

Examining the effect of cultural and social capitals on Kanak Fishers' Indigenous Entrepreneurship Strategies in Loyalty Islands, New Caledonia.

Author: Julie MALLET,

Supervisors: Professor Miguel Imas and Professor Léo Paul Dana.

This thesis is being submitted in accordance with the requirements for the
Doctor of Philosophy at Kingston University,
Submitted August 2024.

Acknowledgements

First, I would like to thank my dad who supported me with his patience all along the thesis project and gave me the force to follow my convictions, also my mom in New Caledonia for her support and my grandparents who transmitted me confidence and hopes to conduct this work. I want to express special thanks to Professor Leo Paul Dana for his precious guidance and unequivocal support all along the thesis project. From the initiation of my path in research, motivated by my interest in his works, to the introduction to the PhD; nothing would have been possible without him. Professor Robert Anderson has also been a source of inspiration and support all along the project. It was an extraordinary chance to have these brilliant, inspiring and generous people around the project.

The PhD has been a long journey marked by the Covid-19 pandemic. To the Professors in Kingston University who have been part of the supervisory team and in the memory of Professor David Smallbone who warmly welcomed me in and challenged my thinking and sharpened my approach to the field with questions, thinking about the “so what?”, thinking about implications and avoiding what he liked to call “armchair theory”. To Professor Audley Genus who had the difficult work of interim and guided me at best possible and to Professor Miguel Imas who joined the team for the last years of the project and who’s expert advice and encouragement contributed to the culmination of this thesis project.

During the journey a myriad of types of assistance and resources along the pathway have helped, acquaintances becoming friends, their support has been key in this project. During the preparation I first met people in Paris, and I would like to thank the people I met at the *Maison de la Nouvelle Calédonie*, especially the key informants whose feedback has been precious, Denis Pourawa, Paul Wamo with the energy of their texts who have inspired me.

This leads me to the heart of this section as I look back to the field with emotion and a feeling of indebtedness thinking about the people I met and granted me the privilege to cross their lands giving me their time. I would like to thank the Kanak community, especially the people from Lifou and Ouvea. Essentially the tribe of Jokin where I have been welcomed as family, and I would like to thank particularly Henri and Magali Humunie as nothing would have been possible without their help and kindness. I wish to thank as well everyone from the tribes I visited, from the North to the South of Lifou in the Wetra from the tribes of Jokin, Tingueting, Luecila, Hnathalo, Hnacaom, Mucaweng, Xepenehe, Easo, Siloam, Hunetë, and Hnanemuaetra; in the district of Gaïca, the tribes of Wedrumel, Drueulu, Hapetra, and in the district of Lösi the tribes of Hnase, Traput, Jozip, Luengöni, Mu, and Xodrë. In Ouvea from Saint-Joseph, Gossanah, and Takedji Fayaoué, Ognahut-Saint-Paul, Wadrilla and Mouli. I would like to particularly thank all the fishers and everyone who gave me time to answer my questions, showing me fishing spots and unveiling their techniques and their places.

In addition, I would like to thank the Institut Agronomique Calédonien especially Séverine Bouard and Catherine Sabinot from the Institut of Research for Development for their warm welcoming, allowing me to access the resources of the research centre and work with them. This allowed me to get closer to the field quickly and opened as well to the possibility to participate in joint publications which was a privilege. Also, I must also acknowledge the invaluable help I received from the friends I made in New Caledonia as Christianne Pouporon and Jean Charles Dorantan whose presence was key when I was working in the North and whose help has been critical to be able to follow the work.

Back in London, I must thank my friends Simon Foggo and Alban James for their countless comments and their merciless proof-reading, who have been present along the years with their support and precious feedback.

Table of Contents

Abstract	8
Introduction	9
Chapter 1: Literature review.....	12
1) Theoretical background on Indigenous entrepreneurship and key concepts	12
Development theories:	13
Distinctiveness of Indigenous settings:.....	16
2) Identifying a gap, systematic approach to the theory of capital and Indigenous Entrepreneurship ...	19
3.1) Human capital	22
3.1.1) Definition.....	22
3.1.2) Effects.....	22
3.1.3) Human capital and Indigenous entrepreneurship.....	22
3.2) Social capital	23
3.2.1) Definition.....	24
3.2.2) Network, tie's nature and network's structure.....	25
3.2.3) Collective social capital.....	29
3.3) Cultural capital.....	30
2.3.1) Definition.....	30
3.3.2) Values and entrepreneurship.....	31
3.3.3) Mediating role of culture	33
3.4) Institutional capital.....	34
3.4.1) Definition.....	34
3.4.2) Levels of embeddedness	35
3.4.3) Mixed embeddedness	36
3.4.4) Institutional capital and symbolic capital	37
4) Defining the framework	38
4.1) Indigenous entrepreneurial models, heterogeneity vs universality	38
4.2) Strategies	39
4.3) Insights from ethnic minorities entrepreneurship and social networks:.....	42
4.4) Summary of the different perspectives.....	44
Chapter 2: Methodology	48
1) Philosophical assumptions.....	49
2) Design of the research	50
3) Research Strategy	52
4) Methods	55
4.1) Selection of cases:	56
4.2) Unit of analysis	56
4.3) Case study questions	57

4.4) Data Analysis	59
5) Organisation of the field study	63
6) Ethic concerns	65
7) Drawbacks	66
Chapter 3: Key contextual issues in New Caledonia.....	68
1) Historical context.....	68
1.1) Pre-colonial period:	69
1.2) Colonial period.....	70
1.3) Post-war context, and the nickel boom	73
1.4) The Events of the eighties; Matignon and Noumea agreements.	75
2) Institutional context.....	78
3) Social context	83
4) Business context	85
4.1) General observations on New Caledonian economy and Loyalty Islands	85
4.2) Fishing activity and fishing sector	91
Chapter 4: Results.....	95
1) Setting and transversal overview of the sectors.....	95
1.1 General observations	95
1.2 Agriculture.....	99
1.3 Tourism,.....	104
2) Fishing activity:	107
2.1) Customary and subsistence fishing.	107
2.2) Fishermen with a licence.....	115
2.3) Commercialisation and fish processing units.....	124
A vehicle for development:.....	127
Expectations and frustrations:.....	129
Chapter 5: Observations and patterns.....	134
1) Self-determination regard to opting-in and opting out strategies.	136
1.1) Strategies.	136
1.2) Indigenous entrepreneurship development.....	138
1.3) Self-determination and opting in strategies.....	139
2) Social and cultural capitals, nature and impact in opting-in versus opting-out.....	141
2.1) Social capital is mobilized in order to reduce risks.....	141
2.1.1) Mutual aid & cooperation.....	145
2.1.2) Norms	147
2.2) Cultural capital.....	149
2.2.1) Rhythm and the pace of nature	150
2.2.2) Pluriactivity and collective orientation:	152

3) Observations on mixed embeddedness, ecosystems, and trust.....	157
3.1) Mixed embeddedness.....	157
3.2) Two entrepreneurial ecosystems.....	160
3.3) Trust.....	167
3.3.1) Relational, collective, and institutional forms of trust.....	167
3.3.2) Trust and ecosystems.....	169
Conclusion chapter.....	177
References:.....	183
ANNEXE 1: Quantity of fish delivered to the fish processing unit of Lifou in 2015.....	198
ANNEXE 2: Example of customary and subsistence fisher interview.....	199
ANNEXE 3 : Example, professional fisher interview:.....	210
ANNEXE 4: Coding in relation to concepts and research questions:.....	228
ANNEXE 5: Observations on ecosystems using Spigel (2017):.....	229

Appendix

<u>Figure 1: Mechanism of regulation theory:</u>	14
<u>Figure 2: Economic development in the new economy</u>	15
<u>Figure 3 Response to the global economy</u>	41
<u>Figure 4: Synthesis of the literature model 1</u>	44
<u>Figure 5: Synthesis of the literature model 2</u>	45
<u>Figure 6: Theoretical Model</u>	52
<u>Table 1: levels research questions; question 1</u>	58
<u>Table 2: levels research questions; question 2</u>	58
<u>Table 3: levels research questions; question 3</u>	59
<u>Table 4: Organisation of the field</u>	64
<u>Figure7: artisanal fishing sector</u>	93
<u>Figure 8: Map of New Caledonia</u>	95
<u>Figure 9: Chateaubriand bay, Wé, Lifou (from top of Luecila) photo by author</u>	96
<u>Figure 10: Province’s offices, Wé, Lifou, photo by author</u>	96
<u>Figure 11: Church of Jokin, Lifou, photo by author</u>	97
<u>Figure 12: Kanak case, photo by author</u>	98
<u>Figure 13: Inside the case photo by author</u>	98
<u>Figure 14: Wadrilla, Ouvea photo by the author</u>	100
<u>Figure 15: Ouvea, tribal fishing boat photo by the author</u>	100
<u>Figure 16: fishing ramp, Ouvea photo by the author</u>	101
<u>Figure 17: Lifou, preparation of the field, woods settled for yams, photo by the author</u>	102
<u>Figure 18: Lifou, yams and banana tree, field, photo by the author</u>	102
<u>Figure 19: Lifou, banana tree, field, photo by the author</u>	103
<u>Figure 20: Lifou, pineapple, field, photo by the author</u>	103
<u>Figure 21: Cruise in Easo, Santal Bay, Lifou, photo by the author</u>	104
<u>Figure 22: Tourists landing from the cruise in Easo, Santal Bay, Lifou, photo by the author</u>	105
<u>Figure 23: Stand in Easo, Lifou, photo by the author</u>	106
<u>Figure 24: Stand, Lifou, photo by the author</u>	106
<u>Figure 25: Catching fish with net, pointe Daussy, Lifou, photo by the author</u>	108
<u>Figure 26: North Cliffs, Jokin, Lifou, photo by the author</u>	109
<u>Figure 27: Stairs to tribal fishing ramp, Jokin, Lifou, photo by the author</u>	110
<u>Figure 28: fishing ramp, Jokin, Lifou, photo by the author</u>	110
<u>Figure 29: boats at the fishing ramp, Jokin, Lifou, photo by the author</u>	111
<u>Figure 30: Hnathalo, line fishing on coral, Lifou, photo by the author</u>	112
<u>Figure 32: Cliff on the way to fish, Tingueting, Lifou photo by the author</u>	113
<u>Figure 31: Cliff on the way to fish, Tingueting, Lifou photo by the author</u>	113

<u>Figure 33: Fishing area, line 20 nautical miles.....</u>	116
<u>Figure 34: satellite picture of the port, marina and fish processing unit, Wé, Lifou.....</u>	117
<u>Figure 35: Fish brought back at the fish processing unit, Lifou.....</u>	125
<u>Figure 36: One good catch, artisanal professional fishing</u>	126
<u>Figure 37: schema of Stakeholders in the professional artisanal sector</u>	127
<u>Table 5: Prices of fish products.....</u>	131
<u>Table 6: Transactions in the fishing sector.....</u>	134
<u>Figure 38: fishing practices in Lifou in perspective of indigenous strategies orientations</u>	136
<u>Figure 39: Co-existence of two ecosystems</u>	162
<u>Figure 40: Different levels of trust in relation to ecosystems' attributes:</u>	169

Abstract

In recent years, Indigenous entrepreneurship has evolved remarkably, not only due to the growth of Indigenous businesses but also because of the diversity of entrepreneurial models that incorporate Indigenous ontologies and practices. This thesis examines the unique framework in which on-tribe entrepreneurship develops in the Loyalty Islands Province of New Caledonia, with a focus on the fishing sector. Fishing activity is a factor in both customary and commercial activities, illustrating the interaction of diverse strategies.

The research pays particular attention to the kinds of strategies developed in relation to self-determination processes and value creation, using ethnography and a multiple case studies approach. The observations highlight a hybrid context marked by the pivotal role of institutions in developing the material attributes of the commercial ecosystem. Building on recent advancements in the study of Indigenous entrepreneurial ecosystems, this work reflects on the nature of the various entrepreneurial strategies at stake and the impact of different facets of trust in their replication.

Introduction

My interest in Indigenous entrepreneurship, combined with my concern for the current political situation in New Caledonia, drove the development of this thesis project.

Pacific colonisation history is quite recent compared to other continents and it is still living history for the different ethnic groups of New Caledonia. There, colonial legacy is linked to an uncertain political climate marked by successive referendums and recent upheavals. Located in the South Pacific, New Caledonia is about 1500 kilometres east of the Australian coast and 2000 kilometres north of New Zealand, in the middle of the Coral Sea. The archipelago is comprised of four islands; the main island called “Grande Terre” lies to the west of three other geologically different islands called Loyalty Islands which are (from north to south): Ouvea, Lifou, Maré, and a fourth small one, Tiga, which belongs to Lifou. Other islands comprising the mainland’s Provinces include Belep islands in the north and an island called “Île des Pins” in the south.

The relative isolation of New Caledonia reinforces the importance of fishing activity regarding the fresh protein intake of coastal populations. Fishing is traditionally practiced on tribes for subsistence and customary activities. Yet, mixed results have been reported regarding the development of the artisanal professional fishing sector. David (2008) emphasises that researching on how to maintain or restore the abundance of reefs resources is the common objective of any regulation of traditional fishing activity. In the Pacific region, differing perspectives regarding fishery management have long opposed a Western vision based on outputs with catch records and quotas, compared to a traditional vision looking at planning which consists in controlling access to the resource by setting up temporary fishing bans affecting part or all the fishing territory. Fisheries management is complex from a sector perspective with different fishing practices, and from a biology perspective with different types of patterns in fish stocks sometimes straddling from national to international waters.

Coastal fisheries suggest we also look at the ecosystem, in close relation with the notions of territory. Systems develop in particular areas along with closely related cultural activities and practices, which it can supply or compete with. Fishing is one of the oldest human practices and continues to hold great significance in our societies. The normalised overexploitation of global fish stocks, the growing micro-plastic coating, and the increasing acidity of the oceans, raise concerns regarding the future of our global waters. According to The State of World Fisheries and Aquaculture (SOFIA), the global apparent consumption of aquatic animal foods reached 162.5 million tonnes in 2021, with 81 million tonnes coming from marine capture. SOFIA stresses that

even with the blue economy transformation, this pressure will persist due to the rising global population. It also notes that the proportion of animals from healthy stocks, as defined by the FAO, decreased by 2.3 percent in 2021 compared to 2019. The growing demand, the shadow of illegal fishing and the associated illicit trade in marine seafood threat exclusive economic zones and even protected areas¹. Combining satellite imagery, vessel GPS data and deep-learning models, Paolo, Kroodsma, Raynor, Hochberg, Davis, Cleary, Marsaglia, Orofino, Thomas, and Halpin (2024) unveil that about three quarters of the world's industrial fishing vessels are not publicly tracked. For Indigenous communities across the world, average consumption per capita of seafood is 15 times higher than for non-Indigenous country populations (Cisneros-Montemayor, Pauly, Weatherdon, Ota, 2016), reinforcing that communities fishing activity has various purposes, as a primary source of food along with being an economic source of revenue.

The challenges toward resource management and economic development are not straightforward and depend on the collaboration of all stakeholders. Fisheries biologists have long acknowledged a proclivity of Pacific people toward the sea and their traditional resource management practices' sustainability (Joannes ,1978, Veitayaki, 1997). Veitayaki (1997) called for mixed methods approaches toward fishery management, emphasising the importance of empowering local fisheries to protect their resources. This echoes the first elemental issue in Indigenous entrepreneurship research paradigm (Hindle and Lansdowne, 2005), known as the heritage index, in which Indigenous traditional knowledges and practices can be seen as a source of long-term competitive advantage as reconciling tradition with innovation. Learning from Indigenous perspectives and practices for resource management of coastal fisheries reveals different worldviews and by this mean can be a source of development for Indigenous entrepreneurship as well as the broader entrepreneurship field. Then this research could be valuable to a variety of audiences, including both Indigenous and non-Indigenous groups.

This work draws upon Indigenous entrepreneurship literature and Bourdieu's theory of capitals along with the argument of embeddedness. The framework regarding economic development in the new economy (Anderson, Camp II, Dana, Honig, Nkongolo-Bakenda, and Peredo, 2005) highlights the complexity rose by multiple levels of stakeholders and the diverse dynamics involved in the trajectories of strategies developed. The research objective is theory-driven and focuses on obtaining knowledge and insights concerning the trajectories of the diverse strategies pursued by Loyalty Islands fishers and the elements impacting on them. This study delves into the existing rules of Indigenous entrepreneurship as a framework, focusing on the role of context in relation to

¹ [Bloom Association » Not a single veritable Marine 'Protected' Area in France: a groundbreaking analysis by BLOOM](#)
Page 10 of 229

the activities of Kanak fishermen in the Province of Loyalty Islands, New Caledonia. The research further explores how social and cultural capital influences the development and replication of strategies which can opt- in or opt-out the global economy, with or without transforming it (Anderson, Camp II, Dana, Honig, Nkongolo-Bakenda, and Peredo, 2005). Additionally, it examines how the unique characteristics of Indigenous communities shape their entrepreneurial approaches.

The background research consisted in the first part of a preliminary research on New Caledonian history, economy, and politics to better comprehend the context. Then, the field of study examined how people perceive the development of artisanal professional fishing and what social and cultural factors shape these views. To meet this objective, the research adopts an ethnographic methodology with an extensive field of study, using a multiple cases study approach to compare subsistence customary fishers with professional artisanal fishers.

Firstly, this research invites to new perspectives of research on Indigenous entrepreneurial ecosystems looking at the interaction of different forms of trust in hybrid contexts. Secondly, by examining the different strategies developed, the research highlights their complementarity regarding different objectives of self-determination. Finally, the contributions encourage further research regarding the impact of cognitive ties on practices and their potential positive externalities in relation with conservation and sustainable development. Practical implications highlight the potential complementarity of these two types of fishing activity. Yet the development of the artisanal professional fishing sector seems to have been hindered by various elements stemming from cultural capital with the perception regarding fishing purpose, rhythm and volume; and the top-down approach with the associated with the lack of transparency creating distrust. The research encourages to further support artisanal fishers and create area of discussion regarding the orientation of the sector and the role the artisanal professional fishing sector can play.

The research thesis has been structured in the following way: chapter one focusses on the literature review, with the Indigenous Entrepreneurship framework and the theory of capital in relation to Indigenous Entrepreneurship. Chapter two presents the methodology of research processes, approaches, and methods. Chapter three reviews previous anthropological and ethnographic research to provide the necessary background information to understanding the wider context. Chapter four presents the results and findings from the field of study and chapter six deals with the analysis of the data, combined with a discussion guided by topical research questions. The conclusion chapter summarises key findings and highlights areas of interest for future research as well as practitioners.

Chapter 1: Literature review

1) Theoretical background on Indigenous entrepreneurship and key concepts

The first part of this review presents the principal characteristics of indigeneity and Indigenous entrepreneurship which became recognised as a proper field of research for its distinctiveness (Dana, 1997; Hindle and Moroz, 2009; Anderson, Dana and Dana, 2006; Dana, 2015) contributing to the recognition of alternative forms of entrepreneurship (Obrecht, 2011). Indigenous entrepreneurship is linked to the inherent nature of Indigenous people, so I begin with an explanation of the term Indigenous:

“Indigenous communities, peoples and nations are those which, having a historical continuity with pre-invasion and pre-colonial societies that developed on their territories, consider themselves distinct from other sectors of the societies now prevailing on 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 system.”
(Secretariat of the Permanent Forum on Indigenous Issues, 2004:2).

Dana (2015) highlights that Indigenous entrepreneurship has often non-economic explanatory variables and is usually environmentally sustainable. Vakkayil (2017), against a generalisation, states that “the idea of indigeneity—defined in terms of a static way of life that is frozen in time and as a “primordial identity” of people whose lifestyles have remained unchanged over the years—can lead to obvious problems.” (2017:397). Against a general misleading categorisation these remarks call for our attention on the cultural specificities of different Indigenous communities as well as their dynamic character. In this work I refer to the widely accepted definition of Indigenous entrepreneurship (Dana and Anderson 2007:9; Hindle and Moroz 2009:7):

“Indigenous entrepreneurship is the creation, management and development of new ventures by Indigenous people for the benefit of Indigenous people. The organizations thus created can pertain to either the private, public or non-profit sectors. The desired and achieved benefits of venturing can range from the narrow view of economic profit for a single individual to the broad view of multiple, social and economic advantages for entire communities. Outcomes and entitlements derived from Indigenous entrepreneurship may extend to enterprise partners and stakeholders who may be non-Indigenous” (Hindle and Lansdowne 2005: 9).

Not all Indigenous Nations display the same characteristics, but the majority exhibit an attachment to ancestral lands and their resources and besides inclination to modern subsistence, economic arrangements and distinctive languages (Peredo, Anderson, Galbraith, Honig, and Dana,

2004). Looking at the concept of indigeneity in context emphasises the importance of history and colonisation times as well as the progressive recognition of Indigenous rights at different levels. For example, Hindle and Lansdowne (2005) report: "Richard Trudgen spoke for many respondents when he argued that Indigenous heritage has been so battered by mainstream culture that many young Indigenous people themselves now doubt its power and value. " (2005:137). Prior to the UN Declaration of 2007 on the Rights of Indigenous Peoples, Indigenous Nations have led their battle at country level around the world to trigger the awareness of governments toward their views (Meyer, 2012). After precious artifacts and remains from Indigenous cultures had been dispersed around the world in museums, the progressive return from western countries to its rightful holders can be seen as a sign of the growing global awareness and respect toward Indigenous cultures. Implied in the notion of Indigenous rights is the right to self-determination. Graff (2012) notes the various conception of self-determination affecting Kanak people in New Caledonia as aside to the rights of Indigenous people the whole territory is in the process to determine his future by referendum². This work considers an internal aspect of self-determination linked to the rights of Indigenous people concerning their choices of economic, social and cultural development. The United Nation Declaration on Indigenous Rights (2008) guarantees:

Article 3

"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." (2008:4)

Article 4

"Indigenous peoples, in exercising their right to self-determination, have the right to autonomy or self-government in matters relating to their internal and local affairs, as well as ways and means for financing their autonomous functions." (2008:4)

Development theories:

The right to self-determination is highly important to consider as it emphasises the importance to consider the distinctive values and worldviews people have. Central in Indigenous entrepreneurship field are the questions of development, and long-term capacity building (Buckingham and Dana, 2005) face to which the concerns for self-determination arose (Anderson, Camp II, Dana, Honig, Nkongolo-Bakenda, and Peredo, 2005) in response to the socio economic circumstances faced by Indigenous populations (Anderson, 2002, Anderson, Camp II, Dana, Honig, Nkongolo-Bakenda, and Peredo, 2005, Buckingham and Dana, 2005). Then theories of development have been under review due to their diverse impacts upon Indigenous communities. A reason for such scrutiny is that

² This later process is envisaged by the United Nations Special Committee on Decolonization and regroup also other citizens of New Caledonia (see Graff 2012).

the development theories do not necessarily relate to self-determination logics. Anderson, Dana and Dana (2006) emphasised that the two perspectives, the modernization theory and the dependency theory, were competing and mutually exclusive. The authors explain that the modernization approach suggests to people to "follow the path" of development in which the First World Nations represent a model to attain. Kayseas, Moroz, Anderson, Goulden and Dana (2015) underlined that modernisation theory generally postulates on the consistency of social, cultural and human capital with mainstream requirements. On its part the dependency approach is based on the idea that "underdevelopments in the Third World are the outcome of the rise of the First World to its current state of development." Anderson, Dana and Dana (2006) suggest that both modernization and dependency theory are incomplete and state that "the interaction between a particular people and the global economy need not be as envisaged by the modernization or dependency perspectives; it could be something else entirely" (2006:47). In this perspective the objectives and outcomes sought by Indigenous people can be a basis for development.

