. This has resulted in "*an emerging convergence of thinking between the Māori world view and ecological economic epistemologies as to what constitutes*

[90] Magallanes, C. (2015). Nature as an Ancestor: Two Examples of Legal Personality for Nature in New Zealand. *VertigO - La Revue Électronique En Sciences de L'environnement*, *22*(Hors-série 22).

ecosystems and ecosystem services and what desirable frameworks are needed to effect change and improve ecosystem management[91].”

The most effective models are based on the principles of the Treaty of Waitangi and the right for Māori to be involved in ecosystem management. Two main environmental legislations- with the strong influence of *Matauranga*- try to reconcile economic development and sustainability, traditionally view in isolation or opposition: The Treaty of Waitangi and The Resource Management Act 1991. While these two legislations provide for the inclusion of Māori environmental knowledge on a theoretical level, Te Urewera Act 2014, Te Awa Tupua (Whanganui River Settlement Agreement) Act 2017 and Te Anga Pūtakerongo, a Record of Understanding 2017 have practically implemented the principle *Kaitiakitanga*. These instances reveal an increased interest towards *Mātauranga Māori* and provide inputs for cooperation and collaboration with *hapū* and *iwi* of *Aotearoa* in the future. Each legislation will be further discussed in the paper.

4.2 The Declaration of the Independence of the United Tribes of New Zealand

Before talking about the Treaty of Waitangi is essential to introduce its parent document, without which the Treaty would have been legally void. The Declaration of the independence of the United Tribes of New Zealand or *He Whakaputanga o te Rangatiratanga o Nu Tirene* is a unilateral declaration of independence drafted by the United Tribes of New Zealand and formally recognized by the Crown (endorsed by King William IV). Even if the document was mainly signed by chiefs representing tribes of the North Island the 28th October 1835 at Waitangi, it was legally recognised to extend its legal effects to entire Māori population.

This document is of a fundamental importance for three main reasons. First and foremost, the Declaration recognised and confirmed the independence of *Aotearoa* and its people and at the same time asserted that *Tikanga Māori* (Māori customary law) was the law of the nation. Legal recognition of indigenous people as rightful holders of the land was sharply in contrast with the widespread use of the notion of *terra nullius* and the doctrine of discovery.

[91] Harmsworth, R. (2013). Indigenous Māori knowledge and perspectives of ecosystems. Manaaki Whenua Press, Lincoln, New Zealand. Pp 274 – 286. p.1

As we already introduced, the First Nations were usually regarded as too low in the scale of social organization to be owners of the land, which consequently became vacant and could be "discovered" by European nations. By doing so, colonizers could assert authority over the country without reliance on any other legitimate mode of acquisition in international law.

This Declaration of Independence is surprising for its time and circumstances, few other indigenous groups around the world obtained the same "privilege". For example, aboriginal people of Australia needed to wait for the Mabo decision in 1992 for their authority to be recognized and the notion of *terra nullius* to be finally abhorred[92]. Secondly, the Declaration provided Māori with an opportunity to cooperate through a confederation of *iwi* and *hapū* and thus to form a sort of national indigenous government. Lastly, the declaration preceded The Treaty of Waitangi and posed the legal basis for relationships with the British crown. Without the declaration to recognize Māori as the rightful independent people of New Zealand, such indigenous group would have been impeded to enter the international legal framework- as it was done for many others.

4.3 The Treaty of Waitangi

The Treaty of Waitangi or *Te Tiriti o Waitangi* is a bilateral agreement between Māori leaders and the British Crown, signed the 6th February 1840. The Treaty was drafted with the intent to provide a British government, whilst securing Māori sovereignty over the land. For this reason, the document provides the basis for partnership and engagement between Māori and the Crown. The New Zealand delegation to the World Intellectual Property Organization (WIPO) in the 2002 Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore stated that the "*Treaty must be foremost in our minds when considering the protection of traditional cultural expressions. In considering solutions we must maintain our ability to meet our Treaty obligations*." Nowadays, the Treaty of Waitangi is considered a funding document[93] and a core part of New Zealand constitutional arrangements. However, many controversies still surround it, as two versions- a Māori and an English version- exists and display enormous inconsistencies. The two

[92]Mabo v Queensland (No 2) ("Mabo case") [1992] HCA 23; (1992) 175 CLR 1 (3 June 1992). High Court of Australia.
[93]New Zealand Maori council v Attorney General [1994] 1 NZLR 513, 516 Lord Woolf (PC) which stated that the "Treaty records an agreement executed by the crown and maori, which over 150 yearslater is one of the greatest constitutional importance to New Zelanad

parties had very different understandings and expectations, but it is clear from the English translation that British representatives were not acting in *bona fide* and drafted their version of the Treaty in a way that it was instrumental for their expansionist ambitions.

On one hand the Māori version, called *Te Tiriti o Waitangi*, allowed the Crown to have *kawatanga*, which can be translated as delegated authority over the administration of the land and people, but *Rangatira* were assured to keep *tinorangatira*, translated as self-determination or sovereignty. On the other hand, in the English version, *Rangatira* ceded complete sovereignty over the country and its people. On this regard, Queen Victoria made Māori British subjects and established William Hobson as Governor. Only few Māori at that time were literate and just a handful of them was able to read and write in English. Moreover, While the Māori version was signed by more than 500 *Rangatira* and formally endorsed by them, the English one collected only around 40 signatories. For these reasons, The Waitangi Tribunal in 2014 found that the English translation was malicious and void of legal significance. The Crown legislative and executive rights were not absolute but qualified by the promises made towards Māori, which could have not been unilaterally set aside.

4.3.1 The Treaty's principles

Nowadays preferred strategy is to reference Treaty principles, rather than specific provisions due to discrepancies between the two versions and incapacity of literal application in modern contexts. These principles can and have been inferred by the original text and its surrounding circumstances, elicited for the first time by Lord Cook's decision in New Zealand Māori Council v Attorney-General in 1987. Since then, Treaty principles were identified, reiterated and developed by the judiciary, rather than the legislative. Three core principles have been identified: the principles of partnership, participation and protection. The Treaty of Waitangi Act 1975 legally confirmed the presence, relevance and interpretation of such fundamental principles for the first time. But most importantly, it established a tribunal able to make recommendation on claims relating to the practical application of said principles - the Waitangi Tribunal. The Tribunal was also empowered to investigate past and present breaches of the Treaty by New Zealand government and state-controlled or state-owned bodies and issue recommendations. Recommendations by the Waitangi Tribunals, even if not legally bound have always been taken seriously and used in negotiations. Before 1975, *tikanga* values and Māori rights- especially environmental ones- were marginalized and lay legally dormant.

4.3.2 The Waitangi Tribunal

The Tribunal of Waitangi or *Te Rōpū Whakamana i te Tiriti o Waitangi* was instituted by The Treaty of Waitangi Act 1975 with the purpose to report and suggest settlements for Māori claims of breaches of the Treaty of Waitangi as well as to ensure that future legislation to be consistent with its principles. It was conceived as a permanent commission of inquiry and not as a court of law, meaning that its decisions are not legally binding on the Crown and national governments. The bright side is that the Tribunal may use *tikanga Māori* in its hearing as a source of law. Originally, investigations were restricted to grievances issued after 1975, but in 1985 its jurisdiction was expanded to claims about any alleged breach since 1840 - the date of the Waitangi Treaty.

The Tribunal treated claims as locally-bound and grouped them into regional districts. Its scope of action is virtually limitless. However, after the 1985 amendment, the Tribunal found in various inquiries that the Crown had consistently breached Treaty obligations in the past. In doing so, it became a political issue, often leading to general public backlash. However, it is beyond doubts that the Tribunal, despite controversies, has significantly contributed to remedying some aspects of the country's colonial legacy. It has evolved and adapted to public demands and reassured its importance in several cases.

As previously introduced, the Waitangi Tribunal, not being an adversarial court, is able to justify its decisions by means of *Matauranga Māori* and *tikanga*, rather than just conventional law. Its decisions have advocated for Māori environmental rights and values in many instances such as:

- Motunui case 1983: *Te Āti Awa* of Taranaki brought a claim against a petrochemical plant which had been given permission to discharge untreated industrial waste into the mouth of the Motunui river. The claim was that the authorized pollution of their traditional fishing grounds was an infringement of their Treaty rights. The Tribunal found that "*Māori people were to be protected not only in the possession of their fishing grounds, but in the mana to control them and in accordance with their own customs and having regard to their cultural preferences*[94]". For the first time, a Tribunal decision acknowledged the validity of Māori cultural and spiritual beliefs as *mana* in its decisions. In doing so, relevant legislation - the Environment

[94] Waitangi Tribunal. (1983). Report of the Waitangi Tribunal on the Montunui-Watara Claim (Wai 6). Wellington, New Zealand.

Act 1989, the Conservation Act 1987 and the Resource Management Act 1991 - now contains specific provisions for compliance with Māori non-material values.

- Manukau Harbour Case 1985: the Tainui people brough a similar claim about severe pollution of the Manukau Harbour and loss of *mana* over the natural resources surrounding it, such as the Waikato river. The tribunal decision was centred around the importance of natural features for Māori cultural and general wellbeing. It stated: "*It is difficult to overestimate the importance of the Waikato river to the Tainui tribes. It is a symbol of the tribe's existence. The river is deeply embedded in tribal and individual consciousness… The river has its own spirit. It is addressed in prayer and oratory as having a mauri of its own. The spirits of ancestors are said to mingle and move in its current*[95]". But most importantly, the Tribunal issued a recommendation that *kaitiaki* (legal guardians) were appointed to assist decision-making processes affecting both the harbour and the river.
- Muriwhenua case 1988: the previous decisions were reaffirmed in the Muriwhenua case 1988, in which the Tribunal stated that the Treaty guaranteed to Māori full protection for their fishing activities, including unrestricted rights to develop them along either or both customary or modern lines[96].

In these and several other cases, the Tribunal pointed out that the values of a society and cultural preferences should be regularly applied in decision-making processes, regardless of their material or non-material nature. At the same time, it reaffirmed that The Treaty of Waitangi must give Māori values an equal place to conventional ones and prioritize Māori interest when their *taonga* is adversely affected. As a practical consequence of these hearings *Kaitiakitanga* was subsequently incorporated in the most important environmental legislation, the Resource Management Act 1991.

4.4 The Resource Management Act 1991

The resource management Act (RMA) 1991 is one of the most important pieces of legislation regarding conservation. Its adoption was significant for four main reasons. Firstly, it established one integrated framework replacing the countless previous resource-use regimes and legislation. This way, it redirected all policies and standards of the management of natural resources under the scope

[95] Waitangi Tribunal. (1985). Report of the Waitangi Tribunal on the Manukau Claim (Wai 8)
[96] Waitangi Tribunal. (1988). Report of the Waitangi Tribunal on the Muriwhenua Fishing Claim (Wai 22)

of this sole act. Secondly, it was the first statutory planning regime to incorporate the principle of sustainability. Thirdly, it incorporated sustainable management as a- explicitly stated- core purpose of the regulatory framework. Lastly, it recognises the importance of indigenous rights in the mitigation process.

The RMA was initially conceived as a response to the "Think Big" economic philosophy and its legal implementation- The National Development Act 1979[97]- provided fast track approvals of energy related projects, elevating ministerial decision above the law passed by Parliament[98]. The National Development Act generated extreme opposition and triggered RMA. The Fourth Labour Government won the 1986 and repealed the National Development Act and appointed start the long reform process required for the drafting and approval of RMA. The process for passing the bill was not concluded by the election of 1990, which Labour lost. However, Simon Upton, the new Minister for the Environment, recognized its importance and finally enacted it in 1991.

The RMA integrated the bulk of New Zealand's environmental law in 314 pages and it was accompanied by a detailed explanatory note written in plain English to eschew the complexity and prolixity. The government adopted as conceptual basis for managing natural resources the Brundtland report. In doing so, they focused on cost-effective use of resources, intergenerational equity, the World Conservation Strategy, intrinsic valued of ecosystems and the Treaty of Waitangi. In December 1988 the reform proposal was published after extensive public consultation. The public interest was intense and usually expert: Planners, lawyers, local government staff, environmentalists, engineers, mining companies, Māori groups and servants were the main people to cooperate. Thanks to it, New Zealand was at the head of the international race to attain sustainability. Its approach was to ensure that the country's growth was sustainable, rather than a simple balance between environmental damages and economic interests. The Act is also pioneering in recognizing indigenous culture practices as enabler of sustainability and explicitly including them in its provisions.

In Section 2 of the RMA a comprehensive definition of the environment is given. It is described as comprising: *"(a) ecosystems and their constituent parts, including people and communities; and (b) all natural and physical resources; and (c) amenity values; and (d) the social, economic, aesthetic and cultural conditions which affect the matters stated in paragraph (a) to (c)".* In this way Māori traditional cultural values were included as fundamental components of what is considered by law as

[97] Part of a pattern of neo-liberal legislation promoted by the Muldoon administration.
[98] Palmer, G. (2013). The Resource Management Act – How we got it and what changes are being made to it. New Plymouth. p.3

an ecosystem. This is important because non-monetary values are usually ignored as they are considerably more difficult to quantify than economic loss or growth.

In Section 5(1) the purpose of the RMA is reiterated as to promote the sustainable management of natural and physical resources. Sustainable management is further defined in Section 5(2) as managing the use, development, and protection of such resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety while "*(a) sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations*[99]*; and (b) safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and (c) avoiding, remedying, or mitigating any adverse effects of activities on the environment*".

In other words, the RMA is effects-based, meaning that if applicants are able to prove that the effects of development activities are unproblematic on the environment then they are free to use natural resources. Rather than balancing or trading-off environmental interests for economic benefits, this section provides for the primacy of the former and environmental limits which cannot be compromised. This has been fundamental as any attempt to quantify non-material values, would be at their detriment.

In Section 6 all people and institutions with the power over the management and protection of natural resources shall recognise and provide for a list of matters of national importance. Among them, the most relevant for the enforcement of Māori environmental perspective are: *"(a) the preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development, (b) the protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development; (c) the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna; (d) the maintenance and enhancement of public access to and along the coastal marine area, lakes, and rivers; (e) the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, wāhi tapu, and other taonga; (f) the protection of historic heritage from inappropriate subdivision, use, and development; (g) the protection of recognised customary activities".*

The express inclusion of cultural wellbeing is also found in the wording of Section 7 and 8. Section 7 states that all persons exercising functions and powers under the RMA shall have particular regard

[99] Intended as reasonable assessment of anticipated needs of future generations having regard to the current state of knowledge and projected future requirements in such a way that the resource capital would be preserved (Palmer 2013).

to: "*(a) Kaitiakitanga; (aa) the ethic of stewardship […] (c) the maintenance and enhancement of amenity values; (d) intrinsic values of ecosystems […] (f) maintenance and enhancement of the quality of the environment."* Section 8 provides for the protection of metaphysical interests associated with *taonga*, because in achieving the purpose of the Act, all persons exercising functions and powers under it, shall take into account the principles of the Treaty of Waitangi.

4.4.1 Consultation and Resource Consent under the RMA

For the activities that are not explicitly permitted under the RMA a resource consent is required before they are carried out. If anyone consider the decision of the consent authority to be wrong on a resource consent application, he/she may decide to lodge an appeal with the Environment Court. The RMA classifies activities into six primary categories: permitted, controlled, restricted discretionary, discretionary, non-complying and prohibited. These categories, determine whether a resource consent is required before carrying out the activity, what will be considered when making a decision on a resource consent application and whether a resource consent must, may or may not be granted.