Regulation theory emphasises this new approach as it analyses the global economy "in terms of a series of mode of development based on the combination of the currently ascendant regime of accumulation and a variety of modes of social regulation" (Hirst and Zeitlin, 1992:84-85). This school of thought stresses the existence of different modes of development resulting from the interaction of a dominant regime of accumulation with various modes of social regulation. Kayseas, Moroz, Anderson, Goulden and Dana (2015)³ underline "because modes of social regulation are based on such things as habits and customs, social norms, enforceable laws and state, form unique modes can exist at virtually any territorial level—local, regional, national, global" (2015:9).

Figure 1: Mechanism of regulation theory:



Source: author, building on Anderson, Dana and Dana (2006)

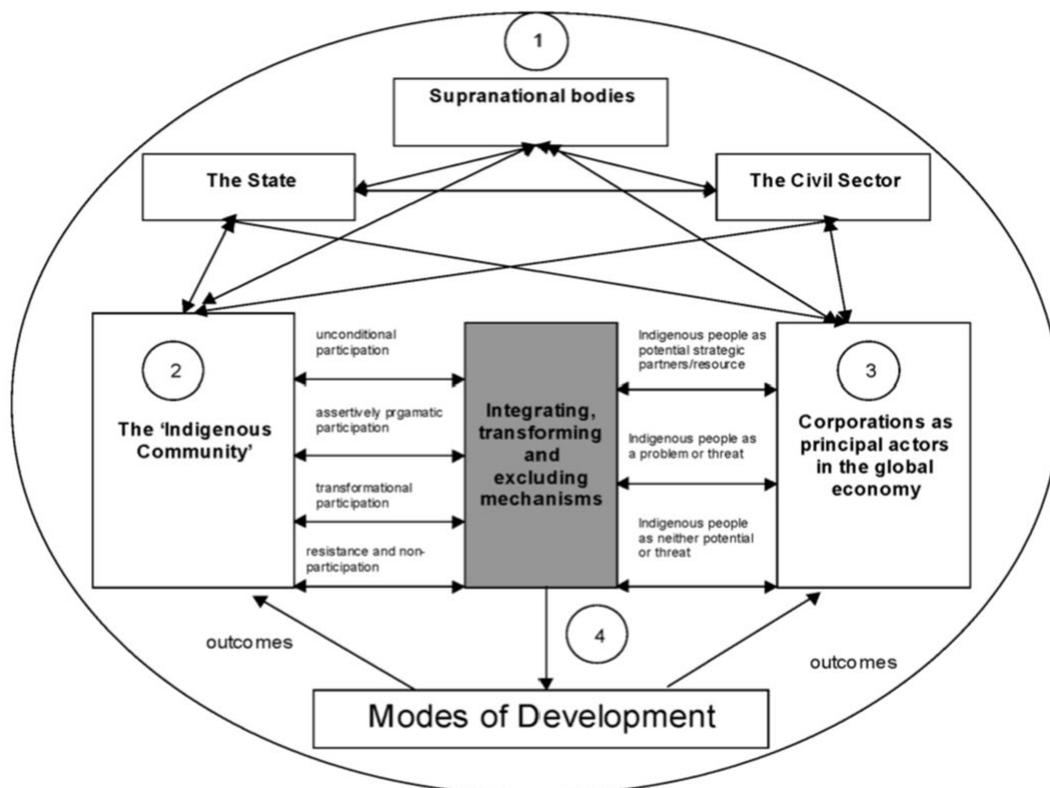
Among the cultural heterogeneity of Indigenous people, their desire toward western styles of entrepreneurship development varies also in many ways. As a result of both the long-term and dramatic effects of colonisation, as well as the current environmental degradation, First Nations question Western style of development and have started to engage in their own strategies of development based on their values and perceptions. The concept of regulation theory highlights the

³ building on Peck and Tickell, (1992) and Storper and Walker, (1989).

importance of the mode of social regulation in shaping strategic decisions and lead to the notion of choice between opt-in and opt-out strategies, with or without transformation (Anderson, Camp II, Dana, Honig, Nkongolo-Bakenda, and Peredo, 2005). Anderson, Camp II, Dana, Honig, Nkongolo-Bakenda and Peredo report that some Indigenous people in Canada have refused the status quo and "through entrepreneurship and business development, they believe that they can attain their socio-economic objectives, including: greater control of activities on their traditional lands, self-determination and an end to dependency through economic self-sufficiency, the preservation and strengthening of traditional values and their application in economic development and business activities, improved socio-economic circumstance for individuals, families and communities." (2005:110). This process stresses the development of entrepreneurial ventures which fit with Indigenous ontologies.

The framework hereafter from Anderson, Camp II, Dana, Honig, Nkongolo-Bakenda, and Peredo, (2005) presents four groups of actors interacting in the process of development of Indigenous communities, it highlights the interaction of different institutional levels and stakeholders with the community.

Figure 2: Economic development in the new economy



Source: Anderson, Camp II, Dana, Honig, Nkongolo-Bakenda, and Peredo, 2005.

They stress that "People in a particular community do not adopt their perspective on the global economy in isolation or in abstract. It emerges in response to their direct experience with actors in the global economic system." (2005:116). This thinking is in line with Johannisson, Ramirez Pasillas and Karlsson (2002) on institutional embeddedness. They present varying types of interactions, spanning the different levels of embeddedness, where in-between firms' interactions are more related to a micro level of analysis, and firms in interaction with associations/institutions refers more to a meso and macro level. In the particular context of Indigenous development, it is important to stress the influence of "supranational bodies" in the process of Indigenous rights recognition and their potential impact on national policies. Further, there are also specific impacts that can arise concerning the group "civil society" as non-governmental organisations, associations and also scientists and research programs can have a particular role interacting with Indigenous communities, like for example by providing information, or advocating for Indigenous communities.

Distinctiveness of Indigenous settings:

Although local modes of social regulations might be unique as they are marked by distinctive norms, values, habits, and laws; the literature recognises common characteristics to Indigenous mode of social regulation. Natural resources use and appropriation rules vary across culture, Dana (2015) explains "some people are Dionysian, with emphasis on being. Others are Promethean, with emphasis on doing" (2015:160). Indigenous Peoples' cultures are based on a profound spiritual relationship with their land and natural resources (Kipuri, UN report, 2009) that are often held collectively (Dana, 2015). Several authors have suggested that mainstream entrepreneurship theories are inapplicable to Indigenous contexts, including Dana and Anderson (2007) and Hindle and Moroz (2009). Hindle and Moroz (2009) also emphasised the concern of maintaining the distinctiveness of community's identity and they note "the vast majority of Indigenous communities, from the smallest band to the largest nation, are vitally interested in the maintenance of what we will call 'community integrity': that combination of factors including culture, heritage and weltanschauung (a comprehensive conception or apprehension of the world especially from a specific standpoint) which define the Indigenous community and can keep defining its distinctive character in a world of globalization and rapid economic change." (2009:17).

Also, Indigenous people may have different worldviews. Dana (2015) called attention on their specific system of values, with emphasis on equality and personal autonomy, as a "defining feature, of the Indians' sense of ethnic identity" (2015:159). Pointing to the distinctiveness of social networks and culture among Indigenous communities Dana and Anderson (2007) stressed that culture and social organisation among Indigenous people is often based on kinship ties. Following

on this idea the common emphasis on the community is supported by strong egalitarian ethic (Dana, 2015) and non-monetary goals relegate market transactions and monetary considerations to secondary importance (Curry, 2007; Peredo, 2001; Peredo & Chrisman, 2006). For example, in the Andes, research on community-based entrepreneurship highlights a wide range of goals reflecting the diversity of their social needs (Peredo, 2001; Peredo & Chrisman, 2006). Also, the prevalence of non-monetary goals can be illustrated by the example of Sami culture and reindeer herding, where, despite individual ownership of reindeers, the activity is performed collectively and hardly profitable in the financial sense (Dana, 2008; Dana and Light, 2011). These observations have supported the argument of a specific cultural perception of opportunity rose by Dana (1995).

Fundamental works linked to this paradigm emphasise the different externalities associated to various types of resource. According to Penrose (1959), contrary to the neoclassical idea of an economy where markets are perfectly regulated and resources are equally accessible, the firm is a collection of productive resources performed by individual members of a coordinated administrative organisation. Kor and Mahoney (2004) underline Penrose's distinctive contribution and stressed that "Penrose (1959) contributed to the research literature concerning isolating mechanisms in at least five areas: (1) path dependencies in resource development; (2) firm-specific knowledge possessed by managers; (3) shared team-specific experience of managers; (4) entrepreneurial vision of managers; and (5) the firm's idiosyncratic capacity to learn and to diversify". (2004:186). Penrose's research on "industrial firms", and the strategic management view it associated with, were not designed for Indigenous microentrepreneurs, yet they make sense when applied to Indigenous entrepreneurship. Indeed, the consideration of unique and often preserved natural resources as well as distinct knowledge associated are specific tangible and intangible resources. In this perspective on-tribe entrepreneurship allows to link with peculiar elements which lead to appreciate this approach for Indigenous entrepreneurship, for example (1) path dependencies relating to routines, habits, custom in traditional practices, but also the weight of history and what Ratten (2014) spotted as "historical trauma" due to colonisation and traumatic events that have impacting communities and depleted resources. (2) Specific knowledge in traditional practices have been explored by ethnographers and anthropologists for example Berkes, Colding, and Folke (2000) highlight the role of Indigenous practices and Traditional Ecological Knowledge for resource and ecosystem management. (3) Knowledge transmission is strategic in cultural resilience. From all over the world the literature presents examples as Dana shows in United States among Amish people (2007), Europe, Norway with Sami people (2008), Africa, Lesotho with Basuto people (1997), South America, Peru with Brazil nut harvesters from Tambopata (2014) or potato producers in Bolivia (2011). Relating to (4) the entrepreneurial vision of managers the strategic decision

between opting-in or opting-out strategies with varying degrees of transformation is central in Indigenous entrepreneurship (Anderson, Camp II, Dana, Honig, Nkongolo-Bakenda, and Peredo, 2005). Finally concerning (5) the Indigenous firm's capacity to learn and diversify highlight key questions about the degree of diversification in the opting-in global economy as well as its impacts on Indigenous societies. Curry (2005) illustrates how wage labour is only a part of on-tribe economy in Papua New Guinea. In Indigenous settings how entrepreneurship tends to bring the local and the global together is often source of innovations or transformations chosen or undergone, the lessons from mining development in the Arctic in Baker Lake, Canada (Dana and Anderson, 2014), oil and gas development on the Dene First Nations of the Sahtu (Dana and Anderson and Meis-Mason, 2009) have mitigate somehow infatuation toward the growth of industrial firms due to negative externalities.

Penrose highlights the contribution of both tangible and intangible resources in the creation of services that contribute to build the uniqueness of the organisation, leading to the construction of the competitive advantage. Successful Indigenous ventures like for example the Lac La Ronge Indian Band in Canada, which is recognized as one of the leaders in economic development in Canada (Hindle, Anderson, Giberson and Kayseas 2005), highlights the importance of rights recognition and traditional knowledge (Dana and Anderson 2015, and Kayseas, Moroz, Anderson Goulden and Dana 2015). Obrecht & Raheltha (2014) underline the usefulness of the resource-based theory (RBT) for sustainable business approaches. They stress the RBT and more precisely its advances, which focus on resource development aspects, recognize the specific characteristics of the entrepreneur in an approach based on local features. Linking with our previous comments, the specificities of Indigenous communities, especially their distinctive worldviews and bonds to the land, can be seen as precious intangible resources in the pursuit of sustainable development strategies. Kanak's practices can be key in the development of a healthier fishing sector globally, also in the other sense they can be key in the development of Loyalty Islands.

This part aimed to present key concepts and specificities related to Indigenous entrepreneurship field, and principally the importance of the mode of social regulation. The review of the literature highlights the distinctiveness of specific resources, more precisely the different values, and the organisation among Indigenous communities which impacts their choices and strategies of development. The scope of these strategies is also specific as it considers the relation to the global economy as well as the possibility to opting-in or opting-out from it.

2) Identifying a gap, systematic approach to the theory of capital and Indigenous Entrepreneurship

Entrepreneurship literature is teeming with articles illustrating the impacts of different types of capitals on the entrepreneurial process from social capital, cultural capital, human capital and institutional capital. Jensen already argued in 1987 that Homo Economicus is a one-dimensional man who should be replaced by a multidimensional man, the "socio-cultural person", who pursues a multiplicity of goals and objectives. These remarks shed lights on the multiple dimensions of the context impacting on entrepreneurship processes (Baker and Welter 2018).

The importance of social (Anderson and Jack, 2002; Greeve and Salaff, 2003; Jack, Dodd and Anderson, 2004) and cultural (Aldrich and Waldinger 1990) capital in entrepreneurship research and more precisely, in Indigenous entrepreneurship (Dana 1996, 1997, Light and Dana 2013, Foley and O'Connor, 2013), has developed alongside the growing recognition of the embeddedness of economic action in the social context (Granovetter, 1990; Uzzi, 1997) with the influence of networks' nature (Granovetter, 1973 and 1983) and structure (Burt, 2009). The "International Handbook of Research on Indigenous Entrepreneurship" published in 2007 provides a collection of research covering Australia, Canada, Denmark, Finland, Germany, Ireland, Kenya, Mexico, Mongolia, New Zealand, Nigeria, Norway, Russia, Sweden and USA from 50 contributors. Dana and Anderson's concluding chapter draws clear links between the forms of capitals. Manifestation of cultural capital are evident in relation to natural and human capital. More precisely the authors stress that the (1) heterogeneity among Indigenous peoples is linked to a special attachment to the place in relation with the development of traditional ecological knowledge. The (2) incompatibility with assumptions of mainstream theories impacting on perception of opportunity supported by (8) culturally influenced opportunity recognition, and valuation of success stress the importance of cultural capital both individually and collectively. Activities rely on (3) immediately available resources linked to the attachment to the land; this is linked to natural capital and the Indigenous community. The authors precise in (4) sustainability as condition, which is strongly linked with values (10) and a "need" versus "desire" which impact on choices and governance but might be more related to the cultural perception, and the (11) emphasis on community which can allow to draw parallel with ethnic network theory and materialised by the enclave on our schema. Then, linked with social capital, we can group the aspects related to (5) kinship ties, and a (7) propensity for cooperation, both linked to nature of ties and reciprocity as well as an (11) emphasis on the community. Finally linked to specificities of institutional capital we have (6) markets and internal economic activity linked to internal norms, and (9) external forces that we try to materialize

from the addition of the interaction with stakeholders "supranational bodies" and "civil society". These observations refine our approach with the different forms of capitals to better understand Indigenous entrepreneurship process. Building on Bourdieu and the argument of embeddedness (Polanyi 1957, Granovetter, 1985, Zukin and DiMaggio, 1990) the description of the determinants of Indigenous entrepreneurship allow to draw more precise links with the different capitals interacting during the entrepreneurial process. This observation encourages to explore further which elements in relation with these capitals could impact and how they could impact to achieve, in some measure, to explain the choice to develop entrepreneurial projects. In addition, it stressed the complex network of institutions often marked by a mixed embeddedness and a dominant regime of accumulation. Bourdieu (1986) highlighted relations and processes of conversion between three forms of capital: "as economic capital, which is immediately and directly convertible into money and may be institutionalized in the form of property rights; as cultural capital, which is convertible, in certain conditions, into economic capital and may be institutionalized in the form of educational qualifications; and as social capital, made up of social obligations ("connections"), which is convertible, in certain conditions, into economic capital and may be institutionalized in the form of a title of nobility." (1986:16). Bourdieu (1986) on habitus pointed to the central role played by the process of codification in the formalisation of institutions. Without naming institutional capital specifically his paradigm underlines the role played by institutional capital in the process of conversion, more precisely thanks to the process of creation transforming the tacit in explicit. This remark stresses the importance of institutional capital and more precisely the recognition of Indigenous rights in the development of Indigenous communities (Kayseas, Moroz, Anderson, Goulden and Dana 2015).

However, at the start of the PhD (2015), when attempting to research articles looking at capitals and Indigenous entrepreneurship on the main online databases, the results were very scarce. When looking at "capital*" and "Indigenous entrepreneurship" on "Web of science" only three results appear before 2015. This apparent shortage of research published might be due to the youth of the Indigenous entrepreneurship field and maybe because mainstream journals might not be primarily interested in remote setting and Indigenous ventures. Main articles on this subject like Light and Dana (2013), which looks precisely at the relation between cultural and social capital, were not even selected by the database. Launching the same keywords on EBSCO the Boolean result brings six articles. A smart text search provides more than 400 results dealing with Indigenous communities and development but not targeted on our subject.

Because of difficulties in establishing a systematic literature review, the research framework has been elaborated in a more idiosyncratic way. The objectives were to understand what elements are at stake when we look at capitals and to better comprehend how they might interact on the Indigenous venture process. To achieve in reaching the main works and concepts regarding Indigenous entrepreneurship, the following part of the literature review has been built with the precious inputs of Léo Paul Dana and Robert B. Anderson, as point of departure and then complementary research. Léo Paul Dana was the first PhD in the field comparing entrepreneurship between Indigenous and non-Indigenous entrepreneurs in the Canadian subarctic. This research was subsequently reproduced in Alaska bringing the same important finding, that entrepreneurial perception of opportunity is culturally constrained. Robert B. Anderson has originated or participated to more than 205 publications and research papers related to Indigenous development and is now Professor Emeritus from the University of Regina in Canada. They both edited the *International Handbook of Research on Indigenous Entrepreneurship* (2007).

The perspective of the research builds on the embedded nature of the entrepreneurial process with the context, looking more precisely at how the social, institutional, and spatial contexts enable in some ways, and constrain in others, entrepreneurship processes. The concept of embeddedness traced back to Granovetter works on the social embeddedness of economic action. Today entrepreneurial activity is seen as situated in social, institutional and spatial contexts which determine the universe of possibilities and shape entrepreneurial behaviour. This perspective is consistent with the approach of entrepreneurial embeddedness presented in the recent special issue by Korsgaard, Wigren-Kristoferson, Brundin, Hellerstedt, Agnete Alsos, Grande, (2022). The authors stress the importance of looking at the entrepreneurship process in a holistic view and to not focus only on one dimension of embeddedness. By taking a Bourdieusian perspective the literature review explores the theory of capitals and their contribution to the entrepreneurial process, a special attention is paid to how Indigenous entrepreneurship has been explored in relation with human, social, cultural, and institutional capitals.

3) Forms of capitals

Coleman (1988) points out that regardless of their shared characteristics as facilitators of productivity, the different types of capitals - physical, human, social, cultural, institutional, and even natural - differ greatly in their tangibility. The same author explains that if physical capital is wholly tangible, and observable, human capital is less tangible because it is embodied in the skills and knowledge acquired. Instead, "social capital is less tangible yet, for it exists in the relations among persons. Just as physical capital and human capital facilitate productive activity, social

capital does as well" (1988: S100 - S101). The aim of this part is firstly to define the different kind of capitals and secondly, following on the embedded perspective of entrepreneurial activity, to discuss how the different capitals are articulated more specifically in Indigenous contexts. The mitigated successes and often failures of development programs, despite great amount of economic capital available to them, encourage to concentrate on the less tangible concepts at stake in Indigenous entrepreneurship literature, namely: human, social, cultural, and institutional capitals.

3.1) Human capital

3.1.1) Definition

According to Golding (2016) the concept of human capital goes back at least to Adam Smith, who noted: "The acquisition of [...] talents during [...] education, study, or apprenticeship, costs a real expense, which is capital in [a] person. Those talents [are] part of his fortune [and] likewise that of society" (Smith, 1776, in Golden 2014). Building on Becker (1994), human capital is defined as the sum of knowledge, skills, abilities, know-how that people can accumulate thanks to schooling or training.

3.1.2) Effects

Becker (1962) pioneered the investigation of the impact of human capital on earnings. He underlined the many ways to invest in human capital including schooling, on-the-job training, medical care, vitamin consumption, and acquiring information about the economic system. These ways differ in their effect on earnings and consumption, amount of resources typically invested, size of the returns and the extent to which the connection between investment and return is perceived. In addition, he underlined that all improve the physical and mental abilities of people and thereby real income prospects (Becker, 1962). Following on Smith's (1776) comment, human capital can be seen both at the individual level with its impact on earnings, and at the society level with its impacts on growth. Penrose (1959) stresses the central role of knowledge in the interaction between material and human resource; she states that: "increases in knowledge can always increase the range or number of services available from any resource." (1959:67).