On this regard, the Act gives important powers to regional and local councils, under Section 30 and 31. Such l authorities are required, under Clauses 3 of Schedule 1, to consult local *tangata whenua* (local Māori communities), through *iwi* authorities and take into account any relevant planning documents recognised by an *iwi* authority, when preparing a policy statement or plan. Clause 4A of Schedule 1 also require that these *iwi* makes well-informed decisions, by obliging local authorities to provide them with a copy of any policy's draft or plan and an adequate amount of time to provide any advice over it.

In other words, local authorities must have adequate regard to the *iwi* authority and relevant *kaitiaki* involved or affected. In order to assist with consultation, local authorities are required to maintain, for each *iwi* and *hapū* within its region or district, a record of the the planning documents recognised by each iwi authority and the area over which iwi or *hapū* exercise *Kaitiakitanga*[100]. In this way, local authority not only have a duty of consultation, but also the responsibility to foster the Māori capacity to make contributions and provide relevant information.

[100]RMA Section 35A

Ex ante consultation with Māori, when their interests may be affected by an activity, is considered the best practice for resource consent applicants. Many districts have now entered into written memoranda or agreement with iwi[101] to reduce potential misunderstanding and conflict. Moreover, Section 58L to 58 U of the RMA, which came into force on 19 April 2017, provides for *Mana Whakahono ā Rohe* - Iwi Participation Arrangements. These arrangements are a tool designed to assist discussion between Māori and councils. This includes agreeing how Māori will participate in decision-making processes, to assist local authorities in complying with their statutory duties under the RMA and all the other facets of cooperation. Both parties have the power to initiate a *Mana Whakahono ā Rohe*, which once finalised, change internal council's policies in a way to be consistent with the agreement[102]. Another way to consult Māori is through Māori Hearing Commissioners, generally used when districts are interests in specialist environmental knowledge.

The obligation to consult should be viewed in concomitance with the extensive range of information applicants for resource consents must provide and the express obligations which rule-makers have to consider alternatives and assess benefits and costs. However, the advantage for consultation with Māori is their special cultural relationship and knowledge with the natural resources of the environment This has led to positive outcomes in resource management different from those which would have occurred without the RMA, when Māori interests could be easily ignored.

4.4.2 Transfer of Power under the RMA

Furthermore, under Section 33, local authorities can transfer their decision-making functions to another public authority, including and especially any *iwi* authority. Obviously, the advantage of such transfer is that local people and indigenous group make decisions about their own environment and put into practice their specific and ancestral knowledge.

The Act also envisage the development of joint-management agreements with tribal groups, which provides that the two parties jointly perform the functions, which were before solely managed by the

[101] These have been titled as partnership agreement, charter of understanding, memorandum of understanding, memorandum of agreement, memorandum of partnership, agreement of understanding and operating protocol.
[102] Environment Guide. (n.d.) Maori and the Environment. Retrieved 17 May 2020 from: http://www.environmentguide.org.nz/rma/maori-and-the-rma/#:~:text=The%20first%20joint%20management%20agreement,Board%20on%2017%20January%202009.&text=It%20is%20the%20first%20example,making%20power%20within%20New%20Zealand.

district. Each party must represent a relevant community interest and has technical or special expertise to operate jointly. The first joint management agreement was signed by the Taupo District Council and the Tuwharetoa Māori Trust Board on 17 January 2009 in relation to the management of the Māori owned *rohe* (area) of *Ngati Tuwharetoa* within the Taupo District to be decided by a panel of decision makers consisting of two commissioners chosen by each party and a jointly appointed commissioner and chairman. "*It is the first example of an iwi authority having an equal share of statutory resource management decision-making power within New Zealand"*.[103]

4.5 Kaitiakitanga in Action I: Environmental Personhood

New Zealand has upheld the Māori cosmological view of nature and proved it in several cases. Unusually, natural features holding outstanding spiritual value have been recognized as rights-bearing legal persons, with human guardians appointed as their kaitiaki to represent and protect their interests. The appointment of guardians reflects the indivisibility of humans and nature and the related obligation to care for the environment as kin. In 2014, New Zealand became the first country in the world to grant legal personality to a natural feature, Te Urewera – the mountainous region bordering Hawkes Bay and the Bay of Plenty. This chapter describes the three relevant examples where nature is being given legal personality in New Zealand law: the Whanganui River and Te Urewera National Park, Taranaki Maunga. These phenomena are few of the environmental laws around the world to underlay the intrinsic value of nature. Granting legal personality is intended to give *iwi* the legal right and means to protect their ancestors and thus put *kaitiakitanga* into practice.

The concept of legal personality is a legal fiction that endows non-human entities with the capacity of enjoying rights and performing duties. What is or is not included as a legal person generally varies according to society's values. New Zealand biculturalism reflects both the more spiritual approach towards nature as well as the practical approach of legal personality. Indeed, while humans are still given legal control over nature, it is done so within a framework of humans as guardians of nature's interests[104]. It is therefore probable that recognition of such frameworks may provide valuable examples for the operation of other rights of nature frameworks elsewhere.

[103] Ibidem
[104] Magallanes, C. (2015). Nature as an Ancestor: Two Examples of Legal Personality for Nature in New Zealand. *VertigO - La Revue Électronique En Sciences de L'environnement*, *22*(Hors-série 22).

All three act are the result of a willingness to payback Māori after century of negligence and abuses. They do not originate from conservation movements, but rather from indigenous rights' ones. Yet, it is precisely for this reason, that *kaitiakitanga* was chosen as the preferred method for settlements. New Zealand shows how indigenous cultural practices, when implemented in the legal mainstream framework can be positive enabler of sustainable development. This is because, the emphasis on interconnectedness with nature has the potential to normalise a sense of reciprocity across the entire society, not just indigenous groups, and create new rights for the natural world. Perhaps, the focus on indigenous rights is what is needed to set an alternative paradigm for conservation.

4.5.1 Attributing Legal Personality to the Whanganui River

The Whanganui River flows from the Mount Tongariro to the Tasman Sea, though the traditional territory of the *Whanganui Māori*. The Whanganui River is considered an ancestor central to the existence of *Whanganui Iwi*, providing both physical and spiritual sustenance to *Whanganui Iwi*. After the signing of the Treaty, *Whanganui* tribes lost control over the river, including navigation rights and use of river-based resources. Waterways are particularly important in Māori culture and they have always treated them with special caution. This is because, water is considered to have its own specific spirit or *mauri* as well as important life-giving source.

Accordingly, Māori protocols prohibit mixing human waste - unclean spirit- with water- clean spirit. Such mixing, result inevitably in a detriment of the wellbeing of the river, even when quantities are dispersed or diluted. Moreover, even where no pollutants are scientifically involved, the spirit of a river cannot be artificial mixed with other water-ways. Therefore, the discharge of any type of waste or the diversion of waters from other waterways into an ancestral river are always considered a breaching in the tribe's cultural relationship with it. Such operations have damaging effects on the spirituality of the people, who talks about "grieving" the Whanganui River. According to *Matauranga Māori*, their kinship with the river is deeply engrained in the tribe's identity as the saying *ko au te awa, ko te awa, ko au* - I am the river, the river is me- confirms. In other words, to desecrate the water is to desecrate the iwi.

The desire of these tribes to protect the river have endured for many generations, with multiple petitions and protests raised over a century. Indeed, the Whanganui River has been the longest-standing legal battle in New Zealand's history. The Crown has consistently infringed Māori customary

rights of the area and relied over unjust legislation in doing so. It took large portion of surrounding wetlands under the Scenic Reserves Act and continued to alter the ecosystem of the river, by releasing invasive species in its waters, removing gravel and even proposing an extensive hydro-electric system of dams in 1920. Luckily, things started to change. Firstly, the Whanganui River Trust Board was established in 1988 as a representative of the *Whanganui iwi*. Secondly, in the Whanganui River Report 1999, the Waitangi Tribunal recognised that *Whanganui Iwi* have been prevented from bringing a proper claim over the issue, due to structural limitations.

After that, an agreement between the government and local Māori was reached in 2012 and was eventually finalised in 2014. The river is finally recognised as a spiritual and physical entity[105], with life-supporting capacities. The 2014 Whanganui River Agreement incorporated the personification of the river, creating a new legal entity for the *Te Awa Tupua,* which recognises the indivisible unity of the river and comprises the surrounding mountains, water streams[106] and the sea[107], Whanganui communities and all the metaphysical features associated. Moreover, the agreement adopted genealogy as one of its fundamental principles and recognised the *Tupu ate Kawa*- a set of intrinsic rights- as the natural law which binds people to the river and vice versa. However, it's only with the Te Awa Tupua (Whanganui River Claims Settlement) Act 2017 that the vision of the 2014 Whanganui River Agreement was effectively implemented and the Whanganui River became finally a legal person. In order to act on behalf of Te Awa Tupua and to uphold and protect its "interests" an official Guardian called *Te Pou Tupua* will be established by legislation, comprising one person appointed by the Crown and one appointed collectively by all tribes as *kaitiaki*.

The office of the *Te Pou Tupua*, even if elected by Māori and the Crown, answer only to the river. The figure of the guardian embodies a joint-governance agreement and its main functions comprise acting on the river's name, protecting its status, promoting its health and well-being and being responsible for its liabilities. In doing so *Te Pou Tupua* is intended to be the human face of *Te Awa Tupua* and exercise its rights, powers and duties. *Te Pou Tupua* is supported by *Te Karewau*, a bicultural advisory council, and *Te Kōpuka nā Te Awa Tupua*, a bicultural strategy group. In this way, Māori worldviews and legal concepts are incorporated into the body of the Act, giving them operational force in the common law legal system[108].

[105]Ko te Awa te mātāpuna o te ora (The River is the source of spiritual and physical sustenance)
[106]Ngā manga iti, ngā manga nui e honohono kau ana, ka tupu hei Awa Tupua (The small and large streams that flow into one another and form one River)
[107]E rere kau mai te Awa nui mai te Kahui Maunga ki Tangaroa (The great River flows from the mountains to the sea)
[108] Colwell, R. (2017). Legal Personality of Natural Features: Recent International Developments and Applicability in Canada. The Environmental Law Centre Society. p.8

The legal personification of water bodies was inspired by the article "Giving Voice to Rivers: Legal Personality as a Vehicle for Recognizing Indigenous Peoples' Relationships to Water?". According to the authors, this legal tool "*recognizes the holistic nature of a river and may signal a move away from the western legal notion of fragmenting a river on the basis of its bed, flowing water, and banks*[109]." The 2014 Whanganui River Agreement and the Te Awa Tupua Act 2017 mark an extremely positive development in water-settlement legislation and sustainable joint-management of natural resources. The Whole of River Strategy, interesting all local groups and authorities, will identify issue and recommend related actions. The goal of the strategy and more generally the whole Act is to ensure the long-term environmental health of the river.

4.5.2 Attributing Legal Personality to Te Urewera National Park

Te Urewera is an ancient virgin forest in the centre of the North Island, forming the mythical *Te Manawa o te Ika a Māui* - the heart of the great fish of Maui. This woodland is the home of many native species and rich biodiversity. The background context for its settlement is similar to the Whanganui's one. Indeed, *Te Urewa* is a place with great spiritual value and an essential trait of *Tūhoe iwi*. It is considered their traditional homeland, upon which the *Tūhoe* hold *mana whenua* and *Kaitiakitanga* rights. However, unlike *Whanganui iwi*, *Tūhoe* people were not signatories of the Treaty of Waitangi. Despite that, much of their ancestral land was forcibly confiscated by the Crown and Te Urewera was administered as a National Park from 1954. Local *iwi* were not consulted for resource consent practices and their customary use of the natural resource of the area was restricted, significantly impairing the principle of *Kaitiakitanga*.

Tūhoe people persisted in their claims and resistance against Crown injustice. Relationships among the two parties were tense and culminated in the 2007 Ruatoki Valley "antiterrorist" raids. Nonetheless, an agreement was reached and *Te Urewa* ceased to be a National Park and became a legal person under the Te Urewa Act 2014, implementing the 2013 Deed of Settlement negotiated by the two parties. The Crown was unable to cede *Te Urewera* ownership, as *Tūhoe* asked, but agreed that *Te Urewera* owned itself, inspired by the 2012 Whanganui River framework Agreement.

[109] Morris, J., & Ruru, J. (2010). Giving Voice to Rivers: Legal Personality as a Vehicle for Recognising Indigenous Peoples' Relationships to Water? Australian Indigenous Law Review, 14(2), 49–62.

Even if the land is still publicly used, akin to a national park, it is governed very differently. Its administration revolves around *Tūhoe* input and respect of Māori traditional values. Indeed, Te Urewera Act assure primarily conservation, under Section 4, but also public access and protection of indigenous spiritual relationship. "*The purpose of this Act is to establish and preserve in perpetuity a legal identity and protected status for Te Urewera for its intrinsic worth, its distinctive natural and cultural values, the integrity of those values, and for its national importance, and in particular to —*

> *(a) strengthen and maintain the connection between Tūhoe and Te Urewera; and*
>
> *(b) preserve as far as possible the natural features and beauty of Te Urewera, the integrity of its indigenous ecological systems and biodiversity, and its historical and cultural heritage; and*
>
> *(c)provide for Te Urewera as a place for public use and enjoyment, for recreation, learning, and spiritual reflection, and as an inspiration for all".*

Under the Act, Te Urewera Board was established as *Te Urewa* human face or guardian. Its composition is essential for the shift in governance not to be abrupt. For the first three years the Board will consist in eight members, four appointed by *Tūhoe* trustees and the other four by the Crown; after three years, the members will become nine, six still appointed by *Tūhoe* trustees and the remaining three by the Minister of Conservation. The Board in its representative function could give expression to *iwi* traditional relationship with *Te Urewa* and *Tūhoe* concepts of management. Indeed, it has a statutory obligation "to recognise and reflect" *Tūhoetanga* (*Tūhoe* identity and culture) in every decision-making process.

The Board's functions include the drafting of a Te Urewa management plan of a ten years duration and the new ability to grant permits for "*taking, cutting, or destroying indigenous plants within Te Urewera*" and for "*disturbing, trapping, taking, hunting, or killing indigenous animals within Te Urewera*". Such power is conditional, for preservation must always be assured and the permit only issued when the effects on the environment are minor. This power contrast with the traditional wilderness conservation approach, according to which indigenous wildlife cannot be disturbed in protected areas. Yet, this is still remarkable for the restoration and maintenance of indigenous customary practices, which revolve around the sustainable management of native species. In this way, the Act confirm that human use can coexist with conservation, when sustainable practices are implemented.

4.5.3 Attributing Legal Personality to Mount Taranaki

The *Taranaki Maunga* or Mt Egmont is a stratovolcano rising to 2,518 meters above the town of New Plymouth. The Taranaki area is wounded by the sign of wars, occupation and invasion[110]. Similarly, to *Te Urewera*, Mount Taranaki was confiscated in 1863 and became a Crown-managed national park in 1978. The Crown's confiscation took half of *Ngāti Maru*'s ancestral land from them and led to further omissions of Māori rights. Even, the Waitangi Tribunal in its 1996 reported that there were no grounds for Crown's land acquisition.

Eventually, the Crown agreed to meet with eight local tribes and discuss the terms for their agreement. On December 2017, the two parties signed Te Anga Pūtakerongo, a Record of Understanding in which the *Taranaki Maunga* gained legal personhood. According to the record local *iwi* - *Ngaa Rauru Kiitahi, Ngati Ruanui, Ngaruahine, Taranaki Iwi, Te Atiawa, Ngati Mutunga, Ngati Tama* and Ngati *Maru* - will work together with the Crown to develop an apology and cultural redress in relation to historical grievances.

The Mount Egmont Act 1978 was repealed and these eight tribes and the Crown share now the guardianship of *Taranaki Maunga*. The long-awaited recognition of Taranaki spiritual value and ancestry is yet another step in the right direction.