3.1.3) Human capital and Indigenous entrepreneurship

The International Fund for Agricultural Development (IFAD, 2012) states that the lands where Indigenous peoples live represent 80% of the planet's biodiversity and they have a fundamental role in managing the world's natural resources (IFAD, 2012, Croce, 2017:886, 887). The productivity of their ecosystem in term of services like carbon capture surpasses their own needs. There is an

interesting parallel with Penrose's comment as there is also a positive relation between knowledge and natural resources. Traditional societies have developed context-specific knowledge and ecosystem like concepts (Berkes, Kislalioglu, Folke, Madhav, 1998) that might impact their choices to bring high yield to ecosystems. In relation to these observations, human capital and Indigenous development have led to the concept of traditional ecological knowledge (TEK). According to Berkes, Colding and Floke (2000), the study of TEK began with the study of species identification and classification and moved to considerations on people's understandings of ecological processes and their relationships with the environment. They stress that there is a component of observation supported by specific practices embedded in social mechanisms and observe four levels: (1) generation, accumulation, and transmission of local ecological knowledge; (2) structure and dynamics of institutions; (3) mechanisms for cultural internalization; (4) world view and cultural values. TEK is a component that looks at context and more precisely natural capital in articulation with knowledge and practices and traditional institutions. Bourdieu (1986) associates a symbolic value to the hereditary patrimony, relating to Indigenous entrepreneurship, it is worth to note that often traditional knowledge has both a symbolic and a practical function. Symbolic because it is often linked to the land or animals which are part of the ecosystem and then part of the person's identity. It can sometimes be held only by specific knowledge-carriers or performed in specific moments. Practical as it often refers to concrete practices with a specific purpose. Berkes, Colding and Floke (2000) classify management practices based on traditional knowledge from the monitoring of resources to the management of complex systems, linking it to ecosystems and landscapes as watershed-based management. These practices are based on social mechanisms supported by the interaction between cultural capital and institutional capital for the integration and transmission of traditional knowledge.

This first part suggests recursive links in the relations between human and other type of capitals, more precisely in the Indigenous entrepreneurship context: the impact of natural capital on human capital in interaction with cultures, institutions, and networks (Berkes Colding and Folke 2000). Following on the objective to better understand the interaction of the different capitals and regarding the contribution of local networks in the transmission and integration of human capital the next part presents the concept of social capital.

3.2) Social capital

In the search for a better understanding of entrepreneurial processes, the impacts of social capital on entrepreneurship have raised interest first from the investigation of networks (Jack, 2010). In large ways networks have been proven to facilitate entrepreneurship (Jack, Dodd and Anderson 2004,

Slotte-Kock and Coviello, 2010) with both tangible resources, as access to economic capital or equipment, and intangible resources, as privileged access to information and advice, emotional support, legitimacy signals (Hoang, Antoncic, 2003), influence, control and power, and solidarity (Adler and Kwon, 2002). Also, building on the concept of embeddedness (Polanyi, 1957; Granovetter, 1985; Zukin and Di Maggio 1990), numerous studies have acknowledged the importance of the social context and the interaction of different forms of capitals referring to their convertibility (Bourdieu, 1986) or mediation effects (Davidson and Honig, 2003).

3.2.1) Definition

The prolific literature on social capital proposes various definitions (Adler and Kwon, 2002). Bourdieu (1980) defines social capital as:

“The sum of the resources actual and potential linked to the possession of a durable network of relations, more or less institutionalized, inter-knowledge, recognition; or in other words the fact to belong to a group as a set of agents linked by common proprieties and permanent useful bindings” (1980:2).

Building on a rich review of the field, Adler and Kwon (2002) propose a more process-oriented definition and introduce the notion of goodwill. Aspects of goodwill and benevolence stress the relational nature of social capital which depend on the bond between people and their wish and ability in providing support.

“Social capital is the goodwill available to individuals or groups. Its source lies in the structure and content of the actor's social relations. Its effects flow from the information, influence, and solidarity it makes available to the actor” (Adler and Kwon 2002:23).

Social capital's sources lie in the social structure and relations in within one actor is located. Adler and Kwon (2002) differentiate between three types of relations: (1) market relations, in which products and services are exchanged for money or bartered; (2) hierarchical relations, in which obedience to authority is exchanged for material and spiritual security; (3) social relations, in which favours and gifts are exchanged. They note that any concrete relation is likely to involve a mix of all three types (Adler and Kwon 2002). Looking at the key elements present in previous research on social capital, their review proposes an "opportunity-motivation-ability" framework which suggests that all three sources must be present for social capital to be activated. More precisely a person's social network creates opportunities by its configuration as one can get access to resources through direct and indirect ties; also, it needs motivation to act which can be more or less instrumental, as it

can range from self-interest, to generalized norms like trust or reciprocity finally it needs ability, which stems from the competencies and resources of the networks' nodes (Adler and Kwon 2002).

3.2.2) Network, tie's nature and network's structure

Research on social capital has built on social networks research by looking at the nature of ties (Granovetter 1973, Jack, Dodd and Anderson, 2004) and the structure of the networks (Burt, 1992). Building on the argument of embeddedness (Granovetter 1992), Nahapiet and Ghoshal (1998) focused on three dimensions of social capital, structural, relational and cognitive.

Granovetter defines the strength of a tie as "a (probably linear) combination of the amount of time, the emotional intensity, the intimacy (mutual confiding), and the reciprocal services which characterize the tie" (1973:1361) and considers three situations: strong, weak, or absent ties. The stronger the bond the better access to a richer range of resource and information (Anderson and Jack, 2002). Strong ties present a range of benefits from hands-on and emotional support, new product and market ideas, capital provision, validation about people, general and specific market information and strategy (Jack, Dodd and Anderson 2004). Alternatively, Granovetter (1973) emphasises the importance of weak ties for individuals as they allow access to crucial information and improve community's cohesion, as weak ties set bridges between more or less knitted networks. Aldrich and Zimmer (1986) observe the failure of traditional approaches to explain entrepreneurship rates stressing the importance of the social context in facilitating or inhibiting entrepreneurship and propose an evolutionary approach where the population of enterprises is influenced by their access to resources and opportunities. Building on social network theory, they examine the links between actors, where a tie could represent a relationship or a transaction, and identify key variables of the social configuration: density, reachability, and centrality. Drawing from Granovetter, Aldrich and Zimmer (1986) stress that different social configurations affect entrepreneur's access to resources, for example they highlight the effect of salience of group boundaries on density or also the importance of broker roles increasing connectedness in large set of actors to ease information flow.

Kim and Aldrich (2005) review key principles in the study of social capital and entrepreneurship to appreciate ties strength and they identify homophily as a central principle. They note that homogeneity has both positive and negative effects on networks. Echoing Coleman's concept of network closure, Kim and Aldrich (2005) elaborates that in high- density networks, entrepreneurs can find support and provide access to complex information which altogether contribute the creation of trust. However, they note, these networks can also be detrimental, reducing individuals' autonomy, creativity, and innovation in favour of conformity.

Fehr and Simon Gächter (2000) present social norms as a central component of social capital noticing that most social interactions are regulated by norms. Elster (1989) explains that social norms differ from moral, legal or private norms or even ethics norms in the sense that they are enforced by the community and are sustained by feelings of guilt or shame. The author presents different kind of social norms and stress they are more than a convention and must be distinguished from habits. Building on Bourdieu (1979), consumption norms are close to norm of conformity as manners of dress, table and the like. They also include norms against behaviour as the one considered "against nature". We can note that this appreciation can differ, society from society, and can evolve, as for example the norm against homosexuality. The social norms presented by Elster (1989) have already been subject to scrutiny in research. For example, in theory of organisation, Ouchi (1980) has noted that reciprocity underlies all exchange mechanisms, but we can observe that anthropology brings some earlier examples from observations in communities as the notion of reciprocity in exchanges in the Pacific had already been observed by Mauss (1925), also norms related to different use of money has been distinguished by Faugère, (2000). Other works illustrates varying norms of retribution as for example the observations on the custom (Cornut, 2010), and in Indigenous entrepreneurship the observations of Peredo (2003), and Peredo and Mc Lean, (2006) on work norms and Dana who stresses that norms of cooperation are a distinctive feature of Indigenous organisations (Dana, 2015).

The question around the strategies developed by Indigenous groups lead to interrogate the social norms sustaining collective actions, and looking at fishing activity refers to common pool resource management which lead to the works of Elinor Ostrom. Building on Hardin (1968) Ostrom (1990) points to the self-governed institutions emerging to avoid the tragedy of the commons. Building on game theory and an indirect evolutionary approach, Ostrom (2000) stresses that “a mixture of norm users and rational egoists would emerge in setting where standard rational choice theory assumes the presence of rational egoists alone” (144:2000). Fehr and Simon Gächter (2000) stress the importance of reciprocity in enhancing collective action and enforcing social norms. Furthermore, Ostrom (2000) points to different design principles of long surviving self-organising resource regimes. Especially (1) the presence of clear boundary rules, (2) local rules which restrict the amount, timing and technology of harvesting the resource, (3) the participation of the user in making and modifying the rules, (4) endogenous system of trust and reciprocity, meaning that people monitoring are accountable to the users or are user themselves, (5) the existence of graduate sanctions and finally she points to (6) the importance of conflict resolution which should be fast, local and cost effective. In relation to these observations and more precisely linked to fishing activity, Johannes, (1978), stresses that in Oceania, the right to fish in a particular zone was

controlled by a clan, chief, or family. Johannes observes that the fishing rights allow the group to manage their own marine resource and use to apply from the beach to the edge of the reef. From his observations in Micronesia, he explained that people poaching in neighbour's area were often sentenced to pay, nowadays, generally in cash but formerly the relation were more bitter and if caught the offenders could pay with their lives. Abdullah, Kuperan and Pomeroy, (1998), discussed the dialectic between top-down government management versus community-based approaches for fisheries co-management and argue in favour of the benefices in terms of management of transaction costs. More specifically, they stress "Williamson, (1985), identifies the costs associated with contracting activities as ex-ante and ex post transaction costs. Using the generic of the Williamson's transaction cost economics, the transaction cost in fisheries co-management can, therefore, be broadly categorized into three major cost items: (i) information costs, (ii) collective fisheries decision-making costs, and (iii) collective operational costs" (1998:107). Their identification of the different transaction costs associated with fishery management illustrate how the nature of the network can impact on fishing activity in a management perspective.

Besides the nature of bonds, the varying structures of networks have also different implications. Network's structure relates to the structure of ties among the different actors of the network, the bridges being the structural components of social capital (Anderson and Jack 2002). The more closed is a network the more connected are the people. Coleman, (1988), underlines that network closure facilitates sanctions which make it less risky for people in the network to trust one another. But it is also recognised that dense local networks can lead to self-reinforcing dynamics that reproduce and exaggerate their tendency toward narrow clustering: potential barriers across social boundaries may require the acquisition of knowledge like learning new language, understand other custom, or having an high tolerance for ambiguity ; similarities create strong linkages which may reduce the turnover of contacts or the emergence of new relationships; and for new contacts homophily is presented as a basis for similar others recruitment and then create a lack of diversity (Kim and Aldrich, 2005). A specific position in the structure can also bring unique benefits to an actor; a significant example is the structural hole argument, (Burt, 1997). Based on Granovetter (1973) strength of weak ties argument, the structural hole theory highlights information benefits and access timing by disconnected contacts, as actors situated on nodes of the networks can be in contact with more heterogeneous information.

This part aimed to highlight that different forms of networks in their nature and structure trigger very disparate effects and provide different resources. Adler and Kwon (2002) highlights the importance of task contingency in the sense that the type of networked need to fit with the purpose of action. For example, Uzzi, (1997), notes that if the task requires trust and cooperation then strong

ties would be more adapted; on the contrary, if it requires economic rationality and market competition, weak ties would be more adequate. As pointed by Light and Dana, *“the research literature has relied overmuch on prevailing social contexts in which cultural capital supports entrepreneurship, thus concealing the supportive role of cultural capital just as one would conceal the contribution of oxygen to athletic performance if one conducted all research at sea level”* (2013:604). Adler and Kwon (2002) already pointed at symbolic contingencies, as norms and beliefs, which function as source of social capital and influence the value of the stock of social capital. If the vision toward entrepreneurship is not socially positively supported there is no motivation for people to engage their networks in this dynamic as it will not be rewarded or even it could be penalised. The suppression hypothesis considers situations involving ethnic groups with different endowment of social capital. Taking the example opposing immigrant communities with strong bonding ties, immersed in a society of powerful groups with less bonding and more bridging ties can lock the subordinate group out of crucial resources for entrepreneurship (Light and Dana, 2013). Light and Dana (2013), commenting about Indigenous communities in Alaska, stress that Indigenous social structures illustrate somehow distinct social capital’s boundary conditions, especially that they are *“sharply distinct and unequal in respect to tangible economic resources, intergroup bridges are few or non-existent, and cultural capital does not support entrepreneurship. Under these circumstances, common in the world of Indigenous minorities, social capital does not produce entrepreneurship”* (2013:605). They continue stressing *“except for bonding social capital, which they have in abundance, they often lack business supportive cultural capital (Frederick & Henry, 2004: 116, 127). They have abundant cultural capital, but their cultural capital does not necessarily support commercial entrepreneurship—although it does support other forms of economic activity, such as subsistence agriculture (Wall & Masayeva, 2007), hunting (Povoroznyuk, 2007), and fishing (Simeone, 2007)”* (2013:605). The same authors also precise that middleman minorities are *“unique and exceptional”* and that most ethnic minorities are not endowed with cultural capital to support the vocational legitimacy of entrepreneurship. Pointing to the potential bridges between dominant and subordinate group Light and Dana, (2013) brings additional specifications to the suppression hypothesis. They argue *“(1) we must specify the relative strength of social capital in the dominant and subordinate groups; (2) we must specify the extent of bridging social capital between the dominant and subordinate group.”* (607:2013). These remarks relate to the concept of embeddedness, more precisely how economic activity is impacted by the institutional context, more precisely culture, and leads us to a view more collective on social capital.

3.2.3) *Collective social capital*

Adler and Kwon (2002) stress the link between social capital and norms compliance, specifying that a high degree of closure of the social network encourages compliance with local rules and customs, and reduces the need for formal controls. These benefits impact the members of a community and individual or collective actors, who can bridge to other actors (Kwon and Adler, 2014). Putnam (2000) stresses the link between social capital and the accountability toward civic engagement. In Putnam (2000), social capital is described as a facilitator of informal contract enforcement. In this sense social capital enhances informal rules based on common values. In addition, Putnam (2001) underlines that “*whereas physical capital refers to physical objects and human capital refers to properties of individuals, social capital refers to connections among individuals’ social networks and the norms of reciprocity and trustworthiness that arise from them. In that sense social capital is closely related to what some have called a “civic virtue”. The difference is because “social capital” calls attention to the fact that civic virtue is most powerful when embedded in a dense network of social relations. A society of many virtuous but isolated individuals is not necessarily rich in social capital.*” (2001:19). Putnam’s comment echoes Granovetter’s remark on the importance of weak ties for community cohesion. This calls our attention on the notion of civic virtue, as a shared capital existing thanks to the connection of the members of a group. Adler and Kwon (2002) underline that the norm of generalized reciprocity transcends the aspects of hierarchy or immediateness, in this sense it is not instrumental rather it lies in a general attitude. Taking Putnam’s example: “*I’ll do this for you now, knowing that somewhere down the road you’ll do something for me* (1993:182-183).” These elements can be linked to the norm of generalized reciprocity suggested by Adler and Kwon, (2002), which gather the individuals with a sense of obligation with shared interests and a common identity. Coleman (1988) also points out that the social capital can facilitate or constraint action, and he underlines that a norm that forgoes self-interest and that acts in the interests of the community constitutes an especial form of social capital. He pursues and precises that “*a norm of this sort reinforced by social support, status, honor, and other rewards, is the social capital that builds young nations*” (S104:1988). McKeever, Anderson and Jack, (2014), argue in favour to look at entrepreneurship as a social process “*whereby resources and opportunities are understood in context through social interactions and shared practices*” (2014:468). In Indigenous communities, Berkes, Colding and Folke, (2000), illustrate the role of social capital in maintaining ecologically sound management practices, more precisely concerning the generation, accumulation, and transmission of traditional and ecological knowledge. For example, how traditional institutions, like the beaver management rules system, have been reinstated by James Bay Cree in the 1950s, after their collapse due to external overrun and the

destruction of beaver population. Taking example from various communities, the authors stress the central role of folklore and knowledge carriers in helping maintain strong traditions and institutions.

Finally, Evans, (1996), highlights the importance of state-society synergies where synergistic relations can be based on complementary actions by the government and citizens, and they can be based on ties that cross the public private debate highlighting the importance of political embeddedness in the creation of social capital. Light and Dana (2013) argue that cultural capital direct social capital to approved vocational goals; this supports Kwon, Heflin and Ruef (2013), who stress that community's social context plays an important role in encouraging or discouraging entrepreneurship. The next part explores this argument by presenting the concept of cultural capital.

3.3) Cultural capital

Bourdieu, (1979), first approached the notion of "cultural capital" as a theoretical hypothesis to explain the unequal achievement of his students originating from different social classes. The capital he describes is a personal capital and cannot be transmitted instantaneously; it is linked to the person in its singularity.

2.3.1) Definition

Bourdieu (1979) makes a distinction between three different types of capital: (1) the embodied state, presented as time consuming and personal, manifests in the form of long-lasting dispositions of the mind and body shaped by knowledge, values and perception; (2) the objectified state, in the form of cultural goods (pictures, books, dictionaries, instruments, machines, etc.), and (3) the institutionalized state, which is presented as a form of objectification. In this research I refer to the embodied state of cultural capital which resonates with the following definition proposed by Berkes and Floke (1992). The authors suggest different cosmologies, a different relation to nature as well as specific human and institutional capital. In this sense however still in accordance with our first definition, this one seems better suited to the context of Indigenous development.

"Cultural capital refers to factors that provide human societies with the means and adaptations to deal with the natural environment and to actively modify it: how people view the world and the universe, or cosmology in the sense of Skolimowski (1981); environmental philosophy and ethics, including religion (Leopold, 1949; Naess, 1989); traditional ecological knowledge (Johannes, 1989); and social/ political institutions (Ostrom, 1990)." (Berkes and Floke, 1992:2)

The concept of culture has focussed on values under different levels: the country level with national culture (Hofstede, 1980; Schwartz, 1999), or institutions and firms with organizational culture (Bloor and Dawson, 1994). Ethnic entrepreneurship research builds on networks theory to better understand immigrants' economies (Light, 1989), this body of research look at minorities in

opposition or in parallel to a dominant culture. Dana (1996) highlights substantial differences between Aboriginal and non-aboriginal entrepreneurs in Churchill, a remote city located in the subarctic and he suggests that Western economic assumptions have limitations in such contexts. His work also suggests being cautious with generalization of findings found in Western cultures. For example, Dana (1996:74) highlights that Aboriginals reject Cantillon's (1755) definition because they perceive risk differently. He follows by explaining that aboriginal self-employment is often an expression of traditional activities such as hunting and fishing.

3.3.2) Values and entrepreneurship

Looking at cultural capital and entrepreneurship we can note that some cultures have been presented as more entrepreneurial than others. Religion is often presented as an explicative variable for entrepreneurship (Dana, 2021; Avnimelech, Zelekha and Sharabi, 2014), emphasizing the importance of values and community. Avnimelech, Zelekha and Sharabi (2014), underline that Jewish religion, Hindu religion, Protestant church, and Orthodox church have a significant effect on entrepreneurship levels. They stress that religion as parts of the country's culture have macro effects on the level of entrepreneurship. Parson, (1930), presents Weber's work on protestant values and their impact; frugality, asceticism and patience explain the thriving character of protestant culture. Dana (1996) concluded that culture was an explanatory variable for entrepreneurial activity or lack of it. He also noted that some cultures value more entrepreneurship than others: Ibos in Africa, Gujarati, Jains and Parsi in India, overseas Chinese in southeast Asia, Antioqueros in Columbia, Jews, Lebanese, the people from Pyongyang in North Korea, and Mennonites and Mormons in the United States. Dana (1997) highlights that ethnocultural groups do not all become self-employed for the same reason. His review explains that some entrepreneurs become self employed by choice as in the Weberian model however for others self-employment result from external constraints. Following these observations, reactionary profiles highlight that people can became entrepreneurs by necessity or also as a response to marginality (Hagen 1962, Shapero and Sokol, 1982); in contrast, orthodox entrepreneurship is driven by cultural predispositions (Weber, 1958) resulting in pro-enterprise values.

Despite a great heterogeneity among Indigenous communities the emphasis on the community has been acknowledged in various contexts, (Dana, 2015), this notion of belonging to a group can also be extended to the notion to belong to a place and highlights different perceptions of oneself in different cultures. Even connected to psychology, cultures have challenged traditional assumptions on the self (Markus and Kitayama, 1994) and provide interesting perspectives. Markus and Kitayama, (1994), argue that some understanding of the private, inner aspects of the self might

be universal, but many aspects of the self may be quite specific to some cultures. They discuss two opposed situations of how a person can perceive itself toward the group from a state named 'independent' to a state called 'interdependent' and these different levels of embeddedness impact on many aspects linked to entrepreneurship processes as well as cognitive processes, emotional processes, and motivational processes. They explain: *“we may expect those with interdependent selves to be more attentive and sensitive to others than those with independent selves. Attentiveness and sensitivity to others, characterizing the interdependent selves, will result in a relatively greater cognitive elaboration of the other or of the self in relation to other. Second, among those with interdependent selves, the unit of representation of both the self and the other will include a relatively specific social context in which the self and the other are embedded”* (1994:231). How people perceive themselves regarding the group, and the following cultural orientation - more individualistic or collectivistic - have been investigated by management studies. More precisely in research on national cultures, looking at the variables "individualism vs collectivism", (Hofstede, 1980) and 'embeddedness vs autonomy' (Schwartz, 1999). This theme is also important in the Indigenous entrepreneurship paradigm, as Hindle and Lansdowne, (2005), underlined about the 'individualist versus collectivist paradox'. The evolution of the vision toward entrepreneurs, from decision maker, risk bearer, looking alternatively at reputation and finance management, (Casson, 2021), have, in large measure, been viewed from the perspective of the individual. *“How does deep attachment to the land and the harmonies of nature fit with the drive for profit and success?”*, (Hindle and Lansdowne, 2007:14). Their data from Canada emphasise the importance of sharing and the duality of having to think both about what they must do for their business to survive, along with thinking about what they are doing for their community. In Papua New Guinea, Curry (2005) stresses that being in the community implies obligations, observing the high embeddedness experienced in Indigenous communities the author deduces key principles: profit and consumption may not be primary motivators, the pooling of capital and labour creates social relationships, and Indigenous exchange is a determinant of quality of life. In the same vein Hindle (2010) emphasises the importance of community context on the entrepreneurial process. Following on these observations and relating to the impact of how people are embedded in the group for the specific field of Indigenous entrepreneurship, we can infer that the impact of culture on cognitive processes might be linked to Dana and Anderson's (2011) observation when they referred to the culturally influenced opportunity recognition. Dana, (2015), stressed cultural capital impacts on the perception toward entrepreneurial activity, risk perception, and vision of success.

Coming back to one principle of Indigenous entrepreneurship, the participation of Indigenous communities to the global economy in their own terms, the consideration of how culture

can impact on formal and informal activities and then impact on conventional approaches to development is crucial. The vision toward the attachment to the land and how Indigenous people belong to the land instead of owing the land is a good example of how a fundamental shift from western to Indigenous values can impact on the outcomes of entrepreneurship.

3.3.3) *Mediating role of culture*

Dana, (1995), suggested that culture has a mediating role on the entrepreneurship process. Taking the example of Peru, Dana, (1988), suggested, regarding the rural exode following the land reform, that the endemic poverty of the population in rural areas, and the high rates of informality in urban small business, that individual small business development might not be a solution for the country. In contrast, observing the cultural tradition of communal activities, Peredo and Chrisman (2006) reports how collective initiatives rose and brought benefits to the community, developed the concept of community-based entrepreneurship (Peredo and Chrisman, 2006), which emphasises distinct cultural characteristics, such as a sense of community and an ability to gather in times of crisis. These values inherited from before Spanish colonization have maintained and fostered community-based enterprise, where community and enterprise become one and the same entity, leading to economic democracy.

Other works have more recently investigate the mediating role of culture, looking at its influence on bonding and bridging social capital in three Indigenous contexts, Hawaii, Australia and New Zealand, Foley and O'Connor, (2013), found very different patterns. They stress “*social capital maintains identity (Fernandez- Kelly and Schaufler 1994) and therefore has a normative effect. Culture defines norms and rules on what is accepted and what is not. Culture can limit the people to whom a person can interact if they want to maintain their identity and remain accepted within their culture. If people interact in contrast to norms and rules institutionalized in their culture, they will be—or at least feel—expelled from their culture.*” (2013:290). Light and Dana, (2013), argue that cultural capital has a mediating role on the entrepreneurship process by directing social capital to approved vocational goals, this support Kwon, Heflin and Ruef, (2013), who stress community’s social context plays an important role in encouraging or discouraging entrepreneurship.

Klyver and Foley, (2012), explore entrepreneurial networking across culture by comparing mainstream and minority cultures with the cases of Indigenous Australian, Hawaiian natives and Danish entrepreneurs. They suggest “*social networks are (1) culturally driven by seven dimensions of entrepreneurial networking, and (2) dependent on whether entrepreneurs are embedded in a mainstream culture, or a minority cultures.*” (2012:584). These remarks emphasise the importance

of community context. Bourdieu (2001) elaborates on the significance of the interaction of social and cultural capital highlighting the concept of habitus. The practices and perceptions associated with a particular habit should therefore not be considered as the product of the habit itself but rather as the result of the relationship between the habit on the one hand and the social context on the other hand. This perception provides an analytical framework to better understand why in different situations, which are structured by different networks, the same person would act differently.

Research about culture emphasises how a group tends to think and behave. Litch, Goldschmidt and Schwartz (2003) explain that culture is at the basis of the rule of law. One of the main interests in the study of culture is understanding how perceptions and beliefs impact on the behaviours of groups. At the national level, Litch, Goldschmidt and Schwartz (2003) look how moral equality and individuals' pursuit of their own preferences reinforce good governance, they stress "*the rule of law, together with accountability and curbing corruption, are considered primary mediators for development*" (2003:1). This emphasis on norms and the associated institutions lead to the next part on institutional capital.

3.4) Institutional capital

Institutional capital's effects on fostering entrepreneurship have been explained by its capacity in reducing transaction costs, and lowering risks associated to the uncertainty of individual behaviour (Welter and Smallbone, 2011).

3.4.1) Definition

North defined institutions as "*the humanly devised constraints that structure political, economic and social interactions*" (1991:97). He presents institutions as the product of both informal constraints, such as sanctions, taboos, customs, traditions, and codes of conduct; and formal rules such as constitutions, laws, property rights. In addition, Gagliardi, (2008), points to a third aspects for the definition adding to the notions of the rules of the game and the player of the game who apply and ensure the respect of the rules; she build on Schotter, (1981), and points to the generated cooperative benefit closer to the effect of a social institution which creates a self-enforcing equilibrium outcome of the game. The legal framework influences entrepreneurship on market entry and exit, venture development, opportunity rights, equal opportunities for women (Welter and Smallbone 2011). Scrutinising varying forms of pro-social organisations emerging to meet social needs, Peredo, Haugh and Mc Lean (2018) point to the effect of property regimes. Drawing from examples from pioneers' cooperative movements in the UK, to social cooperative in Italy, the community land trust in the US and community interest in the UK, their work stresses the specific organisational forms and rules limiting the distribution of surplus and organising the disposal of

assets on liquidation. Regarding Indigenous contexts, resources are often collectively own, Peredo and Chrisman (2006) found that a common property regime combined with collective governance structures in community-based enterprises serve as a robust mechanism for poverty alleviation and natural resource conservation in poor countries.

It is interesting to note the similarities with social capital as this distinction nudges the notion of social norms and point to the convertibility aspect of capitals pointed by Bourdieu. According to Aoki, there are two types of rules the one exogenously predetermined (such as legal rules and social norms) and endogenously determined (such as contracts and markets, organizations, and hybrids), each of which has the effect of saving transaction costs within certain constraints. Mainly, North, (1991), stresses that institutions create trust by creating safeguards for capital and by this mean sustain cooperation. He describes the institutional matrix as a web of different business institutions such as voluntary associations or social organizations, allowing network externalities to arise.

3.4.2) Levels of embeddedness

The precedent remark highlights the importance of the structure of the network among institutions and between firms and institutions and suggests that different structures may have different externalities and consequently that institutional capital depends upon the structure and nature of the institutional network. Johannisson, Ramirez Pasillas and Karlsson, (2002), describes institutional embeddedness with different layers of “formal and informal textures”. The first order embeddedness refers to the relations between businesses, while second order embeddedness is about the interaction between firms and economic institutions, and firms with social associations. The third level embeddedness refers to the “indirect” networking provided by membership of the different networks, and finally they suggest a fourth order of embeddedness, which emerges from informal institutions and local culture. The impact of capitals (and here changes in institutional capital) and so their convertibility is not mechanistic due to the complexity of the interrelation between their constituting elements (Welter Smallbone, 2011). Welter and Smallbone, (2011), looking at transition environment suggest a refinement of the institutional approach suggesting its mechanistic emphasis may be misleading. They precise "just as institutional change can influence entrepreneurial behaviour, so too can entrepreneurial behaviour impact on institutional change", (2011:114). In addition to the influence of the institutional framework the authors stress underlying three main groups of factors from entrepreneurial variety which influence behaviours. Namely the size and age of the firm, human capital, and social capital. Regarding the size and age of the firm they suggest that young small firm are more likely to be isolated from financial resources or social

capital which can help to comply with the rules "so instead they resort to bribery and circumventing legal rules" (2011:116). Welter and Smallbone (2011) underline the self-reinforcing character of circle of avoidance that may follow on even after legal registration. Also, they stress that human capital help entrepreneurs to adapt and proactively anticipate the best possible behaviour. "In other words, the higher the level of human capital, the wider the expected repertoire of entrepreneurial behaviours with entrepreneurs combining conforming and defiant behaviours for the respective situation and institutional context." (2011:117). The last groups of factors are those related to social capital which can have its roots in former social structure (social and professional position): as in the context they study links to the party in soviet-times for former countries of the soviet bloc. Indeed, the authors stress that entrepreneurs' connections may ease them to conform when the institutional framework change as they draw on contacts and social networks to overcome institutional deficiencies.

3.4.3) *Mixed embeddedness*

Another specific situation of embeddedness arises when an ethnic network is embedded into a national culture, this refers to the concept of mixed embeddedness has been pointed by Kloosterman and Rath, (2001). When looking at different research on immigrant entrepreneurship they highlight a different opportunity structure influenced by their own capitals but also shaped by the characteristics of the country in which they try to develop their venture. We would like to draw a parallel with Indigenous cultures as Hindle and Moroz, (2010), underline that a "very important definition of 'Indigenous' is self-definition by individuals, groups and communities. (...) Many Indigenous people see themselves as members of a 'nation' within a 'state'." (2010:362). These elements underline the double framework impacting on people on which different rules, norm and values apply as well as different structure of social capital and suggest that the concept of mixed embeddedness might apply also for Indigenous communities. In Canada, Kayseas, Moroz, Anderson, Goulden, and Dana (2015) notes a "positive shift in the way that state governments, civil sector organizations and supranational bodies define and recognize Indigenous rights. This has provided a stock of previously untapped resources by which social capital may be built upon." They stress that "Indigenous rights differ from property rights in that they are not directly convertible into economic capital" (2015:9), for example the land be own collectively people can't contract a mortgage. They add that the conversion of rights into transfers, trusts and eventual investment under the partial control of First Nations provides economic capital but tends to weaken social capital. In contrast they also note that collective strategies based on regulation theory tend to trigger social capital development building on cultural capital which process prime community's economic development.

Anderson, Camp II, Dana, Honig, Nkongolo-Bakenda, and Peredo, (2005) stress "People in a particular community do not adopt their perspective on the global economy in isolation or in abstract. It emerges in response to their direct experience with actors in the global economic system", (2005:116). The complexity of the institutional framework of Indigenous coastal fisheries is influenced at the international by the UN Declaration on the Rights of Indigenous people but also a flurry of agreements linked to the ocean and fishing activity. Taking for example the ILO convention 169 precisising aspects of employment, or the UN conference of Environment and Development and the UN convention of biodiversity precisising aspect related to resources, (Capistrano and Charles, 2012), this in addition to WTO agreements on fishing harmful subsidies signed in 2022 after lengthy negotiations which finally concluded with a consensus, ratified by 62 countries⁴, or other agreement like with the APEC on combatting illegal, unreported and unregulated fishing⁵. While in New Caledonia the cohabitation of the rules of the Custom from Kanak culture and the Rule of law from France illustrates the mixed embeddedness experienced by the fishers.

3.4.4) Institutional capital and symbolic capital

Bourdieu presents the notion of symbolic capital as a mean of understanding and as a communication device (1991), he explains symbolic capital is a form of legitimisation of economic and cultural capital. Looking at the example of the political party Bourdieu draws a contrast with the personal capital which disappears with the person, meanwhile the delegated capital of political authority, like that of the priest, the teacher and, more generally, the "official", is a product of a limited and temporary transfer, a capital that is only controlled and held by the institution. In this sense, symbolic systems are linked with the notion of institutional capital; Bourdieu stresses: because they are structured, they tend to establish an order. For example, Bourdieu's work refers to the notion of class as charged of symbolic capital, structuring perceptions, and allowing distinctions, (Bourdieu, 1979). Regarding to this work it involves then assessing perceptions on fishing activity among the different networks embedded considering the differences between commercial fishing and subsistence self-employment as well as customary fishing with clans.

This section reviewed the types of capital and outlined some of the characteristics of Indigenous communities. The key aspects are embeddedness in a mixed institutional context, holding different beliefs and worldviews, and the impact of history on bonding and bridging

⁴ https://www.wto.org/english/tratop_e/rulesneg_e/fish_e/fish_acceptances_e.htm.

⁵ [APEC Roadmap on Combatting Illegal, Unreported and Unregulated Fishing | 2019 APEC Ministerial Documents | APEC](#)

capitals. Building on the expansion of entrepreneurship research looking at the embeddedness of entrepreneurship process in different contexts, the literature stresses the importance of natural capital as well as its links with the human, social, cultural, and institutional capital, which also reflect the importance of spatial embeddedness. Furthermore, the literature suggests contingencies between the mix of capitals and the purpose of action. The values and beliefs that shape people's interactions and practices and are nested in more formal rules and laws determine the strategy that is developed. In the following section, we explore the specifics of Indigenous entrepreneurship and reflect on the type of capital being used. We then discuss Indigenous strategy and conclude with our theoretical framework.

4) Defining the framework

As a result of both the long-term and dramatic effects of colonisation, as well as the current environmental degradation, First Nations question Western development models and have started to engage in their own strategies of development based on their values and perceptions. The revival of their cultural heritage is not without challenge; for example, Hindle and Lansdowne, (2005), report "Richard Trudgen spoke for many respondents when he argued that Indigenous heritage has been so battered by mainstream culture that many young Indigenous people themselves now doubt its power and value. " (2005:137). Despite these difficulties various communities have taken the challenge of self-determination through entrepreneurship development. Anderson, Camp II, Dana, Honig, Nkongolo-Bakenda and Peredo highlight that some Indigenous people in Canada have refused the status quo and "through entrepreneurship and business development, they believe that they can attain their socio-economic objectives, including: greater control of activities on their traditional lands, self-determination and an end to dependency through economic self-sufficiency, the preservation and strengthening of traditional values and their application in economic development and business activities, improved socio-economic circumstance for individuals, families and communities. " (2005:110). These observations lead to pay attention to the notion of strategy and the entrepreneurial context of indigenous entrepreneurship.

4.1) Indigenous entrepreneurial models, heterogeneity vs universality

Croce (2017), stresses that the universality of Indigenous entrepreneurial models is still an unexplored phenomenon and that however there is a consensus on "why" Indigenous

entrepreneurship occurs and "what" it is, there is still more research required on the question of "how" it takes place. The heterogeneity of Indigenous practices is function of a deep attachment to the place (Dana and Anderson, 2011). The anchoring of practices in the place is a first factor of differentiation that we can link with our part on human capital and TEK. In addition, Dana and Anderson (2007) report that various authors underline differences in same regions for example Nkongolo-Bakenda describes different approaches to entrepreneurship between the Nande, Luba-Kasai, and the Kumu in Northern Congo, which stresses the social embeddedness of practices.

Following on this observation Croce (2017) proposes a taxonomy according to "different sociocultural localizations that varied from urban, rural to remote." (2017:896). It is interesting to note that the three models can highlight different levels of mixed embeddedness, based on their inclusion in the dominant culture impacted by the localisation of the activity. This aspect of mixed embeddedness is common to ethnic entrepreneurship literature and the relative links with Indigenous settings have already been underlined. However, looking at other activities less traditional - as mining for example - this perspective does not consider the level of skills required according to the type of venture it seems interesting for traditional activities as fishing, we must note that for high human capital-based industries, the logic might be more complex with the development of strategic alliances with corporations.

Finally, we can add that another distinctive aspect, intimately linked to the question of "how" Indigenous entrepreneurship takes places, and it concerns the outputs. As stressed in the introduction of this works the strategies can span from different degree of participation to the global economy - opting-in or opting-out - with different levels of transformations (Peredo, Anderson, Galbraith, Honig, and Dana, 2004; Anderson, Camp II, Dana, Honig, Nkongolo-Bakenda, and Peredo, 2005). The following paragraphs come back on the notion of strategy.

4.2) Strategies

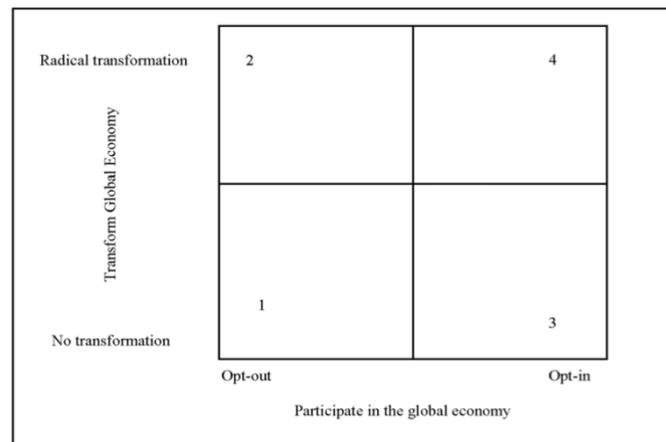
Borrowed from the military world (Hart 1967), the concept of strategy aims to explain why firms succeed or fail. Porter (1991) emphasised the use of strategy to focus on the pursuit of sustained competitive advantage, leading to long-term success. Mintzberg and Westley, (1992) described strategy as a pattern, a consistency in behaviour, whether intended. Their vision highlighted different senses accorded to strategy: strategy as plan, as ploy, as pattern, as position and strategy as perspective. Then it is important to understand the context and the objectives, as they constrain a form of dynamic. Ouchi (1980) stressed "*cooperative action necessarily involves interdependence between individuals. This interdependence called for transactions or exchange in which each individual gives something of value (for example labour) and receives something of*

value (for example money) in return" (1980:130). Ouchi (1980) sheds light on three mechanisms of intermediation: markets, bureaucracies and clans; and noted that markets fail when the cost of establishing transaction is unbearable (too high), these different mechanisms differ in the type of control, trust and depend on performance ambiguity and goals congruence.

Considering network theory and building on observations of horizontal relationships, Bengtsson and Kock (2000) present cooptition, as a mix of competitive and cooperative relationships. Cooptition has been examined across industries (Gernsheimer, Kanbach, Gast, 2021); however, these strategies are also at the core of many small businesses. Granata, Lash, Le Roy and Dana (2017) point to the highly formalisation of cooptition in micro-firms, they add that, as with large firms, the management of micro-firm cooptition requires a separation between competition and cooperation, but such separation occurs outside the firm – in the form of a collective structure. Third they call attention to the manager who need to internalise the “cooptition paradox” by developing a specific mindset for cooperation. Bengtsson and Johansson (2014) look at companies from information technology and telecoms industry, in Sweden. They note that to create and sustain opportunities, SMEs manage cooptition with large firms with a portfolio of capabilities. This perspective can also echo the reality of strategic alliances with Indigenous communities, where boundary spanning is key (Moroz, Kayseas, Anderson, 2014). Dana and Guieu (2014) investigated cooptition in Indigenous ventures, competitive relationships among Sami people present a mix between cooperation and competition. Building on Lash, Le Roy and Yami (2007), Dana and Guieu (2014) define cooptition as the combination of competitive and cooperative relationships among economic actors. They build on Riseth (2003) who reported principles of social regulation among Sami reindeers’ communities; these principles range from (i) breeder autonomy, (ii) extensive social obligations of parental system resulting in mutual obligations through genetic and social proximity, (iii) the partnership and solidarity in the Siida, and (iv) dialogue and consensus, to (v) responsibility toward land and spirits” (Dana and Guieu, 2014:10-11). As for Sami entrepreneurship, Kanak entrepreneurship on tribe is characterized by no individual land ownership.

Anderson, Camp II, Dana, Honig, Nkongolo-Bakenda, and Peredo (2005) explain "*Figure 1 captures these possibilities by considering a group's response to the global economy on two continua. The first is the degree to which a group opts into the global economy or opts out.*" (2005:115) The influence of culture modulating how strategies can be pursued and adapted to Indigenous setting realities and challenges.

Figure 3 Response to the global economy



From Peredo, Anderson, Galbraith, Honig, and Dana, (2004) and Anderson, Camp II, Dana, Honig, Nkongolo-Bakenda, and Peredo (2005).

From the matrix initially proposed (in Peredo, Anderson, Galbraith, Honig, and Dana, 2004, and Anderson, Camp II, Dana, Honig, Nkongolo-Bakenda, and Peredo, 2005), we have a 2x2 matrix with possibilities to opt-in completely on the terms of the international economic system which would be opt-in "transformatively" reflecting Indigenous practices, values and objectives transforming participation in the economy to reflect 'their own terms': upper right quadrant. In another strategic orientation they can opt-in with changes to allow the Indigenous venture to fit which would relate to the lower right quadrant. In the case of opt-in out they can opt-out passively seeking isolation: maintain separateness, non-involvement, seek protection from incursions by mainstream which is in the lower left quadrant, or they can opt-out actively with rejection, resistance, protest, even violence and revolution to protect of lands and resources from incursions by other etc., claim and defend Indigenous separateness which relate to the upper left quadrant. Anderson, Dana and Dana, (2006), provides various example of successful Indigenous ventures opt-in in the economic development in Canada. Concerning the type of outcome, they stress for example the Osoyoos Indian Band "in 2004, The OIB devoted fully 60% the profit from its business venture to social programs," and "between 1986 and 2001 the unemployment rate fell from 29.6% to 9.3%." (2006:53), the other example of Lac La Ronge highlights a success marked by the balance between traditional and commercial activities, they stress "This employment is 'on the land' and a good fit with other seasonal land-based activities such as trapping, hunting, fishing, and mushroom and berry harvesting and therefore attractive to many community members who need income but are not interested in full- time employment", (2006:54). Their research highlights that the matrix conceptualizes extreme possibilities, and it is interesting to look that reality might present some mix patterns in the choices made for opt-in the economy.

4.3) Insights from ethnic minorities entrepreneurship and social networks:

Hindle and Moroz (2009) stress a clear distinction between Indigenous entrepreneurship and ethnic entrepreneurship. The origin of the distinction is matter of definitions and boundaries, but their common points can help us to better understand Indigenous entrepreneurship phenomenon. Building on Peredo, Anderson, Galbraith, Honig and Dana (2004) the first distinction made by Hindle and Moroz (2009) between Indigenous entrepreneurship and immigrant entrepreneurship is on the definition of the community of interest. There is indeed an opposition as ethnic immigrants share an attachment to a country of origin and the entrepreneurs evolve in a new "host country culture" however Indigenous communities often share a common history of colonisation with a dominant culture which impacted on the collection of resources of the community. However, in an Indigenous community and in an immigrant community the individuals are both embedded in a mixed institutional system, in the sense of North (1991), manifesting the embeddedness of formal and informal institutions; specifically marked by a dominant culture and often an ethnic enclave. In this situation for Indigenous nations, the dominant culture frames the formal states institutions, while the ethnic culture shapes the informal as both immigrant and Indigenous entrepreneurship are forms of ethnic entrepreneurship.

Dana and Morris (2011) summarize the various perspectives from the "handbook of research on ethnic minority entrepreneurship" and propose a framework to interpret entrepreneurial process in ethnic minority setting. They highlight the relation between a minority culture and a dominant culture stressing the importance of the ethnic enclave. Although in ethnic entrepreneurship the enclave has been presented as "facilitator of new venture creation" in Indigenous entrepreneurship this argument can be mitigated by the observations from our literature review on capitals. As in one sense the strong bonding social capital and the lack of bridging ties have been suggested as potential barriers to entrepreneurship and in another sense a strong bonding social capital is expected to enhance collective trust and norms compliance, which can be a facilitator for collective strategies. Regarding this duality, their observations on host country characteristics are interesting, for example looking at the size of the informal economy can draw a direct parallel with the size of Indigenous economy. This comment highlights the importance of other types of transactions as bartering, gifts, or customary exchanges and how it can impact on both the obligations of the entrepreneur as well as the market available for the activity.