4.6 Kaitiakitanga in Action II: Cooperative Resource Management

The principle of *Kaitiakitanga* was not only implemented in New Zealand legislation, but also in natural resource management plans and restoration strategy. The country is gradually shifting towards a community action approach or an environmental mobilization where the *tangata whenua* (local Māori communities) knowledge and expertise are at the forefront of conservation. New Zealanders have been grappling with the environmental collapse of indigenous ecosystems and were unable to cope with regular methods. The symbiotic relationship Māori undertake with their natural environment is not only useful for identifying causes of degradation, but also as a basis for restoration.

[110] For more see: Buchanan, R. (2018). Ko Taranaki Te Maunga. Bridget Williams Books. Chapter 3

The example of Lake Ōmāpere Restoration and Management project 2005 shows the Janus-faced nature of modern conservation in the country. The project was a joint initiative between Northland Regional Council (NRC) and Lake Ōmāpere Trust (LOT) generated by the Sustainable management Fund in which *mana whenua* and notions of *Kaitiakitanga* are at the forefront of understanding the degradation and efforts for its restoration. This project produced several positive outcomes including the development of a Lake Ōmāpere Management Strategy, weed management programmes, integrated catchment management programmes, enhancement of indigenous biodiversity and water quality monitoring assisting the Trustees in their role as *Kaitiaki* for the Lake.

4.6.1 Lake Ōmāpere Restoration and Management Project 2005

Water quality is a central issue in New Zealand with its 3820 lakes, with the eight largest each having a surface area greater than 100 km². Over the past, important ecosystem services were affected by anthropogenic pressure on the well-being of such bodies and their biota; the most important being: biodiversity, mitigation effects on climate change, harvestable food, recreational activities and spiritual relationship. These alterations have severe implications. Firstly, systems with low biodiversity poorly adapt to changes. Secondly, unhealthy lakes are unable to perform important ecosystem services instrumental in mitigating the effects of climate change with carbon sequestration and hydrological buffering. Thirdly, New Zealand seafood industry heavily rely on the well-being of lakes' biota to keep harvesting at a fast pace.

Lake Ōmāpere is Northland largest lake with a single outflow - the Utakura River - which runs directly into the Hokianga Harbour. The symbiotic relationship between Māori and their natural environment is evident; it is a *taonga* to *Ngapuhi*. Its health is of immense significance for *Ngäpuhi-nuitonu* (a collective of Northland *iwi* and *hapu*) and its collapse posed serious threats over Māori well-being.

Over the last two decades, these waters have been contaminated from eutrophic and harmful algal blooms[111], which exponentially increase the nutrient level of the lake. The lake was categorised as hypertrophic, meaning it had high level of Cyanobacteria resulting in algal blooms, excessive nutrient levels and consequently poor water quality. Algal blooms are considered the main pollutant in New Zealand lakes and it is primarily caused by land-use practices[112], the most damaging being

[111] Rapid increase or accumulation in the population of algae in an aquatic system-
[112] Ministry for the Environment (2006) Northland Regional Council and Lake Ömäpere Project Management Group.

deforestation, agricultural chemical use, pastoral farming and drainage of wetlands. Since the first collapse in 1985, the lake became for the first time unable to support life and contaminated the Utakura River and Hokianga Harbour.

A surge of interest began in response to Lake Ōmāpere collapse. Consequently, the Lake Ōmāpere Project Management Group (LOPMG) was formed with the aim to restore water quality with the active collaboration of local groups and stakeholders. The group had a broad composition with environmental experts, people with agency responsibility, the Lake Ōmāpere Trust, the Northland Regional Council (NRC), the Department of Conservation and especially *Te Runanga a Iwi o Ngäpuhi*.

Until recently, monitoring and restoration of the lake was exclusively a matter of Western scientific knowledge. However, after several failing attempts, Māori indexes and monitoring tools were implemented. For this reason, three culturally specific environmental assessment models, incorporating Māori perspective on resource management were used for Lake Ōmāpere water assessment and restoration.

- The cultural health index (CHI) measures factors of cultural importance to Māori in the freshwater environment based on *Matauranga Māori* and *tikanga*. This has been applied at a number of rivers with encouraging feedbacks from *iwi* users, and an high level of agreement in the CHI scores relating to stream site status. The index is based on three main components: site status, *mahinga kai* (customary food gathering) status and cultural water quality. Site status measures the association of local iwi with the site; *mahinga kai* status rate on a scale of 1 to 5 (1 very poor and 5 extremely good) biodiversity significance, the cultural stream health rates on a scale of 1 to 5 (1 very poor and 5 extremely good) water quality and water-related factors such as water clarity and quality, flow, riparian margin and vegetation, river bed condition, habitat variety and channel modification.

- Environmental performance indicators (EPIs) for wetlands are a series of nine culturally sensitive and cost-effective indicators, measuring trends and progresses towards desired cultural and environmental aspirations for wetland rehabilitation.
- Mauri assessment level measures sustainability and well-being as an interconnected entity. It assesses how anthropogenic pressure modify the *mauri* of the ecosystems. In doing so, it encompasses four main categories: the ecosystem (environmental), *hapū* (cultural), *whanau* (economic), and the community.

The Restoration and Management Strategy for Lake Ōmāpere was signed and launched on 29 September 2006 with the clear aim to restore the lake's wellbeing. The group knew that for the project to be successful several factions need to work together for the sake of the environment. The consent of livestock farmers was the most important variable for the project to work, as they were the main party whose business operations were concerned.

The LOPMG restoration strategy was a two-pronged approach. Firstly, the group cooperated with local farmers in controlling fertilizer application and complying with NRC dairy effluent controls. Secondly, they develop a "ring-fencing" plan, according to which native species were planted along the lake perimeter in order to stop animals and fertilizers from entering. In other words, the vegetation would serve as a buffer zone to absorb nutrients. Moreover, farmers were economically incentivised to build fences in their private property and revegetating the drains and streams, bringing to approximately 84% of the lake margin being now fenced. The practical outcomes were mainly the product of voluntary work and a shift in the attitude towards the impact of livestock farming. At the same time this strategy was a platform for the improvement of social relationships between *tangata whenua* undertaking *kaitiakitanga* and local land owners.

The strategy is already showing positive effects: from the 2005 to 2009 the Ministry of the Environment reported that Lake Ōmāpere had improved its water quality by 2% per annum based on analysis of trophic level trends. Northland Regional Council also monitored nutrients level in the lake and reported that algal blooms have not recurred since 2008. The review of the Lake Ōmāpere Restoration and Management Project also highlighted the effectiveness of riparian management in decreasing nitrogen levels and enhance indigenous biodiversity. Another important social improvement is that all peoples and entities involved in the project had created a broad sense of environmental awareness and the possibility to collect locally-specific knowledge for restoration. Indeed, the complex causes of Lake Ōmāpere collapse required the collaboration of everyone and the recognition that a healthy environment nurture and sustain people general well-being. The practical application of Māori customary knowledge and practices, especially *Kaitiakitanga* have not only been the preponderant component for the success of the restoration plan, but also help shaping a new environmental ethic[113] of all Lake Ōmāpere community[114].

[113] *Ma te mauri kei* Ōmāpere *ka ora te whenua.Because the wellbeing of this land resides at* Ōmāpere*, so it is in everyone's interest to protect and take care of it.*

[114] Henwood, W., & Henwood, R. (2011). Mana Whenua Kaitiakitanga in Action: Restoring the Mauri of Lake Ōmāpere. *AlterNative: An International Journal of Indigenous Peoples*, *7*(3), 220–232.

CONCLUSIONS

This thesis has dealt with the possibility of utilizing indigenous resource management practices in the context of sustainable development. Indigenous communities, being fundamentally ecosystem people, have matured a dynamic and adaptive system of knowledge, able to contrast and mitigate climate change effects. As analysed, local knowledge is not, as wrongfully perceived, a static system. It has developed a deep resilience after being constantly confronted with variability and environmental changes. Its principles and practices are collectively readdressed and revisited, in a way that information and data are never outdated. Under this perspective, indigenous knowledge resembles science and should thus be viewed as having the same relevance.