Concerning the host country characteristics, two additional variables has been highlighted on the course of our review: the natural capital from the works of Berkes, Colding and Folke (2000) of with the specificities of Traditional Ecological Knowledge and the recognition of land claims and

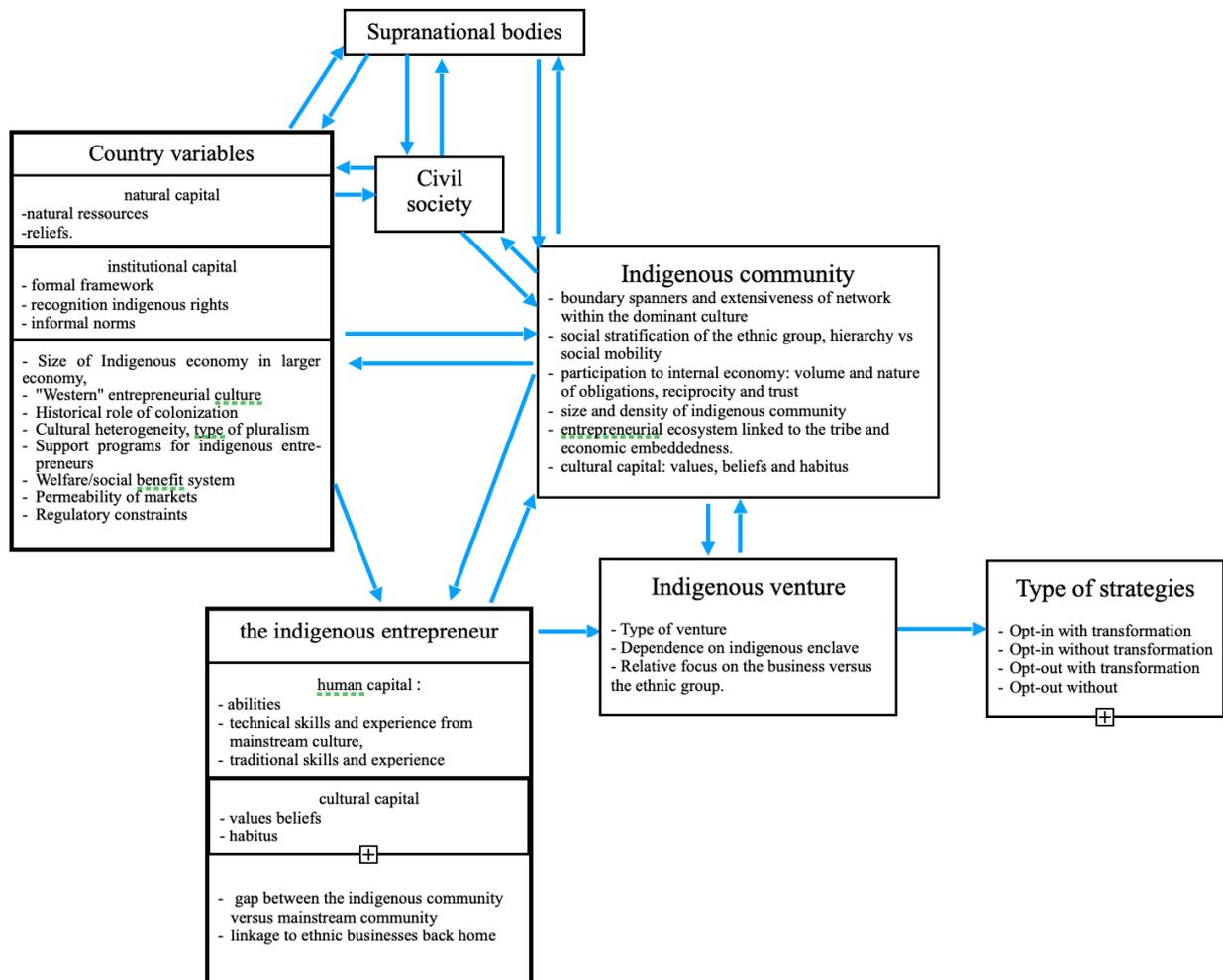
Indigenous rights, referring for example to the Inuvialuit Regional Corporation and how the impact of land claims recognition fostered their development (Anderson, Dana and Dana, 2006). As Kayseas, Moroz, Anderson, Goulden, and Dana (2015) stress, fostering Indigenous rights provides a stock of previously untapped resources by which social capital may be built upon.

Looking at the characteristics of the entrepreneur proposed by Dana and Morris (2011), two elements are linked to immigrant characteristics but also can be understood under the Indigenous stance: the "ethnic gap" can be understood with the gap between the Indigenous community versus mainstream community which can impact on the access to market and conformity of products.

Concerning the venture, the typology of enterprises proposed by Curry (2005) looks at the balance between the fit with the Indigenous economy and the solvency of the activity. His framework illustrates the fragile balance that can exist for an Indigenous entrepreneur between the social obligations from his community and the professional obligations implied by its activity. This remark can be related to what Dana and Morris (2011) name "the cost of membership in network enclave". They explain it is related to the quantity of customary works due, the participation to internal economy and obligations.

Building on the framework proposed by Peredo, Anderson, Galbraith, Honig, and Dana, (2004) and Anderson, Camp II, Dana, Honig, Nkongolo-Bakenda, and Peredo (2005) it is necessary to consider the variables relative to the institutional embeddedness. They stress that "*People in a particular community do not adopt their perspective on the global economy in isolation or in abstract. It emerges in response to their direct experience with actors in the global economic system.*" (2005:116). The research framework needs to consider the influence of "supranational bodies" as they are specific to Indigenous ventures and important in the process of Indigenous rights recognition. From the same schema, the "civil society" including non-governmental organisations, associations or scientific communities, also interact in the development of Indigenous communities.

Figure 4: Synthesis of the literature model 1



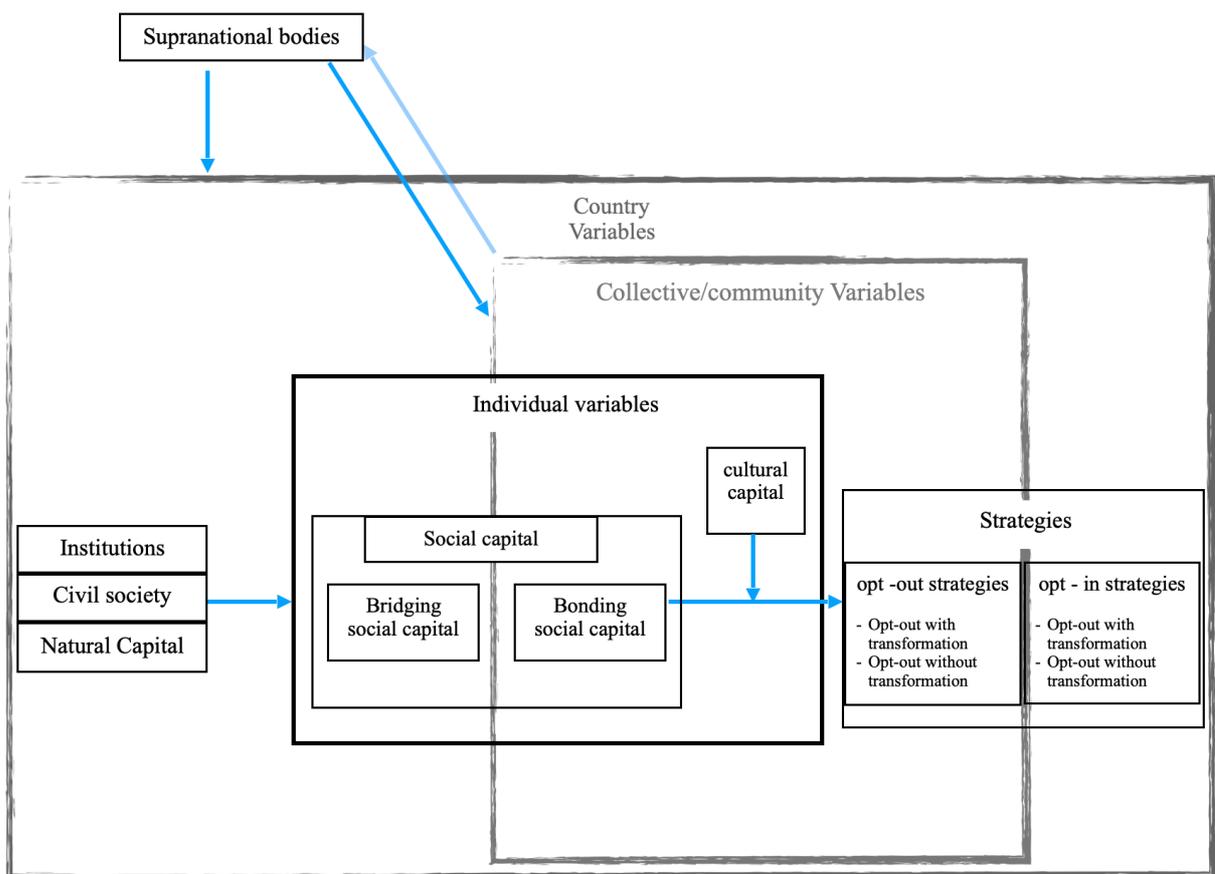
Source: author

4.4) Summary of the different perspectives

The observations made along the literature review call for a better understanding of the role played by the context meaning looking at how the different strategies are embedded in social and institutional context as well as better understanding of the role of social and cultural capital in the development and replication of opt-in and opt-out strategies developed by Kanak fishermen. This section proposes to schematise our theoretical framework and precise the variables under scrutiny in our research building on the entrepreneurship literature presented in introduction with the perspective proposed by on the framework proposed in Peredo, Anderson, Galbraith, Honig, and Dana, (2004) and Anderson, and in Anderson, Camp II, Dana, Honig, Nkongolo-Bakenda, and Peredo (2005) and our previous discussion on the elements from Dana and Morris (2011) regarding

ethnic minority entrepreneurship. This discussion led to remark the common ground with the perspective on entrepreneurial ecosystems (Spigel, 2017, Stam and Van de Ven, 2021, Theodoraki, Dana, Caputo, 2022). More precisely the concept of entrepreneurial ecosystem points to the interplay among cultural, social and material attributes (Spigel, 2017). Ecosystem are defined by connections between the attributes that produce them and the benefit they provide to entrepreneurs (Spigel, 2017). The model hereafter summarises our observations and considers fishing activity as developed at the community level.

Figure 5: Synthesis of the literature model 2



Source: author

This model highlights the interactions between the different stakeholders impacting on the Indigenous venture and leading to the different types of strategies. This model guides our research, but does not pretend to measure any variable, rather the goal is to explore the different concepts to better understand what elements interact during the process of development of a strategy.

Hereafter the definitions of these concepts building on our literature review:

"Social capital is the goodwill available to individuals or groups. Its source lies in the structure and content of the actor's social relations. Its effects flow from the information, influence, and solidarity it makes available to the actor" (Adler and Kwon 2002:23).

Bonding social capital concerns social capital within the group, made of family ties and close relative. It can be understood as the people from the same tribe, eventually extended to people from tribes of the same region.

Bridging social capital concerns social capital bridging individuals from different groups. Bridges can link individuals belonging to groups from another region, or another social network.

Cultural capital: "Cultural capital refers to factors that provide human societies with the means and adaptations to deal with the natural environment and to actively modify it: how people view the world and the universe, or cosmology in the sense of Skolimowski (1981); environmental philosophy and ethics, including religion (Leopold, 1949; Naess, 1989); traditional ecological knowledge (Johannes, 1989); and social/ political institutions (Ostrom, 1990)." (Berkes and Folke, 1992:2). Here specifically we have a special interest in the values and beliefs and practices and customs. In addition, it is important to consider the traditional ecological knowledge and hold by the community as observations serve as guides using traditional knowledge.

The type of strategy: In this work I refer to the strategies from the matrix from Peredo, Anderson, Galbraith, Honig, and Dana, (2004) and Anderson, Camp II, Dana, Honig, Nkongolo-Bakenda, and Peredo (2005), with the possibilities to opting in or opting out the international economic system with different degree of transformation of this one to make it reflect the vision and values of the community.

More precisely this preliminary work led to three types of research questions:

- 1 - Assessing existing rules in Indigenous Entrepreneurship as a framework for analysing the activities of Kanaks fishermen paying particular attention to the role of context,
- 2 - The role of social and cultural capital in the development and replication of opt-in and opt-out strategies developed by Kanak fishermen, and.
- 3 - How the characteristics of Indigenous communities affect their approaches to entrepreneurship.

Chapter 2: Methodology

In the previous chapter, key characteristics of indigenous entrepreneurial development were outlined. More specifically, these can be summarised as the following: firstly, considering entrepreneurship as a vehicle for development with participation into the so-called 'global economy' by indigenous communities on their own terms. Secondly, the distinctive nature of social and cultural capitals that come into play in the process, and their role, which tends to be more context-specific, unlike Western contexts. Thirdly, the complexity of the institutional system marked by the mixed embeddedness of western institutions and indigenous institutions. In summary, this study is intended to provide a better understanding of indigenous entrepreneurship processes, specifically the strategic orientation of a venture, as well as the role played by capital. Our research questions are (1) assessing the existing rules of Indigenous Entrepreneurship as a framework, looking at the stakeholders in order to determine how the context influences fishing activity development (2) How social and cultural capital impact on the development and replication of opt-in and opt-out strategies with or without transformation of the global economy standards. And (3) how the characteristics of indigenous communities affect their approaches to entrepreneurship.

Considering these elements, the essence of the research is exploratory as it is linked to the distinct forms of cultural and social capital that can emerge in the indigenous context and their impacts on the strategies developed. Light and Dana (2013) illustrates how, in Alaska, cultural capital can suppress the effects of social capital if culture does not support business culture. It is important to understand how, in the context of Kanak culture in the fishing sector of New Caledonia's Loyalty islands, these capitals impact on the strategies pursued. In addition to this aspect, this study is exploratory because it is the first occasion in which this framework is being applied in the context of indigenous peoples in New Caledonia and therefore, by the very nature that this is a first study, it cannot be known in advance which elements should prevail in this context. Building on the exploratory nature of this research, the design of the methodology has been deliberately left open, to a certain extent, to be able to capture non-preconceived elements and to further understand actors' perceptions and actions, which has consequently impacted on the choice of strategy. It has long been the practice for exploratory doctoral work to use a qualitative approach; an example is that of Dana (1996). The approach employed in this research has been based on

Page 48 of 229

Dana and Dumez's (2015) comprehensive approach. The formulation of the research problem has been undertaken following the steps proposed by the ANNABEL method (Groenland 2014) and follows the multiple case study strategy (Yin, 2014).

In this chapter, we will present the methodology starting with the philosophical assumptions and proceeding to the justification of the design and the presentation of the research plan. The next part explains in detail the methodological framework to answer the research questions, with the final section covering ethical concerns and potential drawbacks.

1) Philosophical assumptions

Ontology relates to the way we interpret the fundamental nature of reality. One of the main questions regarding the nature of reality concerns the debate between the existence of a single reality versus the vision of multiple realities depending on the observer. These perspectives from objective to subjective impact on the epistemology adopted and the methodology employed. The first perspective of a single reality is related to a positivist approach, whilst the second perspective is associated with a constructionist perspective in relation to the social nature of reality (Eriksson and Kovalainen, 2008). Epistemology relates to how knowledge can be produced, and Dana and Dumez (2015) rise the epistemological debate on the source of knowledge. They describe a crystallisation towards two positions: "on the one hand a positivist or neo-positivist paradigm, and on the other hand there are several constructivist and interpretative paradigms" (Dana and Dumez, 2015:2), the second one being more associated to qualitative research. The same authors argue in favour of an approach they term the "comprehensive approach" capable of handling the quantitative all-the-while maintaining its qualitative objective of understanding of the actors" (2015:4).

Following on from these observations, the ontological position adopted for this research is subjective as the understanding of indigenous people's choices requires being open to different worldviews, perspectives, and values. It has been suggested that regarding the heterogeneity observed in entrepreneurship processes among indigenous ventures across the world, views differ depending on the nature of contexts. In consequence and linked to the exploratory nature of our research questions, the epistemological perspective adopted follows on the comprehensive research framework proposed by Dana and Dumez (2015) to

grasp an understanding of how elements of the context as institutional, cultural, and social capital impact on the strategies pursued by Indigenous people.

2) Design of the research

The design of the research is based on the ANNABEL method (Groenland, 2014). Building on the methodology of Verschuren and Dooreward (2010), the ANNABEL method describes the "problem analysis" in two phases: (1) The management problem and (2) The research problem, which consists of the formulation of research objectives and research questions. (Groenland, 2014). The benefit of this method is its practical approach to deal with complexity and how it allows to operationalise the formulation of the methodological framework. The management problem is, from an academic perspective, the aim to better understand the elements impacting on the choice of strategies pursued by Kanak fishers in Loyalty islands. Groenland (2014) presents the analysis of the research problem in seven steps: background research, reason for the research, intended use of the research, research objective, research questions, conceptual model, deliverables. Hereafter I depict the research following these steps.

The background research consisted in the first part of a preliminary research on New Caledonian history, economy and politics to better comprehend the context. In Chapter 4 the background research on the context is presented with a description of the business, spatial, institutional, and then the social context following Welter's (2011). This phase of preliminary research has been completed with interviews and discussions in Paris with Kanak writers and people at the "Maison de la Nouvelle Calédonie". The first occasion in 2016 allowed for a better understanding of the context, to observe more closely fishing practices and to interview key informants as researchers who know the field study but also as actors of the fishing sector. The emphasis has been on the definition of the management problem from a research perspective.

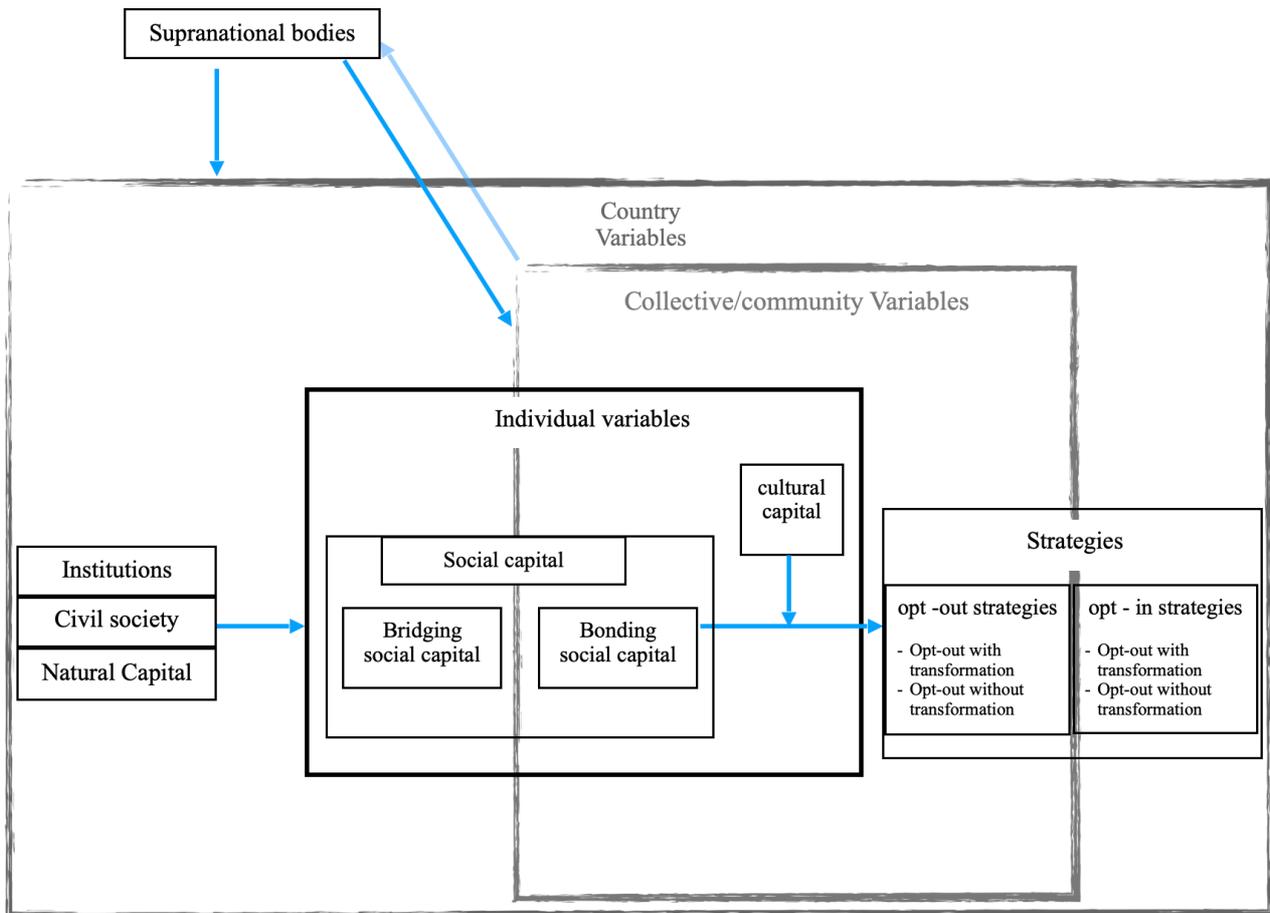
The research is theory oriented, so the intended use of the research is theory development. The research objective is useful in the theoretical sense as our three research questions aim to develop the framework of indigenous entrepreneurship. Furthermore, the research objective can be useful in the practical sense as the collaboration of other fishers in

the commercial project was an important concern for the stakeholders linked to the fish processing unity. The elements impacting on which strategy is adopted by the fishermen can have then direct practical implications which are not the goal of this research but to which it can contribute directly. In a larger sense, the understanding of the strategies pursued by indigenous entrepreneurs may assist development programs.

The research objective focuses on obtaining knowledge and insights concerning the elements of social, cultural, and institutional capitals impacting on the choices of strategies pursued by Loyalty Islands fishing communities. This has been made possible by using the distinction of opt-in or opt-out, with or without transformation, of the global economy standards (Anderson, Camp II, Dana, Honig, Nkongolo-Bakenda, and Peredo, 2005).

The objective of the study is theory-driven, and then the research questions are derived from chapter 2. The first research question is to evaluate the existing rules of Indigenous Entrepreneurship as a framework, looking at the stakeholders and their relationships, to determine how the context influences the type of development, here more specifically the strategies pursued. The second research question is concerned with how social (Klyver and Foley, 2012; Light and Dana, 2013), and cultural capital (Dana, 1995, 2008) contributes, either directly or indirectly, to developing opt-in and opt-out strategies to global economy standards (Anderson, Camp II, Dana, Honig, Nkongolo-Bakenda, and Peredo, 2005) developed by Kanak fishermen. The third research question, while remaining open to the specific characteristics of the Kanak community, looks at how indigenous communities approach entrepreneurship. This last question aims to examine more precisely the characteristics of indigenous exchanges. (referring to the works of Curry, 2011 and Marcel Mauss, 1923-1924).

Figure 6: Theoretical Model



Deliverables:

The main product of this research is the thesis report.

3) Research Strategy

Following on from this epistemological perspective, the research adopts the comprehensive approach (Dana and Dumez, 2015). Using the lens of Popper (1976) Dana and Dumez (2015) stresses the need to understand the actors and describe their actions to grasp the logic of the situation from their perspectives.

The comprehensive approach aims to produce different types of outputs, relating to our work it is useful to highlight mechanisms, and build typologies (Dana and Dumez,

2015). More precisely here we are looking at what could have impacted on the choices of fishers from the field perspective. Finally, this approach suits our necessity to refine the typologies of the different strategies linking the field to the theory of opt-in or opt-out, with or without transformation.

Three types of epistemological risks are indicated by this method: beings of reason, circularity, and equifinality. The risk of abstract actors - or beings of reason - is that they are an explanation for a phenomenon under study, but they do not explain anything since they are black boxes. As an example, the authors cite Alexis de Tocqueville who personified equality as an agent. Dana and Dumez (2015) suggest that one of the crucial points lie in the definition of the unit of analysis. The level of analysis has to correspond to the fishing unit, which perform fishing activity with or without a commercial objective, but the unit of analysis are the individual(s) fishing.

The risk of circularity could arise by omitting other variables, for example, some cognitive dimension which is not under scrutiny in the study or by omitting other constraints, for example related to infrastructures. Building on Yin (2014) Dana and Dumez (2015) stress that the use of large categories minimises the risk of circularity. The fact that the theoretical model uses 'umbrella concepts', - even now seen as research fields - as noted by Adler and Kwon (2002), Kwon and Adler, (2014) such as cultural and social capitals, can help to avoid this risk provided the one remains prudent and alert to define with more precision what aspect of the capital is at stake when making an observation or during an interview.

The risk associated to equifinality arises when different initial states can lead to the same final state; to avoid it we need to confront different hypothesis and discuss our results with informants.

Because of the complexity of the context and nature of the research questions, a case study approach was employed (Yin, 2014). Following the multiple case study approach (Eisenhardt & Graebner, 2007), I explored how people perceive their activity, their goal and seek to understand their opinions. The impact of local networks linked to fishing activity and people's values and beliefs have led to examine inductively what type of trust is mentioned and what relation it is concerning (referring to the relationships with the

stakeholders we investigated in research question 1), to understand its impact on the development of strategies.

A key approach is using numerous and highly knowledgeable informants who view the focal phenomena from diverse perspectives (Eisenhardt & Graebner, 2007). Building on Yin (2014), the research questions have been completed triangulating with different methods combining observations with fishers, semi-structured interviews, and secondary data. The methods employed to answer the research questions are described in the next section.

The choice of the case study methodology in social science implies to ensure the rigor of the research with four validity tests: construct validity, internal validity, external validity, and reliability (Yin, 2014). Yin (2014) stresses that internal validity is only a concern for causal case study and not for descriptive or exploratory studies then hereafter is presented: construct validity, external validity, and reliability.

The concept of construct validity deals with having a sufficiently operational set of measures it can be achieved by identifying correct operational measures for the concepts being studied. To meet the test of construct validity Yin (2014) argues that the investigator must be sure to cover two steps: (1) Select the specific type of strategy that are to be studied, here we refer to the matrix and specify from the literature the elements that can impact on the choice of strategy pursued. (2) Demonstrate that the selected construct - here the institutional, social, and cultural capitals - impact on the type of strategies under study. The literature review suggests relationships between these capitals and the entrepreneurship process. Our goal is to explore which element have impacted the choices and pursuit of strategies in this context.

External validity refers to the area within which the findings of a study can be generalised. Since the research was conducted on Loyalty Islands in New Caledonia and culture is area-specific, it would appear that the scope of generalization is limited to this region, but it can inform on the different ways cultural and social capital impact on entrepreneurship.

Campbell, (1969), presents insightful remarks about the threats to the validity of real-world experiments in his study of research on "Reforms as experiments". Considering that our study does not aim to measure but rather to explore, some of his remarks are not

relevant to our research, however some are still relevant and will be discussed below. As an example, its remarks about history, maturation, testing, and selection bias seem relevant to this study. Since the study was longitudinal, history and maturation are relevant. Historical events such as the referendum preparation or the oil spill that affected many fishing areas have had an impact. A maturation process occurs when people get used to concepts such as networks and cultural capital, which can sometimes lead to a bias towards social desirability in discourses. As an additional consideration, because I did not meet all the fishermen, it is important to be aware of possible selection biases, but the research include feedback of most of the active professionals on Lifou and compare with feedback from Ouvea.

Finally, reliability is ensured by making possible the replication of the operations of the study by the communication of documents and procedures.

4) Methods

Yin (2014) stresses the contrast between on one hand pure ethnography and grounded theory, and on the other hand case study, pointing to the importance of beginning with preliminary theory in a case study approach. Yin (2014) presents four types of case study research according to two rationales: if the research looks at a single or multiple cases and if there is one or multiple levels of analysis. Multiple-case studies deal with situations when the same study is replicated to several individuals or organisation in order to be able to compare them and draw conclusions. The research is designed as a multiple case study as we look at the strategies pursued by different fishing units, with one level of analysis which was the fishing unit, to compare what elements impact on the strategic orientation of the fishing unit.

The multiple case study approach allowed comparison across the different cases. The interviews with the fishers were an important aspect of the research process in the case studies, developed following the methodology of the "*entretien compréhensif*" (Kauffman, 2016). Kauffman (2016) highlights the importance of constructing the object of the research and the aim to achieve a form of "objectification". The starting question was open relating to the nature of fishing activity to let the interviewees talk about their vision on the activity freely about the subjects that concern them the most, the set of questions was adaptable to

follow what the informant wanted to share, trying to develop a conversation around their activity, their project and what do they think about the development of the fishing sector (example of interviews are provided in ANNEXE 2 and ANNEXE 3).

4.1) Selection of cases:

One of the main objectives of running a multiple case study strategy is to be able to make comparisons. In this research, the goal is to qualify and better understand the typologies of strategies, as well as to compare opt-in and opt-out groups operating with or without transformation of Western economic standards. This objective calls for being careful in selecting cases to units and levels of analysis to compare cases that may have very different characteristics in their operations. In these groups, on-tribe professional fishermen (fishermen with licenses) and on-tribe informal fishermen were studied for the different dynamics in effect.

The selection of cases was based on two characteristics: whether or not the fisher was selling his catch to the processing unit, and his tribe of origin. The relative transformation of the venture was only observable once I met the actors and engaged them in discussions about fishing and commercialisation. The professional fishermen are selected based on a document from the fish processing unit, listing the professional fishermen who sell to them, they have been contacted by telephone. A snowball method was used to select the informal fishermen. Müller-Wille and Hukkinen (1999:47) explain that "in snowball sampling of interviewees, those already interviewed identify who else should be interviewed.". Starting with the tribe I was staying with, Jokin, I participated in a number of social events (tribal fairs, dinners, sports) and activities developed on the tribe that allowed me to meet other people linked to fishing activity.

4.2) Unit of analysis

The unit of analysis should be the group comprising the fisher and the people fishing with him, where the entrepreneur (the fisher and his boat) is the permanent aspect, while the people fishing with him can vary. Looking at the fishing unit allows a consistent angle of analysis across different type of cases. In addition, considering that the fishers "harvest" a resource collectively owned we can draw a parallel with Dana (2008) where the Sámi

entrepreneur own the reindeers but the herd is managed collectively by the group. In this perspective the professional fisher carries the risk toward his boat but the resource is managed collectively.

Herrenschmidt (2004) suggests two units of analysis arising from his observations in the field. According to him, patrilineal lines determine a person's status in the local society based on his heritage, his rank, and his history. There are two units of analysis presented, the *hnalapa* and the *lapa*. A *hnalapa* consists of a home that may include the parents of the husband as well as the children. The *lapa* designating the clan structure, or alternatively the hierarchy of *hnalapas* grouping together the various lineages, including those welcomed as refugees or adopted or even imprisoned. In informal fishing, they use smaller, collectively owned motorised boats, the unit tends to be oriented toward a group of people fishing together, which sometimes has a different structure depending on fishing trips but primarily groups people from the same clan, referring then to the *lapa*.

4.3) Case study questions

As part of each research question, there has been a discovery phase conducted in an ethnographic manner to observe, listen, and illuminate the importance of the issue in the particular context of on-tribe fishing development, coupled with semi-directed interviews and informal discussions to allow triangulation.

The questions presented follow Yin (2014) with level 1, questions asked to specific interviewees; level 2, questions asked for each individual case; level 3, questions asked for a pattern of findings across multiple cases; level 4, questions asked about the entire study, requiring information beyond case study evidence; and level 5, normative questions about policy recommendations and conclusions beyond the narrow scope of the study.

Combining the comprehensive interview methodology (Kaufmann, 2016), the list of questions remains adaptable as a simple guide to encourage the informant to speak their mind and ideally create a dynamic in the conversation that goes beyond simple answers.

table 1: levels research questions; question 1

Qst 1	Assessing existing rules in indigenous entrepreneurship as a framework for analyzing the activities of the Kanak fishing communities paying particular attention at the context	Sources of evidence
Level 1:	<p>For all: Where do you come from? Which tribe, clan? Do you know various people in the others districts? to whom do you sell or give fish?</p> <p>For professionals : Are you part of the association/union? Where did you get your boat, how did you decide which boat? and which motor? How do you know Henri? Do you know people working at the province? How did you have the idea to set a project (with the province to obtain a boat?)</p>	<ul style="list-style-type: none"> - Reports - Observations, - semi- structured Interviews with fishers
Level 2:	<p>To which actors is the fishing unit link to ? Did the fishing unit has been set up with a project with the province?</p> <p>If professional fisher: Does the entrepreneur (fisher in charge of the boat) personally know people in the Provincial institution? What is the boat provider ?</p>	
Level 3:	Are there pattern of relationships across the fishing unit, across groups of type of strategies (compare if possible the different types developed). In their structure ? In their nature ?	
Level 4:	What is the framework of stakeholders in which the whole fishing sector is developing (all types of fishing activity) Are there different networks of stakeholders ? How are articulated the different activities on-tribe and in which measures is it linked to fishing activity?	

Table 2: levels research questions; question 2

Qst 2	Role of social and cultural capital in the development and the replication of optic and opt-out strategies with or without transformation of the global economy standards	Sources of evidence
Level 1:	<p>For all: Social capital : Where do you come from? Which tribe, clan? cultural capital : how often do you contribute to the custom with your catch? For which event have you contributed? Aside do you have a field? (opening question about the custom : everybody has a field) How much weddings happened at the tribe last year ? Have you developed other activities (like vanilla, sandal wood or other)? Formal and informal institutions: (maritime conception of real estate) "The sea is a field for people living in costal areas" Do you think it is true or not? Discuss?</p> <p>How do you often do you go to fish? Which type of targets? What technics do you use? How did you learnt to fish ? How do you see fishing activity? Do you know well other fishermen?</p> <p>For professional fishermen : Are you part of the union of fishermen? (normally yes) Do you often go to the meetings? When was the last meeting? Do you share materiel with other fishermen? Do you share information? about fish locations for example? Do you fish together? Where is your boat ? (open discussion on materiel) Do you sometimes use your boat to do the custom</p> <p>What is/are your objective(s) when you going fishing? What do you do with your catch? Who are the 5 first people to whom you give fish if you catch more than needed at home? Are their elements that you think would be useful and you think should have been put in places?</p> <p>For all: Have you hear about the new regulation (environmental code) they are putting on place ?</p>	<ul style="list-style-type: none"> - academic papers and reports on researches and projects in New Calédonia, - open interviews with key informants, - Observations, - semi- structured Interviews with fishers - archival documents collected on the field,
Level 2:	<p>What are the strategies developed ? What are the difference between the strategies opt-in vs opt-out ; with or without transformation.</p> <p>What are the characteristics of cultural and social capital that come into play? How is articulated knowledge transmission</p>	
Level 3:	<p>Patterns of social capital (nature of links) and patterns of social capital structure and strategy developed</p> <p>Patterns of cultural capital and strategy developed</p>	
Level 4:	Question of the viability of the strategies chosen in regard to the objectives of development and the different perspectives of the actors.	
Level 5:	What would be the best strategic orientation ? / strategic arrangement between the different strategies?	

Table 3: levels research questions; question 3

Qst 3	How the characteristics of indigenous communities affect their approaches to entrepreneurship?	Sources of evidence
Level 1:	For pros: Can you find it difficult sometimes to articulate between customary obligations and the need to fish for your professional activity? how do you deal with the pluriactivity? would you share one beliefs/ perception link to fishing activity with me ? something typical from here Was it difficult to set up an account and get the boat? Does sometimes	Observations and interviews
Level 2:	what are the unique characteristics in values, worldview ; institutional arrangements express during the interviews?	
Level 3:	Are there collective beliefs or values that have on the activity repeatedly in the cases? Does Kanak society (network, obligations, institutional arrangement) presents particular characteristics impacting on entrepreneurship?	
Level 4:	What are the positive and negative unique features of Kanak culture and entrepreneurship development?	
Level 5:	How to mitigate potential dark sides ? ex : Are their structural holes creating potential dark sides ? (ex friction or problems see Bizzi 2013, The Dark Side of Structural Holes: A Multilevel Investigation)	

4.4) Data Analysis

The data analysis included two phases. The first phase followed Yin (2014) methodology starting from the theoretical background for each research questions. The interviews, exchanges on the field coupled with observations highlighted different elements related to trustworthiness, the need to federate the fishermen, legitimacy, expectations damages or sabotages which came out when looking at question (1) and question (2), ANNEXE 4 presents the description of the codes used in the analysis and chapter 5 present the cases and observations. Then a second phase followed a more inductive approach (Eisenhardt, 1989) looking more closely to the concept of trust, the analysis in link with the different types of capital is presented in chapter 6.

Yin (2014) highlights six sources of evidence for cases studies: documents, archival records, interviews, direct observation, participant observation, and physical artifacts. During the research I used documents, archival records, interviews and direct observation. A particular attention has been given to tend to triangulate the information from the interviews with documents and observations which allowed enrich it and confirm it. In addition, Yin (2014) underlines the need for an analytic strategy and suggests three approaches: relying on theoretical propositions, thinking about rival explanations or developing a case description. The theoretical point of departure for each question leads us to theoretical propositions which have oriented our analysis. Yin (2014) also suggests different strategies to analyse the data

The first research question examines the existing rules of indigenous entrepreneurship as a framework for studying the activities of Kanak fishing communities, paying particular attention to context. The theoretical point of departure is that "people in a particular community do not adopt their perspective on the global economy in isolation or in abstract. It emerges in response to their direct experience with actors in the global economic system." (Anderson, Camp II, Dana, Honig, Nkongolo-Bakenda, and Peredo, 2005:115). This point stresses that to comprehend how fishers perceive the global economy, we must understand the actors involved and their relations within our context.

New Caledonia has a specific constitutional status, shaped by its unique history (which will be explored in the following chapter). To analyse the interactions between the state, civil society, and private companies with Kanak communities and more precisely the artisanal commercial fishing sector in Loyalty Islands, it was necessary to collect preliminary information on the local context in the Loyalty Islands. The sources of evidence under consideration concern the roles and relationships of actors. Some questions during the interviews explored the nature of relationships, for example how the fishermen were connected to their suppliers or clients. Additionally, this question was answered by the documents I collected and the observations I made during the ethnographic work, as well as the year I spent in the North Province, which gave me a clearer understanding of the sector.

The second question examines the role of social capital in the development and replication of opt-in and opt-out strategies developed by Kanak fishermen with or without transformation. In relation to this research, the main objective is theory development, and one of the principal difficulties is the vast nature of both social and cultural capital concepts. Conversely, using large concepts helps to avoid the risk of circularity, and follows the guidance of Eisenhardt and Graebner (2007:26) in phenomenon-driven research. They note a "research question is broadly scoped to give the researcher more flexibility". In the literature review, we acknowledged that there is little theoretical understanding of indigenous entrepreneurship development and, therefore, the researcher must be open to different realities and, eventually, unexpected facts that emerge during the research process. The operationalization of this question requires the discovery of social capital and cultural capital specific to the context, as well as an understanding of the differences between fishing situations. As such it seems important to not use too explicitly definite categories

and not to be too restrictive. In this second research question, we aim to examine how the structure and nature of social capital among fishermen, as well as their values and perceptions of cultural capital, might affect their activities. The first observation phase assisted in developing a better understanding of Kanak society through observing its values, perceptions, and customs as well as its traditional structure which inform on social capital. Additionally, the observation period helped to develop an adapted questionnaire and test it thoroughly to ensure the questions were adapted well and the wording was understandable. The interviews as well as the discourse analysis were done in French before the results were translated into English.

The approach for the analysis of social capital aims to understand actors' position in the network by combining different type of sources including previous ethnographic and anthropologic research done in New Caledonia. Lin (2001) identified "three principal sources (exogenous variables) for social capital: (1) structural positions (an actor's position in the hierarchical structure of social stratification -- the strength-of-position proposition), (2) network locations -- (an actor's location in the networks that exhibit certain features, such as closure or openness, or bridging, as illustrated in the strength-of-tie propositions), and (3) purposes of action (instrumental- e.g., for gaining wealth, power, or reputation, or expressive - e.g., for maintaining cohesion, solidarity, or well-being) (Lin 2001a: Chapter 5, Lin, 2005:4). Building on this observation and I tried to assess for each fisher their position regarding their family, and their clan. Lin (2005) presents two methods to explore the structure of social capital: the name generating methodology for which the respondent has to provide a list of names, then answer further questions about their characteristics as well as the respondent's relationship among them and position generating methodology for which he has to systematically sample a list of names in the social capital hierarchy (ex: ranked occupation in a society). Each sampled occupation is presented to a respondent who is asked to indicate whether he or she knows anyone in that sampled position: these positions can be used to estimate the potential pool of resources accessible to each respondent. Lin (2005:9) underlines that "The name generator is suitable for probing the depth of close ties, whereas the position generator facilitates studying breadth of access to various levels of a hierarchy". The two methodologies are complementary. "The name generator is useful for identifying significant others in the actor's personal networks; whether they occupy similar or different hierarchical positions is of secondary significance

Page 61 of 229

and interest. On the other hand, the position generator is useful for assessing vertical reaches in the hierarchical structure to which the actor has access through social ties." There are various challenges in the use of the name generator to adapt it to our context to make it useful in the specific context of Loyalty islands. In the interviews I shaped the question toward knowing to whom they were giving their catch to understand even for professional fishermen in which direction the unrecorded catch was going. This was completed with observations regarding practices such as the presence of taboos and understanding other rules that create an informal web of institutions regulating fishing. For the position generator it was interesting to know if they know the head of the fishing sector or anyone working at the Province.

As explained previously, the interviews had an exploratory goal concerning the nature of cultural capital and I tried to remain open to the perceptions expressed and values put forward during the interviews in regard to fishing activity as well as values expressed during everyday life and customary events. The rich ethnographic literature on New Caledonia helped complete and triangulate my observations. According to Light and Dana (2013) in Chapter 2, social capital has boundaries, and a supportive cultural capital is a critical partner for business development. However, indigenous communities often lack this supportive capital. They add furthermore, communities are often excluded from resource swapping networks due to a lack of bridging ties. Based on their comparison of indigenous Australian, Hawaiian natives, and Danish entrepreneurs, Klyver and Foley (2012) show that culture influences social networks in very different ways. As a result, we investigate bonding and bridging ties, along with the vision of entrepreneurship in relation to fishing in our theoretical proposition.

The third question looks specifically at (3) how the characteristics of indigenous communities affect their approaches to entrepreneurship. This last question aims to scrutinize the immediate environment by looking at the social and institutional surroundings affecting the entrepreneurs. Another aspect linked to the context but specific to Indigenous communities' characteristics is to understand how the mixed embeddedness of the institutional framework between customary and non-customary obligations impact on fishing activities. The works of Marcel Mauss on the exchanges and gifts in archaic societies or more recently Curry (2011) in Papua New Guinea outline different typologies

depending on the imbrication of Western and Indigenous economies. These works describe specific economic practices in Indigenous societies and encourage to be vigilant on how this element might impact on the phenomenon under study.

In this phase, ethnographic observations were made regarding the environment surrounding the entrepreneur on-tribe to understand which specificities of the community might affect their approaches to entrepreneurship. I observed various events related to on-tribe economy that are all in some ways related to fishing activity and were interesting to questions to explore about how opt-out strategies develop. This question aims is tightly linked to the two previous but is more interested in the embeddedness aspects looking at the proper characteristics of indigenous exchanges, for example the potential the overlap between customary and commercial activity

5) Organisation of the field study

An initial three-month period of fieldwork from September to December 2016 in Noumea, Lifou and Ouvea, has been followed by a period of short travels during which I was able to carry out a second interview with some fishers and make further observations.

The first analysis of the interviews after returning to London in 2017 led to a closer look at the concept of trust as an important factor in the development of the different fishing strategies. More precisely the concept of trust being embedded in different kinds of capitals emerged as a key concept in several interviews as, for example, trust between fishers, or trust in the relation between the province and the fishers.

Parallel to the thesis I worked for one year at the Agronomical Institute of New Caledonia on a project relating to fishing development in the North Province. During periods of leave, it allowed for travel to Lifou to carry on with the fieldwork. The return to Lifou in December 2017 and March 2018 allowed to reconnect with the fishermen, and witness how their projects were progressing from one year to another. A last trip in February 2018 allowed finishing the last interviews. Focusing on key informants, the second round of interviews tried to better understand the concept of trust in the different relationships of the stakeholders. Special attention was paid to better understand how it has impacted on the strategies pursued by the fishers and how, to a larger extent, it has impacted on the mode of development. In addition, being able to come back to Nouméa (the capital)

allowed me to collect information aiming to triangulate my observations and interviews. As the question of material is central to the serenity of the activity it was interesting to interview met three main providers of boats and engine to understand their perception on the projects as they were working with different fishers since years.