The study proves that, whenever left room for manoeuvre, indigenous knowledge can incorporate new technologies, complement western science and provide for novel models of sustainable development. The aim of the paper is not to demonstrate the ideological or practical superiority of one system over the other, but to shed a light on the innumerable benefits of sincere and mutual cooperation. As the IPCC has concluded in its Fifth Assessment Report "*indigenous, local, and traditional knowledge systems and practices, including indigenous peoples' holistic view of community and environment, are a major resource for adapting to climate change*".

On this line, it is argued how Indigenous knowledge holders are often better positioned to observe and understand local ecosystems[115] and to offer much more coherent solutions to local problems. In fact, state-indigenous co-management regimes have proven extremely effective locally, especially when it comes to restoration and conservation programmes. It is wrongfully believed that indigenous knowledge is void of any valence when decoupled from its environmental context. However, indigenous ecological ethic could promptly fill the gaps of western science, highly compartmentalised, and finally bridge ecology and social sciences.

On a more ideological strand, indigenous holistic worldview could also be able to educate the wider international community, by focusing on the connections between society and nature and making the public more conscious of how they influence the surrounding environment. Lastly, participatory approaches are fundamental for the survival of indigenous knowledge and cultural diversity. In the face of new uncertainties, many communities are calling for the respect of their rights and the need

[115] United Nations Educational, Scientific and Cultural Organization. (2017). *Local Knowledge, Global Goals*. New York: United Nations.

for more stringent rules for FPIC and benefit sharing[116].

The thesis tried to respond to the question of whether indigenous knowledge could be considered a driver and enabler of sustainable development by proposing a case-study on the Māori of New Zealand. Historically, the New Zealand legal system has acknowledged Māori values, customary law and institutions. Despite some initial difficulties, New Zealand has legally recognised Māori cosmology and a set of rights that derives directly from *Matauranga Māori* and *Kaitiakitanga*. Most recently, New Zealand has given legal personality to culturally relevant natural features and appointed representatives as their kaitiaki. The integration of their knowledge systems into development processes has improved socio-ecological decision-making towards the promotion of long-term sustainability[117].

In conclusion, the sustainable development paradigm can and should be reformed. While ecosystem-based management plans are often desired, they are very rarely accomplished in practice. This is why it is important to "look back" at those ecosystem people, such as the Māori of New Zealand, to bring forth an adaptive management able to achieve sustainable development.

[116] Ibidem

[117] Barrett, M. (2013). Enabling hybrid space: epistemological diversity in socio-ecological problem-solving. *Policy Sciences*, *46*(2), 179–197.

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ITALIAN SUMMARY

Introduzione

Il cambiamento climatico si propone come una delle sfide più ardue della modernità ed è ormai inequivocabile che la colpa sia da additare al massiccio intervento antropogenico sull'ambiente. La portata di tale fenomeno è globale, ma interessa in modo sproporzionato i paesi con una bassa capacità di adattamento o situati in territori ad alto rischio ambientale. Fra questi, i popoli indigeni sono tra i più vulnerabili in quanto la loro tradizionale resilienza ecologica è minacciata dal fenomeno dell'accaparramento delle risorse naturali e da una generale penuria di sistemi legali che ne protraggano i diritti fondamentali. Paradossalmente, il sapere indigeno potrebbe però essere un fattore essenziale nello sforzo globale verso il raggiungimento di uno sviluppo sostenibile ed è quindi fondamentale creare piattaforme e approcci partecipativi dove i popoli indigeni siano posti in una condizione di parità.

La tesi ricerca infatti i possibili benefici di una contaminazione fra i modelli di sviluppo prettamente occidentali e i tradizionali metodi indigeni di gestione delle risorse naturali, basati su una prospettiva olistica e interdisciplinare. L'influenza positiva delle pratiche indigene sull'ambiente circostante viene dimostrata attraverso il caso pragmatico della Nuova Zelanda. Il sistema legale neozelandese, con l'azione pionieristica di includere principi e usanze Māori in documenti costituzionali e riforme politiche, ha adottato un approccio altamente cooperativo più consono alla complessità delle moderne sfide ambientali. Degno di nota è il fatto che le strategie che hanno portato l'economia neozelandese ad essere una delle più sostenibili al mondo derivino proprio da politiche originariamente mirate al riconoscimento dei diritti fondamentali dei Māori.

Il primo capitolo illustrerà le origini e il progresso dei diritti degli indigeni a livello internazionale, ponendo particolare attenzione al diritto collettivo alla terra e la sovranità permanente su risorse naturali di rilievo culturale. Il secondo capitolo, dopo aver definito il concetto di sostenibilità e l'etica ecologica comune a tutti i popoli indigeni, analizzerà i modi in cui quest'ultimo influenza la creazione di nuovi modelli di sviluppo sostenibile. Il terzo capitolo introdurrà il case-study sui Māori della Nuova Zelanda, descrivendone la cosmogonia, antropogenesi e sistema di sapere e come questi siano intrinsecamente legati all'uso sostenibile delle risorse. In ultima istanza, il capitolo quarto analizzerà come il sistema legale neozelandese abbia permesso la proliferazione di politiche e piani ambientali fortemente ispirati al sapere indigeno, fra cui la personificazione legale di determinate entità naturali.

CHAPTER 1 - The Rights of Indigenous People under International Law

Nel corso del XV secolo, il termine indigeno veniva utilizzato con una connotazione altamente dispregiativa, figlia del colonialismo e imperialismo occidentale. Fu solo dopo anni di mobilizzazione indigena che il termine venne spogliato della sua iniziale accezione negativa e alienante per focalizzarsi invece sul legame profondo di questi individui con la loro terra; come si può evincere dalla prima definizione legale di popolo indigeno contenuta nel Rapporto Cobo, o "Study on the Problem of Discrimintion against Indigenous Populations" , dalla Convenzione ILO 169 sui diritti dei popoli indigeni e tribali e dalla Dichiarazione delle nazioni Unite sui Diritti dei Popoli Indigeni.

Il movimento mondiale per i diritti dei popoli indigeni, sviluppatosi a partire dagli anni 60', è generalmente considerato il principale fautore del processo evolutivo dei diritti degli indigeni, da cui il sistema internazionale e la sua natura stato-centrica ne uscirono fortemente mutati. La prima tappa venne sancita dall' adozione della Carta delle Nazioni Unite, seguita da una serie di Convenzioni - quali la Convenzione Internazionale sui Diritti Civili e Politici e la Convenzione Internazionale sui Diritti Economici, Sociali e Culturali adottate dalle Nazioni Unite nel 1966- che prevedevano fra i propri obiettivi cardine la promozione della pace e il rispetto dell'autodeterminazione dei popoli.

Tuttavia, fu solo la Convenzione ILO no. 107 del 1957 a concepire uno strumento legale atto unicamente alla protezione dei popoli indigeni. Il testo, seppur pionieristico, conteneva però disposizioni estremamente limitanti, che configuravano gli Stati come principali responsabili dell'integrazione e protezione indigena. Nella maggioranza degli Stati firmatari, essa fu perciò emendata dalla Convenzione ILO no. 169, che impose vincoli stringenti agli Stati, assicurando finalmente la partecipazione indigena nei processi decisionali che li concernevano. Ciononostante, bisognerà attendere l'adozione della Dichiarazione delle Nazioni Unite sui Diritti dei Popoli Indigeni (UNDRIP) nel 2007 per un pieno e universale riconoscimento dello status e dei diritti di questi popoli. La dichiarazione, approvata quasi all'unanimità e con l'inclusione massiccia della rappresentanza indigena, è considerata tutt'oggi la pietra miliare per l'*empowerment* indigeno e un più generale simbolo di trionfo e speranza nonostante il documento non sia vincolante *per se*. L'UNDRIP articola intorno al principio di autodeterminazione il desiderio di conservare sistemi di sapere ancestrali e le pratiche tradizionali che ne derivano, ponendo particolare accento alla rivitalizzazione della distintività culturale indigena.

Tali disposizioni assumono particolare rilievo nel riconoscimento della legge consuetudinaria. Poiché il principio di autodeterminazione sia effettivo, il diritto internazionale non può ignorare la centralità

di tali sistemi legali nelle società indigene, le quali sono sovente strutturate per mezzo di accordi comunitari o tradizione centenarie, che affondano le radici nel dinamico sistema del diritto consuetudinario. È evidente che la natura mutevole di tali sistemi abbia contribuito alla flessibilità e resilienza caratteristica di questi popoli, con capacità di adattamento superiore alla media. L'amministrazione della terra è infatti basata su sistemi comunitari, che favoriscono l'uso collettivo delle risorse rispetto alla canonica proprietà privata. Il pericolo di prioritizzare un sistema legale piuttosto che l'altro comprometterebbe quindi l'esercizio dei diritti di gestione e amministrazione delle terre tradizionali e risorse naturali, esacerbando condizioni preesistenti di alienazione. L'articolo 8 dell'ILO Convention no. 169 e l'articolo 27 dell'UNDRIP riconoscono e proteggono la possibilità di coabitazione di differenti sistemi legali all'interno dei confini del singolo stato ribadendo che il riconoscimento di questi sia prerogativa per lo sviluppo indigeno.

Un ulteriore elemento fondamentale per l'emancipazione indigena è il riconoscimento del legame culturale e spirituale con le loro terre ancestrali, che va ben oltre le mere speculazioni economiche e monetarie. La terra non viene infatti intesa come *commodity* o parcella da coltivare, ma è elemento essenziale dell'identità e benessere della comunità. La gestione degli ecosistemi circostanti viene da loro condotta sotto un'etica di *guardianship* e reciprocità, all'interno di una prospettiva olistica di interdipendenza. Il diritto alla terra è stato oggetto di aspri dibattiti internazionali e regionali, che in ultima istanza convogliarono nell'articolo 25 dell'UNDRIP. Inoltre, la Dichiarazione investe gli Stati con l'obbligo corollario di implementare processi inclusivi e trasparenti per la protezione di tali diritti. Gli stati sono in modo più specifico tenuti a rispettare e richiedere il *Free Prior and Informed Consent* prima di portare avanti qualsivoglia azione riguardante territori e risorse indigene. Il diritto alla sovranità permanente sulle risorse naturali (PSNR) è deducibile dal più ampio quadro dei diritti alla terra, emerso come reazione all'irresponsabile accaparramento e sfruttamento delle risorse naturali. Anche se originariamente introdotto a sostegno dell'emancipazione dei paesi di nuova indipendenza in seguito al processo di decolonizzazione, fu poi qualificato per comprendere fra i propri destinatari anche i popoli indigeni. Il diritto all'autodeterminazione e le sue diverse manifestazioni vanno infatti concepite come dinamiche e in divenire, adattabili ai bisogni della comunità internazionale e superando il tradizionale canone Vestfaliano.

Nonostante ciò, la negligenza degli stati verso il riconoscimento formale dei diritti collettivi alla terra non è inconsueta. Ciò ha permesso negli ultimi anni la crescita spropositata del fenomeno di *land grabbing* o accaparramento delle terre descritto come acquisizione su larga scala di lotti terreni per

fini industriali[118]. Tali processi non comprometto solamente l'accesso alle tradizionali risorse naturali da parte delle comunità locali, ma colpisco in modo tragico la ricca biodiversità delle terre ancestrali. È perciò imperativo che gli stati revisionino le loro legislazioni in ottemperanza alla serie di diritti sopracitati.

CHAPTER 2 – Indigenous Knowledge as a Driver of Sustainable Development

Lo sviluppo sostenibile è un concetto introdotto negli anni 60 per contrare il sempre più ingente deterioramento ambientale. Per la prima volta, la comunità internazionale riconobbe infatti i limiti della crescita economica. Fu proprio allora che organizzazioni, conferenze e trattati ambientalisti cominciarono a proliferare e riconoscere l'interdipendenza fra sviluppo e sostenibilità, come dichiarato nella parte introduttiva della World Conservation Strategy (WCS). Si dovrà però aspettare il Bruntland Report del 1987 per abbandonare definitivamente il compromesso fra interessi economici e danni ambientali e introdurre il concetto di conservazione ed equità intergenerazionale.

La Conferenza sull'Ambiente e lo Sviluppo delle Nazioni Unite del 1992 viene generalmente associata con l'inizio di un processo di governance ambientale globale e di un piano strategico per il raggiungimento della sostenibilità. La conferenza produsse una serie di documenti di grande rilievo sia per la protezione della biodiversità che per la riduzione delle emissioni di gas inquinanti - la Convenzione sulla Diversità Biologica e la Convenzione Quadro delle Nazioni Unite sui cambiamenti climatici. Negli anni successivi, le Nazioni Unite adottarono una serie di obbiettivi globali vincolati da scadenza. Fra questi, ricordiamo i Sustainable Development Goals nel 2015, che inclusero nei precedenti Millennium Development Goals il traguardo di curare il pianeta, in parallelo con il più generale obiettivo di eradicare la povertà.

Gradualmente, la comunità internazionale ha iniziato a valorizzare i contributi del sapere indigeno in aree come la sostenibilità, biodiversità, conservazione e più recentemente mitigazione dei cambiamenti climatici e prevenzione di disastri ambientali. Seppur localmente specifiche, le epistemologie ambientali dei popoli indigeni, mostrano similarità importanti. Ciò è principalmente dovuto al fatto che i popoli indigeni abbaino affrontato la stessa sfida: appagare una serie di bisogni per mezzo di risorse naturali limitate[119]. Si è riconosciuto di conseguenza che il loro processo di adattamento culturale abbia reso possibile lo sviluppo di un'etica ecologica resiliente e pratiche volte

[118] Gilbert, J. (2017). *Land Grabbing, Investments & Indigenous People's Rights to Land and Natural Resources: Case Studies and Legal Analysis*. IWGIA p. 11

[119] Kahui, V., Richards, A. (2014). Lessons from resource management by indigenous Maori in New Zealand: Governing the ecosystems as a commons. *Ecological Economics*, *102*, 1–7.

alla gestione sostenibile delle risorse. Tali sistemi sono inerentemente flessibili e complessi, in quanto continuamente sottoposti a climi impervi e variabili. Mentre il neo-liberalismo favorisce la mercificazione della natura, i sistemi indigeni sono ben radicati sul principio che tutte le cose siano profondamente interconnesse e si influenzino quindi vicendevolmente. La natura viene perciò internalizzata e diventa parte inscindibile dell'identità indigena. Grazie a questo approccio olistico, i questi sono riusciti a trovare un equilibrio fra sfruttamento delle risorse naturali e la loro conservazione, permettendo alla società di vivere in armonia con l'ambiente circostante. Non è infatti una semplice coincidenza che le regioni più ricche in termini di biodiversità siano state storicamente gestite da popoli indigeni.