Table 4: organisation of the field

date	Place	Number and type of interviews	Description of data collected
first trip: September 2016 to December 2016	Noumea, Lifou and Ouvea	<ul style="list-style-type: none"> - Key informants (4), <ul style="list-style-type: none"> • Fishermen in Lifou pro and non pro (15) and Ouvea (4), • Manager of Lifou's fishing sector at the Province (1) and • Manager of the fish processing unity (1) 	<ul style="list-style-type: none"> • secondary data from the IRD collected in Noumea, • semi directed interviews with researchers and professionals • attending conferences and workshops in Noumea thanks to the IRD. • observation of on-tribe organisation, participation to fishing trips • semi directed interviews with fishermen
second trip: December 2017 and February 2018	Noumea, Lifou	<ul style="list-style-type: none"> • Professional fishermen in Lifou (4), • Manager of Lifou's fishing sector at the Province (1) and • Manager of the fish processing unity (1), • Boat providers (3) 	<ul style="list-style-type: none"> - Direct observation, - Semi directed interviews

Field procedures:

I received valuable assistance from an informant from Lifou, working at the Province, his post was head of the fishing sector at this time. He was from a tribe located in the North of the island called Jokin, I first met him in Noumea in September 2016 at the start of the research after having contacted him by mail. His assistance helped kick off my research in a very straightforward manner. He allowed me to stay in Jokin that eased the start of the field of research, sharing his opinion and introducing me to people. During my stay in Lifou, I had internet access and a place to work from which I communicated with the university through the "Espace Cyber Information Jeunesse de Lifou", a youth organization in the tribe of Qanono, near the centre Wé. Being in a similar situation to anyone from the island

allowed me to understand better "proximities" in the sense of the constraints to travel if you have no car, or the constraints caused by a weak internet connection.

The data collection schedule had to be flexible, as fishing activity was affected by the weather and the obligations of the fishermen. As a result, I had to adapt even to interviews or observations. Beginning in the north in Jokin tribe, I travelled as often as possible in the tribe of Wé, which is central and connected me to the internet point and allowed me to get to the fishermen at the port or in the provincial office.

6) Ethic concerns

Kingston University Guidelines and Procedures for Research involving Human Participants were used in the conduct of this research. The Kingston University Faculty Research Ethics Committee approved the research.

The process involved a preliminary study which resulted in the development of a questionnaire in French. To ensure the words were well understood and the sentences appropriate, this questionnaire was first tested in Lifou. For the fishermen, the research presentation and informed consent form were printed in French.

As part of the methodology of the comprehensive interview, the interviewer remained open to the respondent's ideas while adapting the questions to consider peculiar themes (Kaufmann 2016). Every interview was recorded and transcribed. The participants' anonymity has been ensured, so that they can freely share their thoughts.

In order to be contextually sensitive and respectful, customary gestures were performed for every participant on Lifou. This gesture comprises a piece of fabric called "*manou*" and 1000XPF (French Pacific Franc) or sometimes a packet of coffee (which have roughly the same value). Each custom has a symbolic meaning and is accompanied by a 'parole', which is the explanation of why one is in a place, who one is, and what he or she expects from its moment and future. Customary gestures and the "parole" that accompany them are more meaningful than the value of the money brought to the table.

7) Drawbacks

It is critical to note that as an outsider, being a white French woman may lead to distance and mistrust with some people. Neither the colonisation history of New Caledonia, nor the patriarchal aspect of Kanak society, were in my favour. However, some fishermen explained going in “family trip” sometimes, for the professional fishing trip I have not seen woman going to fish with the fishermen, they often have another activity. Bataille-Benguigui (1988) reflect on difficulties she faced as woman anthropologist to go at the sea to observe fishing technics in Tonga, she reflects on Johannes and explains for the sea is considered “to be a "jealous woman" (Johannes 1981:14) who does not like the presence of other women. This perception of the sea environment as territory for bidden to women also occurs widely outside the Pacific Ocean area.” In addition to these elements, some people expressed deception regarding previous studies they participated in but never heard the results from. I had to further develop an ongoing relationship to get to know them better, which helped, and plan to give feedback at the end of the project.

Other difficulties were to use and aggregate secondary data on professional catches, as the data available does not representing the whole sector as the three provinces have slightly different schemes. For instance, in North Province, it depends on the type of catch sold in any canal (local market; fishmonger or others). In loyalty islands, it depends on the number of fish brought back to the processing unit, and all the other catches, particularly the fish sold to individuals and small business, are not considered in the statistics. However, the data related to recreational fishing and customary fishing are currently out of the scope of the data collected by the Provinces they account for most of the fish catch by tribes. The New Caledonian Institute of Statistics (IAC) has dedicated much work in trying to evaluate more fairly tribe activities with the estimates of catch dedicated to customary and subsistence fishing activities. Their work reveals it reaches on average 20% for the custom and surpass 60% of the total catch for subsistence leaving less than 20% in average for the commercialisation (Guyard, Apithy, Bouard, Sourisseau, Passouant, Bosc and Bélières, 2013). Our research does not aim to evaluate the number of fish catches exactly but I intent to appreciate the distribution of different the activities related to fishing to understand the

repartition of activities for a same entrepreneur. Attending traditional events allowed understand the dynamics and organisation of such practices.

As customary catches are not recorded, it may be difficult to collect data on them. It may pose a challenge for an outsider since customary works may be seen as having "private character" in the sense that they are part of Kanak culture, which they are not accountable for.

Chapter 3: Key contextual issues in New Caledonia

Research on local development and entrepreneurship highlights the effects of different kinds of capital and their embeddedness (Granovetter, 1985; Polanyi, 1957; Zukin and Di Maggio, 1990). Formal institutions, culture, and social networks all play a central role in shaping entrepreneurial behaviours, especially in the Indigenous context. This view is supported by Obrecht (2011) who draws a link between the multidimensional sense of the 'economics of proximity' and the embeddedness concept, stressing that entrepreneurship is anchored in local realities.

The convergence between these schools of thought encourages us to scrutinise New Caledonia and more precisely the context of the Loyalty Islands, taking into account its various dimensions. This perspective echoes the framework proposed by Hindle (2010), who assesses community context with a synthesis of physical, human, social, and institutional resources. Furthermore, Ratten (2014) highlights the importance of historical events on entrepreneurship, supporting Welter (2011), who stresses the importance of "when" as well as "where" contexts. Indeed, the ongoing process of self-determination in which New Caledonian territory is engaged puts history at the forefront as it conditions the trajectories of the actors.

The first part of this chapter presents a review of key milestone dates to better situate the political and institutional trajectory of the territory. In a second part the chapter explores the "where" facets by discussing the institutional, social, and business contexts, combining theoretical background on context with field data.

1) Historical context

In New Caledonia, colonisation dates back to the beginning of the XIX^o century, and the territory is still in a process of self-determination. Since the Events of the 1980s that led to the agreements of 1988 and 1999, this right to self-determination has been formalised with successive referendums and discussions. This section highlights pre-colonial characteristics of Kanak society to better understand the changes that might have affected its organisation. With the Matignon agreements (1988) and Nouméa agreements (1998), the French State affirmed the process of decolonisation. It is not my intention to provide an exhaustive review of New Caledonian history, but rather to highlight relevant events and aspects that have shaped the business context of the territory and impacted on fishing activity. Our goal here is to gain a deeper understanding of the historical background of the archipelago, with a particular focus on the development dynamics in the Loyalty Islands

1.1) Pre-colonial period:

There has long been a degree of uncertainty regarding New Caledonia's prehistory. Lapita settlements is documented by pottery as early as 1300 BC (Sand and Bedford, 2010). Meanwhile, Stevenson and Dodson (1995) find that the first human activity on the mainland could be traced to 3000 BC by studying sedimentation in the south of the mainland. The region was inhabited by Austronesian-language populations, believed to be farmers and maritime foragers who migrated from the Asian continent (Bulbeck, 2008). Exploring Lapita pottery sites, Sand (1998) draws attention to the former complex of islands and societies in the Melanesian world spanning from the Bismarck archipelago to New Caledonia and Fiji. Specific Lapita tradition associated with the Loyalty Islands, highlighting cultural links. In addition, the complexity of water management systems on the mainland, reinforces the idea of a complex pre-colonial society, whose organisation might have been underestimated by the first archaeologists (Sand, Bolé, and Ouetcho, 2003).

The pre-colonial Kanak culture was organised by chiefdoms, composed of exogamous clans, which were patrilineal local groups of people, encompassing various families (Guiart, 1963; Leenhardt, 1930). In the traditional organisation of Kanak clans, territories were delimited by alliance agreements. At these times Faugère (2002) highlights different types of relations, especially commercial, matrimonial and political relationships which connected the islands, but stresses that the essential of politic, economic and social life remained within the limits of their respective insular territories as there was no linguistic, politic or even economic unity between the islands. Bouard (2013) explains that clans have developed along the coasts and valleys, on both side of the mountain range on the mainland, leading to a spatial specialisation and social organisation of exchanges. Each clan is associated to a totem (or local divinity) which could be an animal, a plant or even an atmospheric phenomenon. Tjibaou and Guiart (1976) explain that each clan is linked to a legendary story, a myth, about the origin of the clan. Nowadays these aspects are still vivid in Kanak culture. Bensa (1992) for example illustrates the relationship to the land with the importance of *toponymes* in Kanak culture, which named each mountain, hill, grove, and stream. This vision resonates with a sense of belonging, with the people part of their milieu. In precolonial times, however, while the great chief's authority was respected, his power was mitigated by the delegating of responsibility to other clans. The chief's authority, for instance, doesn't matter for all that concerns the land because another clan's chief held the role of 'master of the land'. Teulière-Preston (2000) nuances and precises that a space is considered appropriated when it has been cleared, socialised, and inhabited. An ancestor performs this transformation, the founders of the chiefdom are considered as the masters of the land.

In September 1774, Captain Cook first charted the archipelago, putting it on the Western map, opening the route to whalers and sandal merchants who had deviated from the Pacific via

currents to the Loyalty Islands, before it became a French colony. The name of New Caledonia is due to its peculiar landscapes which reminded Cook of his country. This period, marked by different kind of trades, manifests the cultural openness and sense of exchange in pre-colonial times and illustrates the value of hospitality, important in Kanak culture. There were pre-colonial contacts in New Caledonia with whalers and sandal wood traders, and it is estimated that 400 boats arrived between Captain Cook's arrival and French control of the territory (Bouard, 2013). These times were also the time of Evangelisation. Facing the expansion of Protestantism with the London Missionary Society in the Pacific, the French Marist mission sent from Lyon arrived in 1843 in the north-east of the mainland in Balade. The influence of religion is still present in Loyalty Islands and New Caledonia in general, and its role during the period of colonisation is introduced in the next section.

Precolonial history is characterised by various waves of settlements and first contacts that intensified as time progressed. There was a complex social organisation with its clan-systems and chiefdoms. Next, we discuss key historical elements of this period of colonisation in order to better understand the evolution of New Caledonian society and the evolution of the institutional framework, which provides the backdrop for understanding the strategies of development.

1.2) Colonial period

Amidst Franco-British colonial rivalry, New Caledonia was annexed by France in 1853, and this first period of colonisation was mainly marked by two stages. The first stage was the penal and settler colonisation. For Kanak people this period is synonymous with population depletion and displacement and the redesign of Kanak institutions. The second period being marked by the initialisation of nickel exploitation of New Caledonia and the complicated but growing recognition of Kanak identity and Kanak rights.

The first settlers arrived in the South, in the region of the actual capital, Noumea. Fifteen years after France's possession the reserves were created and on the mainland the Kanak population were resettled where the land was less fertile (Horowitz, 2004). Merle (2016) explained that New Caledonia was the only French colony where there have been Indigenous reserves inspired by the one initiated in Algeria. The Declaration of January 22nd, 1868, affirms the incommutable, non-transferable and inalienable nature of Aboriginal reserves, and the decree of January 24th, 1868 delimits them. The principle of Kanak collective property was then established, followed by the implementation of a special regime referred to as the "*code de l'Indigenat*". As tribes and districts were created, colonisation impacted institutional and spatial organisation. Tribes were first created by the colonial state in 1867 (Leblic, 2003). A tribe is a legal entity represented by a "little chief"

appointed by the colonial administration. The system was inspired by the precolonial Kanak chiefdom but has not replaced it. The colonial state, in addition to the tribes had perfected its division of New Caledonia by creating the districts, administrative and political subdivisions grouping different tribes. Each district, was led by a “great chief” whose duties were to maintain order, execute orders, collect taxes, perform chores, and be responsible for schooling in the Indigenous government schools (Merles, 2002). Creating reserves and forcing people to become sedentary helped the colonialists to regroup society around churches, thus facilitating conversion of the colonised people, to Christianity. When France took possession of New Caledonia deacons, catechists and pastors then accessed power positions in "their tribe" (Trépiéd, 2010). In addition, building upon Kohler (1979), Graille (1999) underlines that the missionaries stimulated the assimilation of the Kanak people by the introduction of new technologies, assistance with the marketing of agricultural or animal products and the transfer of health standards. The Church played a significant role in the dialogue with Kanak populations. A great figure for example, the French pastor Maurice Leenhardt, translated the Old Testament in Houailou (a Kanak language from the East coast of the mainland) and was active in promoting the dialogue with the Kanak population.

In addition to establishing the reserves, this regime also led to arbitrary violences and injustices. As Merle (2002) describes, the *Indigenat* regime was first implemented in Algeria in 1881. It was then extended to other French colonies, being applied in whole or in part, depending on the period and territory, until its abolition in 1946. The *Indigenat* regime existed as a legal instrument in the service of exercising colonial domination, allowing the administration to exercise "justice" specifically against Indigenous population in defiance of the fundamental principle of separation of powers (Merle, 2002). Merle (2002) stresses that even the mission in charge of the inspection exposed the abuses of the colonial administration services in charge of Indigenous affairs. In this manner appropriation was possible, denying Kanak ownership and use of their traditional lands for agriculture and the establishment of penitentiary centres on the mainland. Merle and Coquet (2022) comparing the period in Guyana from 1852 to 1938 and to New Caledonia 1863 to 1897, during which times they were both penal colonies, note that both examples stress "the aim of the French system was to use convicts as cheap forced labour for the hardest tasks of colonisation " (2022:8). Convicts were mainly political opponents, in particular from the Paris revolt in 1871, and from the 1874 Kabyle revolt in Algeria. During this period, land grabbing and social marginalisation led to violent uprisings against French presence. During just the 19th century, three major colonial wars broke out in New Caledonia in 1856-59 in the South, 1868-69 in the North and 1878-79 in the West (Douglas, 1991).

The Charter of the Kanak People⁶ (2014) stresses:

“Colonisation hits all the Chieftainships in the Kanak country. In practically all the regions on the mainland, the violence of colonisation created the disappearance of Clans and Chieftainships, the displacement of all, or part of, tribes, and entire regions. These acts of violence resulted in long term traumas affecting both customary structures, and humans living hereabouts.” (p.10)

Once Cook arrived, the population depletion hit principally the mainland. During the beginning of colonisation, the French administration in Noumea, however impatient to establish her effective sovereignty, did not intend to create an administrative permanent structure on the Loyalty Islands. Indeed, it lacked necessary resources there and, more importantly, the Loyalty Islands were unfit for large-scale economic exploitation. While on the contrary the mainland was endowed with agricultural possibilities and mining potential. Kohler and Pillon (1982), proposes an estimation of about 60000 Kanak people at the arrival of the Europeans, with the numbers substantially declining by the end of the 19th century, to an estimated Kanak population of only 30000 individuals, roughly halved. The Loyalty Islands were not impacted the same way as the mainland. These points are important to consider as the culture was not impacted in the same way, and networks were affected differently, between the mainland and the Loyalty Islands where people were not displaced but were rather grouped into tribes during the period of Evangelisation.

In the XX^o century, France, in the turmoil of the first war and facing various uprising in her diverse colonies, turned to New Caledonia in order to ask for volunteer soldiers. In a recent book Bensa, Muckle and Goromoedo (2015) relate how in this tense geopolitical context, a war within the war started. First, French citizens and Kanak people joined the war effort in 1916. In 1917 as news about the deaths of the first volunteers spread, and the need for soldiers for the war effort grew, as well as the pressure of the administration amplified, some Kanak people began to question the conflict, left, or retaliated against those who refused to oppose France. This war had been a bloody uprising for the Kanak from which they had to reorganise (Bensa, Muckle and Goromoedo, 2015).

New Caledonia played a strategic role during the WWII, particularly due to its geographic position. The territory became one of the main rear bases of the Allied Command in the Pacific after the attack on Pearl Harbor in 1941, and the Battle of the Coral Sea in 1942. Henningham (1994) stresses how the demography of the island changed quickly, he even describes it as a "peaceful invasion": "the first contingent of the American task force arrived in March 1942, the population of Noumea more than doubled overnight. In its peak, the American and allied population

⁶ Adopted in 2014 by New Caledonia's Kanak customary authorities the “Charter of the Kanak People on the Common Foundation of Fundamental Values and Principles of the Kanak Civilisation” asserts the indigenous rights of the Kanak people, English version available online: senat-coutumier.nc/phocadownload/userupload/charte_anglais.pdf

in the colony reached over 130000 people" (Henningham, 1994:22,23). Also, in trading with the Melanesian people, the Americans did not always follow local rules and paid more fairly, which opened Kanak people to new cultural influences and opportunities (Henningham, 1994).

The two Wars profoundly changed New Caledonian society, with Kanak society shambled by the first War, and then by the melting pot of the second War. At the same time, the invasion of France by Germany triggered deep changes in politics, which in turn impacted on New Caledonia in ways overviewed in the next part.

1.3) Post-war context, and the nickel boom

In the 1946 post second war context, the Defferre law granted all former subjects of the French empire the rights of voting and of being elected. This law made it possible for Kanak people to enter into French politics, Angleviel (2008) highlights the growing concern by Caledonian of European colonial origin to see their interests threatened. The political party "*Union Caledonienne*" of Maurice Lenormand, with the slogan "Two colours, one people", helped make great progresses for the recognition of Kanak's people's rights by defending the unity of all Melanesian and Caledonian from European origins. This period put New Caledonia at the forefront of the decolonisation process if we compare it with its neighbours like Samoa, Fiji, Vanuatu or Salomon Islands, and during these times Kanak claims began to take shape within politics. The Charter of Kanak People states:

"On 23 June 1956, an outline law opened the way to some form of autonomy with the creation of a Territorial Assembly. But in front of the forces of Kanak majority, France abolished this autonomous regime, which subsequently gave birth to the "Kanak Nationalist Movement" in favour of independence. This marked the beginning of the boosting of both political trends "loyal supporters of France" and "Kanak freedom fighters" (p.12).

In 1958, a referendum took place and New Caledonian people decided by vote to remain within the Republic with the status of overseas territory (TOM). From 1946, the creation of a fund for social and economic development in rural areas was put in place, and Bouard (2013) notes that public policies were mainly directed to Europeans and poorly adapted to Melanesian systems of production. For example, Herrenschmidt (1999) underlines that it was impossible for a Melanesian individual entrepreneur to contract a loan or a mortgage due to the status of customary lands which make them collective in essence. Herrenschmidt (1999) and Leblic (1999) highlights successive programs referred to the "*Fond d'Aide au Développement à l'Intérieur et des îles*" (FADIL) in 1975, then in 1984 the "*Office de développement de l'intérieur et des îles*" (ODIL) and then in 1986 the "*Agence de développement rural et d'aménagement foncier*" (ADRAF). The first initiative for

development in the islands, the program FADIL, aimed to encourage rural production, also including the support of fishing activity with small, powered boats. Despite the poor return in term of creating sustainable entrepreneurial projects and the resulting critics, this initiative made it possible to gain familiarity with the concept of economic development as well as financing and training mechanisms. Then the policies follow one another and the creation of the ODIL succeeded the FADIL, more pragmatic and closer to the field than its predecessor, Leblic (1999) explains the program ODIL deployed local agents which role was to facilitate paperwork, also the project followed traditional pathways and entrepreneurs had to perform *palabres*⁷ nonetheless, Herrenschmidt (1999) reports that its operations are seen as unduly bureaucratic and it failed to trigger a real local dynamic. Finally in 1986 was created the ADRAF, in relation to the matters of land claims and land restitutions. Herrenschmidt (1999) notes the disappointing outcomes in the results of a survey carried out by ADRAF on the 3,870 projects submitted between 1978 and 1988: very few projects were still active in 1990.

The changes enacted after the WWII crystallised in the second half of the twentieth century with the maturation of the claims. As a backdrop, nickel economy was developing rapidly. Back in 1864, Jules Garnier discovered the first nickel silicate in New Caledonia, followed by a nickel rush. nickel exploitation started in the south of the mainland in Noumea, with the company “Société le Nickel” (Bouard, Levacher, Bencivengo, Decottigny, Demmer, Le Meur, Blaise, Burton, Enjuanes, Grochain, 2018). The economy of the country and its business context has been influenced by nickel exploitation with the territory playing a pioneering role in this sector. From the sixties as the nickel boom created a need for more workers, the massive immigration program implemented over the territory significantly impacted New Caledonian demography and resulted in weakening Kanak representation. Also, facing to the development of the nickel sector, the transfers from the homeland increased to compensate for public sector salaries. For the period from the sixties to 1975, Freyss (1995) labels the New Caledonian economy an "assisted economy", noting this resulting distortion favoured the business sector leading to the development of the service sector and a general augmentation of prices of commodities. These effects impacted on the purchasing power of the households excluded from these "protected sectors" of mining and administration, the effects also reached the general productivity of the territory. In light of declining Kanak conditions and as part of a broader political strategy, Kanak claims have gained importance. Freyss (1995) describes two strategies: one from the French government, which consisted of the integration of Kanak people into a multicultural society in order to thwart separatist power; and the other more supported by the Kanak separatist movement, aimed to promote economic development in order to reach

⁷ *A Palabre is a discourse pronounced in a customary situation where people transmit a message, make a demand or show respect.*

independence. In response to these changes, the organisation of the first art festival called "*Mélanésia 2000*" marked a turn in the affirmation of Kanak culture. The Charter of Kanak people highlight:

"In 1975, the Kanak People will assert its identity as a people coming from the land of Melanesia during the Melanesian Arts Festival, "Melanesia 2000", going into a dynamic of political emancipation." (p.12).

These demands for a greater recognition of Kanak identity and the land claims gave rise in 1978 to the first land reform. A major goal of this reform was to resolve the land problem and to better recognise Melanesian communities' historical rights. Between 1978 and 2005, with the successive land restitutions, Kanak customary territory increased by 66% (Sourisseau, Pestana, Gaillard, Bouard and Mennesson, 2010 cited by Bouard, 2013). In 1981, the statute "*Groupement de Droit Particulier local*" (GDPL) was created as part of the land reform to reconcile the requirements of civil law and traditional customary organisation. A GDPL is a legally recognised structure that only exists in New Caledonia. It is endowed with legal personality to represent groups of individuals bound by custom. This structure aimed to reflect clans' alliances in accordance with the concept of customary organisation. In its initial form this tool was used for determining land rights and compensating landowners and since 1989 a growing number of GDPLs have been created in support of economic activities.⁸ The GDPL presents a form of CPPO (Peredo, Haugh and Mc Lean 2018) where the members are innately collectively connected by the clan to their territory, allowing them to settle projects.