Tradizionalmente, i paradigmi riguardanti lo sviluppo sostenibile hanno gravitato intorno alla conoscenza scientifica occidentale, portando così alla creazione di modelli che invece di eradicare le diseguaglianze le acuiscono. I progetti che ne scaturiscono ricalcano l'ideologia dominante e non tengono conto delle divergenze insite nelle diverse culture. Sarebbe quindi più opportuno implementare, piuttosto che piani top-down, modelli autodeterminati e culturalmente sensibili. Un popolare esempio di metodi alternativi di sviluppo costruiti intorno a principi indigeni dei popoli Quechua dell'Ecuador è il cosiddetto *Buen Vivir*,

CHAPTER 3 – Indigenous Māori Knowledge and Perspectives of Ecosystems

I Māori, il popolo indigeno della Nuova Zelanda, è sempre più coinvolto nello sforzo nazionale di trovare soluzioni al degrado ambientale dei fragili ecosistemi del paese e delle sue specie native. La Nuova Zelanda ha infatti storicamente incluso il *Māori Resource Management* in svariate legislazioni e promosso la cooperazione con autorità tribali tramite una serie di documenti legali volti a garantire loro numerosi diritti. La visione olistica Māori è riuscita negli anni a plasmare l'opinione pubblica Neo Zelandese e a migliorare le sue riforme ambientali. Il loro sapere indigeno, conosciuto con il nome di *Matauranga Māori*, guida le azioni di questo popolo tramite una serie di principi cardine fortemente legati all'ambiente.

La cosmologia Māori viene tramandata da una serie di narrazioni che personificano i vari aspetti della loro etica ecologica. L'universo viene concepito come un insieme di entità, visibili e invisibili, interconnesse secondo il principio del *whakapapa*, un immenso tessuto genealogico che accomuna ognuno secondo legami di familiarità. Secondo il mito della creazione i Māori sono infatti diretti discendenti di due singoli antenati divini: *Ranginui*o padre cielo e *Papatūānuku* o madre terra. Questa fitta genealogia fa in modo che la terra assuma sembianze materne, da cui scaturiscono una serie di obblighi per cui gli individui non siano abilitati a possedere la terra o le sue risorse. Si può infatti

dichiarare che il *Māori Resource Management* non sia basato sul principio di proprietà, ma piuttosto su un'etica di responsabilità o *guardianship*, meglio conosciuta con il nome di *Kaitiakitanga*.

Kaitiakitanga raffigura l'etica ecologica dei Māori, in forte disappunto con la visione antropocentrica giudaico-cristiana dell'uomo superiore alla creazione. La prospettiva Māori è etnocentrica e non concepisce alcuna dicotomia fra società e natura, obbligando ogni generazione ad agire come custode della terra. In questo modo lo sfruttamento delle risorse deve avvenire in modo sostenibile, così da non compromettere l'armonia dell'ecosistema o alterarne in modo irreversibile la forza vitale. Laddove l'equilibrio dovesse essere turbato il *kaitiaki* o guardiano emana misure che regolano l'accesso spaziale e temporale alle risorse naturali. Gli storici hanno inoltre evidenziato che il basso danno ecologico dei Māori non è da attribuire a limiti tecnologici o alla scarsa popolazione, ma è l'effetto diretto del corretto utilizzo del principio di *Kaitiakitanga* e delle sue misure restrittive o normative. L'incidenza dell'applicazione di tali pratiche si è infatti intensificata con l'aumento della popolazione.

CHAPTER 4 – Māori Resource Management in New Zealand Legislation

La Nuova Zelanda vide nei principi del *Kaitiakitanga* un modo per ricongiungere ecologia e scienze sociali e decise perciò di includerli come parte fondamentale della sua legislazione. Infatti anche se l'individuo detiene ancora il controllo legale sulla terra e le sue risorse, deve agire in un contesto che vede gli uomini come guardiani degli interessi della natura. I modelli nazionali di *ecosystem-based management* più efficaci sono basati su tre documenti, la Dichiarazione di Indipendenza della Tribù Unite della Nuova Zelanda, il Trattato di Waitangi e il Resource Management Act 1991.

La Dichiarazione di Indipendenza del 1835 pose i Māori in una condizione privilegiata rispetto a molti altri popoli indigeni, in quanto affermava la loro indipendenza e autorità sulla terra. Senza la Dichiarazione, le tribù Māori sarebbero state impossibilitata a partecipare a livello internazionale come gruppo indipendente e a concludere quindi il Trattato di Waitangi del 1840. Il Trattato di Waitangi è un accordo bilaterale fra le tribù Māori e la Corona Inglese, che investe il governo Britannico con l'autorità di amministrare il paese e allo stesso tempo assicura la sovranità Māori sulle terre ancestrali. Il documento è considerato come la base per il rapporto fra le due parti, riconoscendone i rispettivi diritti e doveri. Nonostante ciò, esso è circondato da numerose controversie, principalmente incentrate nelle differenze con la versione inglese, in cui le autorità Māori cedettero presumibilmente la propria sovranità alla regina Vittoria. È palese che i rappresentanti inglesi non abbiamo agito in buona fede, ma che piuttosto abbiano dato adito alle proprie mire espansionistiche. Per questa ragione, il Tribunale di Waitangi - instituito come tribunale

d'inchiesta per mezzo del Treaty of Waitangi Act del 1975 con l'obbiettivo di assicurarsi che le politiche nazionali fossero consistenti con i principi generali del Trattato - spogliò di ogni valore la versione Inglese nel 2014.

Infine, il Resource Management Act (RMA) del 1991 corrisponde alla più importante riforma ambientale del paese. L'RMA ha come base concettuale il rapporto di Brundtland e riformula quindi le leggi ambientali preesistenti sotto il concetto di sostenibilità e eguaglianza intergenerazionale. Il decreto si pone in contrapposizione con le precedenti politiche neo-liberali, per porre determinate limitazioni alla crescita economica. La riforma fu supportata da un'estesa consultazione pubblica, includendo principalmente autorità governative distrettuali, rappresentanti Māori ed esperti ambientalisti. Grazie ad essa, la Nuova Zelanda si posizionò alla testa della corsa internazionale verso la sostenibilità, ponendo standard minimi imperativi per la salvaguardia dell'ambiente. L'RMA contiene inoltre numerosi richiami alla cultura Māori, che provvedono a includere valori qualitativi e non monetari fra i parametri e indicatori per la definizione di sostenibilità ambientale, come si può evincere dalla Sezione 7 e 8 che obbligano ogni tipo di intervento a rispettare il concetto di *Kaitiakitanga* e i principi generali del trattato di Waitangi. A livello pratico, l'RMA ha instituito l'obbligo di consultazione per decisioni potenzialmente dannose per le comunità Māori locali. In diverse disposizioni, figura anche la possibilità di un pieno trasferimento dei poteri decisionali e funzioni pubbliche a autorità tribali.

La Nuova Zelanda ha inoltre accettato all'interno del proprio sistema legale la visione cosmologica della natura come antenato. In modo inusuale, è stata riconosciuta a tre entità naturali distinte una personalità legale. Il primo esempio riguarda il Whanganui River, oggetto di una delle più lunghe battaglie legali più lunghe del paese. Il desiderio di preservare il fiume da ulteriore inquinamento si tramutò nella decisione di dotare il fiume e i suoi affluenti di una personalità legale, per mezzo del Te Awa Tupua Act del 2017 e nominare un ufficio di rappresentanza - Te Pou Tupua – secondi i principi del *kaitiakitanga*. Il secondo esempio riguarda il *Te Urewera*, un'antica foresta vergine dell'isola del Nord di grande valenza culturale per la tribù *Tūhoe* mentre il terzo ed ultimo esempio riguarda il *Taranaki Maunga* o Monte Egmont, uno stratovulcano della zona di New Plymouth. In ultima istanza viene anche proposto un esempio di progetto di sanificazione, con il Lake Ōmāpere Restoration and Management Project 2005, che indica una mobilizzazione ambientale basata sull'azione comunitaria e la consultazione del sapere indigeno.

Considerazioni Conclusive

In conclusione, il sapere indigeno ha il potenziale di riformare positivamente la comprensione dello sviluppo sostenibile. Il fallimento cronico dei tradizionali piani di sviluppo nell'affrontare tematiche ambientali complesse ha gradualmente portato la comunità internazionale a rivalutare l'etica ecologica dei popoli indigeni, come i Māori della Nuova Zelanda, per la ricerca di nuove pratiche sostenibile. I piani basati su tale approccio partecipativo hanno dimostrato benefici reali e misurabili: emerge quindi chiaramente la relazione positiva fra sostenibilità e sapere indigeno.