Leblic (2007) points out that if the goal at the end of *Indigénat* was to recognise Kanak's identity, after that only it became closer to a claim for independence. Horowitz (2001) stresses Kanak identity has a social component, linked to the clan and a geographical component, the place. The clan's myth is anchored in this place, where the first ancestor arrived. Two key elements for this period from the WWII to understand the rise of the tensions are the growing, but slow, recognition of Kanak rights and culture with, in parallel, the development of the nickel industry which will change the face of the territory.

1.4) The Events of the eighties; Matignon and Noumea agreements.

For a generation of New Caledonian, the violence of the eighties with the civil war (1984-1988) is still a vivid memory. However, this traumatic period has marked a shift in the relations,

⁸ <https://www.adraf.nc/dossiers-thematiques/gdpl#les-gdpl-economiques>
Page 75 of 229

with the subsequent “rebalancing” program⁹. In 1984, the Front de Liberation National Kanak (FLNKS) was established, bringing together the parties supporting independence. Face to the rising tensions, the Fabius-Pisani statute is adopted by the law of August 23, 1985; and a new configuration is promulgated. New Caledonia become divided into four regions: South, Center, North, and Islands. If this status advantaged the pro-independence electorate, the next government, led by Pons as new minister for Overseas territories, changed the situation in favour of Loyalists.

As a result of the law of November 9th, 1988, outcome of Matignon’s agreement, a complex redesign of the institutions is engaged. With Nouméa for its centre, the French administration was historically centralised in the South, where the majority of the population, political power, and economic activity took place. In 1998, Nouméa's agreement¹⁰ confirmed the willingness to build a common destiny formed by Matignon's agreement. Eight customary areas and eight customary councils are created. These treaties acted to readjust New Caledonian economy and end the marginalisation of Kanak people. The territory is divided into three provinces: North and South provinces on the mainland, and the province of the Loyalty Islands. The regional authorities are self-managed. The provincialisation, follows a logic of territorial federalism, proportional and '*consociative*'¹¹ (David, Sourisseau, Gorohouna and Le Meur 2016). David, Sourisseau, Gorohouna and Le Meur (2016) describe New Caledonia as a form of collegiate government emphasising also that the Customary Senate is multicultural. After the Matignon agreement various institutions have been established in order that customary representation takes the step of institutionalisation and in parallel, the programs to train Kanak executives, like the one called "400 cadres", was launched to assist them in gaining access to executive positions. Bouard (2013) underlines the role of the FLNKS will be both to prepare for independence and organise a counter power economical by encouraging rural development projects.

The institution of the Loyalty Islands has two main instruments related to economic development: the Provincial Economic Development Assistance Code and the State-Province Development Contracts. From 1990 the development is oriented toward a diversification of the economy. For example, Herrenschmidt reports that between 1990-1993 the Province is very

⁹ This policy is designed to harmonise access to public facilities throughout the territory and to assist the least populated communities in achieving economies of scale. Essentially, the New Caledonian budget is double equalised with the provincial budgets: the allocation to the provinces represents a minimum of 51.5% of the distribution budget, with 50% allocated to the southern province, 32% allocated to the North, and 18% allocated to the Loyalty Islands province. Population distributions in 2019 were 75%, 18%, and 7%, respectively, while those in 1989 were 68%, 21%, and 11%. The equipment tax base is 4.0%, divided 40% between the provinces in South and North, and 20% for the Loyalty Islands.

¹⁰ <https://www.legifrance.gouv.fr/jorf/id/JORFTEXT000000555817>

¹¹ Consociationalism is a form of democracy which seeks to regulate the sharing of power in a state that comprises diverse societies (distinct ethnic, religious, political, national or linguistic groups), by allocating these groups collective rights. The executive-power sharing is mainly characterised by proportional representation, veto rights and segmental autonomy for minority groups.

supportive, the small projects, about 7500 pounds or less, were funded up to 75% of their investment cost. Also, the scheme proposed loans proportional to the personal contribution, credits of interest-free, reimbursable development loans, equity loans and equipment grants. These actions were coupled with indirect financial support to favour job creation, as for example free taxes holidays and funded training. Herrenschmidt (1999) notes that at the end of the 1990's two main ideas drive the Province: training and rebalancing. Herrenschmidt (1999) also underlines a negative impact from all these transfers as he notes a form of frivolity in the consumption. These changes engaged the country in a multiculturalist, integrationist policy, with the recognition of collective rights to an ethnic group and empower the institutions of the Congress and the Provinces.

From 1998 onwards, the North and the Loyalty Islands Provinces have faced the challenges of structuring themselves and catching up with their infrastructure, as compared to the South Province in Nouméa where most were concentrated (David, Sourisseau, Gorohouna and Le Meur, 2016). In this process, the Loyalty Islands face specific challenges due to the "double insularity" and has opted for the development of strategic sectors, like transportation infrastructures and maritime infrastructures, agriculture, fishing, and tourism while respecting the immaterial dimension of culture. These political changes have triggered new strategies of development supported by the Provinces, with a new governance. It is important to stress that in its essence Nouméa's agreement is transitory and that in preparation for a future decision, the territory has gone through a preparation process. This "rebalancing" came with the necessity to legitimate the new Provincial structure, and the politics put in place (Bouard, Sourisseau, Bellec, Hoffer, Le Meur and Levacher, 2016).

Within the framework of Nouméa's agreement various referendums have taken place and the question around independence have moved closer to the question regarding New Caledonian's sovereignty. The autonomy requires many steps in the preparation of the institutions, taking an example from business, regard to the unique resources of the territory, a key informant from the incubator of the *Agence de développement de la Nouvelle Calédonie* (ADECAL) commented about the importance to create a patenting of innovations system. At time of the research (2016) it was still the French patent application system in place. Referring to the concept of assisted economy mentioned above, today we assist to a shift as the "administrative income" has been progressively replaced by a "natural income" based on nickel, the future of the whole archipelago is presented as remaining close to a mining economy (Sourisseau, Geronimi, Blaise, Bouard and Zugravu-Soilita, 2016). The economy of nickel and its dividends have different side effects impacting on the economy in general. More precisely, they trigger price distortion - prices in New Caledonia are on average 34% superior to the prices in France (ISEE, 2012) - and favour importations markets thanks

to the high commercial margin made possible with the high wages creating the demand. On the contrary, as a result of the high costs of labour inputs and raw materials in the New Caledonian primary sector, investing seems less appealing and gives way to the Provinces' multifaceted support for entrepreneurs.

In conclusion, along the changes of the formal institutional framework the historical review highlights the hybridisations of former Kanak customary institutions and new initiatives for economic development with the creation of new institutional arrangements to ease the insertion of Kanak people into the market economy. Also, despite all the changes and upheavals that took place during colonialism, it is critical to recognise a form of permanence in Kanak society and also in their claims to assert their way of life. Bensa, Muckle and Goromoedo (2015) emphasise the flexibility of social segments and the capacity of making new configurations. After the institutional upheavals following the Kanak Claims of the eighties, the political system underwent structural changes and various changes have affected the economy. The last section of this review has emphasised the importance of newly created institutions, especially the provinces' role in economic development. Following on these observations the next part presents contextual elements of contemporary New Caledonia, with a special focus on the fishing sector in the Loyalty Islands. Following on Welter (2011) there are several components of the "where" context, including institutional, social, spatial, and business aspects, which are presented in the next sections.

2) Institutional context

North (1991) presents institutions as the result both of informal constraints, such as norms, customs, traditions, codes of conduct, and formal rules, such as laws, constitutions, and property rights. Echoing this vision, Welter (2011) describes the institutional context as encompassing culture and society, political and economic systems, the next part examines these elements in regard to their links with fishing activities and summarises the main lines of the current institutional environment by first explaining the implications of Noumea's agreement today. Next the other section explores specific aspects of Kanak tradition and culture, as most of the land on the Loyalty Islands is customary land¹² the elements presented allow a better understanding of the context in which activities are carried out.

¹² Customary Lands can be a reservation, an extension of a reserve, a clan land, or a land owned by a Local Particular Law Group. Customary land is governed by its customs and specific texts. Therefore, it is not subject to the civil law of property. There are four characteristics of customary land, namely that they are inalienable, inalienable, incommutable, and non-transferable.

Currently, New Caledonia is governed by the New Caledonia Act of March 19, 1999¹³ (David and David, 2020). The archipelago is still part of French territory, but its status is the most original ‘collectivity’ of the French Republic (Faberon, 2012). The French *Conseil Constitutionnel*, on its website, describes that, in a similar way to Russian dolls, the Title XIII of French Constitution introduces another Constitution within the Constitution and refers directly to Nouméa’s agreement¹⁴, establishing a shared sovereignty. New Caledonian society is pluralistic, and its institutions tend to reflect this reality. The consideration of the different aspects of Kanak culture in New Caledonian politics is an ongoing and complex work carried by the Customary Senate. As seen in the precedent part, along to French institutions pertain traditional customary institutions, that have been, in some measures, impacted during history. David and David (2020) explain that people under customary civil status are governed by their customs for all civil status-related matters, e.g., marriage, adoption, divorce, inheritance, matrimonial matters, property rights, the authors precise that this status affects a person's legal regime based on the customary rules existing within his or her clan, tribe, or customary area¹⁵. Then, if the French State have kept its regal powers (defence, public order, justice, currency, foreign affairs), New Caledonian Government has developed its own decentralised institutions with a large federal autonomy (David, Sourisseau, Gorohouna and Le Meur 2016). Local formal institutions are the Congress, the Government, the Provincial Assemblies, the Economic, Social and Environmental Council, and the Customary Council. In this context the Provinces oversee economic development and then fishing activity management for all that concern the establishment of projects and the regulations concerning commercialisation. In addition to the Provinces, it is necessary to note adaptations, like the creation of the special status of GDPL created to allow group, as clan for example, to settle projects and note the existence of a Guarantee Fund. The Guarantee fund on customary lands was formalised in August 2012 by an agreement between New Caledonia's government and the *Banque Calédonienne d'Investissement* (BCI). This fund, provisioned with XPF 100 million, provides guarantees to credit institutions for financing projects on customary land, the latter being unseizable and therefore immune from seizure or confiscation in the event of non-repayment. In support to the institutional framework, it is also important to note the important associative grid present in New Caledonia. Relating to the financing of economic projects the "*Association pour le droit à l'initiative économique*" (Adie), and "*Initiative Nouvelle-Calédonie*" (Initiative NC); both propose

¹³ Loi organique modified 99-209 relative to Nouvelle-Calédonie.

¹⁴ Nouméa’s agreement explains which of the state’s powers are definitively transferred to the institutions of New Caledonia and the rules governing the organisation and operation of the new institutions. Particularly in relation to the kind of decisions taken and the questions relative to the attainment of full sovereignty the rules concerning citizenship, the electoral system, employment, and personal status as laid down by customary law.

¹⁵ Section 7 of the 1999 New Caledonia Act (NCA).

microcredits, the entrepreneur are addressed to one or the other depending upon the amount of capital necessary for their project.

Fishing activity set a good example of the institutional evolution and arrangements with the institution in charge of the management and protection of the area, the "*Affaires Maritimes*" (AFFMAR). The AFFMAR has shared competencies between France (Ministry of Ecology, Development and Sustainable Planning) and New Caledonian government, its attributions come both from the sovereign missions of the State and from the distribution of powers organised by the organic law of March 19, 1999. Since 2011, New Caledonia government oversees the regulation and the safety of ships registered in the territory or carrying out inland navigation. Additionally, concerning sea areas two conceptions of the sea seems to cohabit. In French law, the Maritime Public domain is divided regard to the shore and according to the boat's category. Then, for the AFFMAR, coastal areas are open to all boats, the fifth category concerns boats which remain in sheltered waters, then the fourth category up to 5 miles from the coast, the third category comprises boats that can navigate until 20 miles, the second category for boats up to 200 miles and the first category for all other boats. On the other hand, Kanak's conception of coastal spaces, which considers the sea as part of the territory, is common with others Pacific Islands (Johannes, 1978; Teulière-Preston, 2000). Sabinot and Lacombe (2015) underline that lagoon governance used to be carried by the chieftainships and people used to look at the sea as a continuity of the land. David (2008) explains that traditional fishing regulation in Oceania is linked to group's viability of the territory with both social and economic goals. In this sense traditional fishing regulation allows a form of equity between groups regard to resource access and prevent disagreements. In addition, it strengthens subsistence fishing in providing protein and the reinforce the pantry in case of hard blow like cyclones, finally it preserves sufficient resource for customary events. In Kanak culture, maritime territory is part of the *terroir*; as a river or a forest, in other words it is part of real estate, and appropriation rules differ from usage rights (Teulière-Preston, 2000). In this dynamic, knowledge and systems of activities connect the land with the sea (Bernard, Lacombe, Lancelot, Sabinot and Herrenschmidt, 2014). Noumea's Accord (1998) recognised that the domains linked with the territory must be examined, as are the maritime areas:

"State and territory domains should be examined with a view to allocating these areas to other collectivises or to customary or private owners, with a view to restoring rights or realising development of general interest. The question of the maritime zone will also be examined in the same spirit." (translated by the author)

This juxtaposition of the two institutional systems is one aspect of the mixed embeddedness experienced by people on-tribe. In Kanak society, practices and habits are often referred to with the

concept of Custom. While this notion immediately and exclusively refers to the Melanesian world and Kanak identity, it refers above all to all sorts of definitions and covers several social realities (Graille, 1999). However, the Customary Senate has, in the "Charter of Kanak people", worked on the recognition of common elements and values that are shared by the whole Kanak population in the different customary areas. Bouard and Sourrisseau (2010) argue, based on Polanyi (1957), that the custom cannot be considered limited to interactions with the market. More generally, it seems to be a central instrument for regulating exchanges based on redistribution and reciprocity. Important in the concept of Custom is the word, referred to as "*la parole*". Tjibaou and Guiart (1976) presents the Custom as a code of relations, more precisely attitudes, and behaviours which an individual must have and follow regards to its brothers from the same tribe is imposed by "la parole" which means the word, or speech. The notion of parole is linked with the oral character of Kanak culture. For example, it is normal when you arrive to someone you have not seen for a long time to do specific gesture, called "*faire la coutume*". This gesture always comes with different elements: some words to explain your pathway (addressed to the living being but also to the ancestors of the place), some objects, usually a traditional piece of fabric, some money and sometimes tobacco. The monetisation of customs has infused in all customary events like even weddings or mourning and this mutation sometimes triggers questionings and critics. More precisely, Faugère (2000, 2002) analyses monetary transactions in Kanak communities and discusses the assumption that custom and money should be dissociated. She explains that in a sense denigrating money and valuing "true custom" helps maintain the established order. In contrast, taking the contrasting example from the Maka in Cameroun she suggests that the dissociation between money and kinship can be interpreted as a sign of an appropriation of Western ideology. The exploration of this paradox led her to further scrutinise the kind of exchanges and the role of money in order to discuss the apparent monetisation of customary works. Faugère (2000) underlines that the presence of the absence of money is not linked to the nature of the exchange. Stressing the difference between money and market, she poses that there are market and non-market exchanges in which the role of money differs. In her example customary money exchange stand successively for a gesture of humility, gesture of solidarity, or even gesture of forgiveness.

As underlined before, Kanak tradition places chieftainship at the core of its functioning. Herrenchmidt (2004) stresses that the traditional chieftainship is different from the administrative chieftainship as tribes and villages in Melanesia aimed to gather populations around churches, usually divided into small lineages or multi-lineage, to facilitate their evangelisation. However, they were originally a parish and the administrative structures, today the tribe of origin is part of people's identity. The logic in a chieftainship is by segments, which means by clans, there is a

political centralisation and hierarchy according to a principle of first resident. Kanak chiefdoms are, at present, political spaces which are neither totally autonomous nor fixed on a pre-colonial model, but which nevertheless remain specific political entities. It is tedious for an outsider to access to a great understanding of the history of the chiefdom because, as Demmer (2009) explains, this type of story is kept secret. Demmer (2009) highlights two types of secret, one related to the history of the chiefdom and the other one related to the history of the clan. In a chiefdom the genealogical history is transmitted within the same group of agnates (or akin). The story provides the name of the common ancestor as well as his place of birth along other elements on their identity. By this explanation Demmer (2009) precises that each home has a different part of history to tell. Aside these aspects of complementarity, there is also the aspect of hierarchy. Along history, the Great Chieftaincy was able to profit from this in its function of "unifier of the countries." Herrenchmidt (2004) underlines a double control on the territory: political control by the settlement of its clan's members in each tribe in order to establish local political alliances over the long term and thus ensure the support of minor chiefdoms, and the control of the land through the intermediaries.

The historical review presented the major role of religion, implemented by the evangelists and missionaries, which impacted New Caledonian culture with the "Soul conquest" from 1840. These changes have allowed religion to fully integrate into tribe life and by the same mean it gave to some Kanak people access to new positions of power. Emphasising the importance of symbolic power as well as the mastering of language and symbols, Graille (1999) echoes the work of Bourdieu and underlines "one cannot help noticing that access to political responsibilities does not go without the mastery of a certain cultural capital, in particular linguistic and oratorical skills." (109:1999). She follows on explaining how two kind of Kanak elites have emerged: the one originating from the "missionary matrix" which allowed to access higher education, and those who accessed higher education and went to France via a specific training program¹⁶. Graille (1999) specifies that the first group mobilises a political discourse that emphasises nonviolence and cultural dialogue, while the second group integrates dominant ideologies of anti-imperialism and socialism from which Kanak nationalist thought is rooted. In it, two notions are guiding: freedom and reason for an individual, and sovereignty and a democratic state as the foundation. These aspects are important as they connect with the idea of mixed embeddedness between Kanak and Western culture where the mobilisation of different kind of social and cultural capital is key to

¹⁶ «400 cadres» was a training program resulting from political peace agreements between the French State, the Kanak separatists, and the Loyalists of New Caledonia in 1988. The programme then became "Cadre Avenir" and is still in effect.

access middleman positions (Bonacich, 1973). Religion also can play another role underlined by Faugère (2002), taking the example of an entrepreneur converted to the Pentecostal Church, suggests it can allow to escape the logic of the custom when dealing with payments.

We can acknowledge a progressive recognition of Kanak culture's values and perceptions with the growing recognition of their institutions. The result is a dual institutional framework, in constant evolution and with specific hybrids and articulations.

3) Social context

Today New Caledonia is a pluralistic society, in 2014 the total population of New Caledonia was about 268,767 people (ISEE), of which 39,1% of the inhabitants were Kanak, 27,1% were European, then Wallisian and Futunan with 8,2%. Tahitians, Indonesians, Vietnamese, Vanuatu, Asian or people from other communities comprise 8,6% of the population. Building on Barth (1963, 1967), Dana and Dana (2008) underlines that the nature of pluralism affects entrepreneurship. He distinguishes two types of pluralism: when different people from different cultures share activities in a secular mainstream arena, as opposed to when different cultures share little in the mainstream arena. The result of the first is limiting the expression of cultural differences to private life, however in the second there is minimal social interaction across cultures. Rather, each ethnic group has its distinct values and lifestyle. Most of non-Kanak population is concentrated around Noumea's agglomeration; however, in the Loyalty Islands most people are Kanak and all land is customary land. Then a quick look could make think of the second case, where groups have minimal interaction, but reality is more complex as underlined in our precedent sections. Different historical events such as the "cantonment to reserve" (Merle, 2016) have directly impacted the mainland but the Loyalty Islands context is different as their whole territory have been declared reserve from colonisation times. In 2014, Loyalty Islands' population was about 18297 people¹⁷ with 94% of the population Kanak. The same year in Lifou the population was about 9275 people, Ouvea 3374 and Mare 5648 individuals. However, the density is greater in Ouvea than in Lifou with in 2014, about 7,6 hab./km² in Lifou against 25,7 hab./km² for Ouvea.

According to the IEOM, in 2019, the migratory balance is down by 12% compared to 1996, and the Loyalty people maintain a strong bond with their tribe despite these departures. Thus, taking into account people who live in another province but consider themselves to belong to a tribe of the Loyalty Islands, the population of the Loyalty's residents reached 45,185, which was more than the double than the official one.

¹⁷ Source : *Recensement de la population Nouvelle-Calédonie 2014, INSEE-ISEE*
Page **83** of **229**

As explained in the presentation of the chieftainship, traditional networks in Kanak society are patrilineal and each member according to its place of birth in the family hold a precise role. Herrenschmidt (2004) describes a territorial grid extended between tribes. Clans have specific functions from warriors, sacred role and ritual duties to advisors or even food production. This later being directly in relation with fishing activity as sea clans are traditionally the one in charge to provide fish for customary events. In accordance with customary rules, each clan are holders of their land, each clan is somehow autonomous. We can note that if there is a rejection of individual property the notion of collective can match with the notion of clan. This element brings us back to a distinctive feature of Kanak identity linked to place. Sabinot and Lacombe (2015) remind the distinction made by Haudricourt in 1964¹⁸ between the people of the mainland he calls the yam civilisation, and the people of the Loyalty Islands described as fishermen of the warm seas. The complexity of the social organisation of Kanak society compels us to try apprehending it globally and avoid a reductive vision. The population of the mainland has both fisher clans and clans of the earth. This image can also be considered as a cultural metaphor for Kanak culture where the clans of the sea provided fish to the clan of the land who provided yams. In Kanak culture, exchange as a social mechanism is fundamental to social organisation, echoing Mauss's work. Herrenschmidt also explains that the power of the chieftainship isn't central, and it needs to function in political networks with lineage structure. Part of his work investigates the chieftainship of the Wetr, district in the north of Lifou, showing that clans have branches all over the district. According to him, this vision might be overly simplistic, and reality would be much more complex, but it is intriguing to note that their spatial distribution bestows particular geo-strategic roles to each actor, each customary person being then unique and forming a crucial links. These networks are maintained or reactivated with each customary events, as birth, mourning, weeding, which rhythm the time on-tribe in which fishing clans have their proper role to play. Illustrating the social embeddedness of society and place in Kanak culture, Tjibaou and Guiart (1976) underlines that clans and space are linked; *"the space in the Melanesian world is the country on which extend the myth"*; they precises *"space is not interesting in its objective reality"* (1976:284). In relation to this Herrenschmidt (1999) explains how history and time are spatialised and suggests that places are mythical references. The bonds to natural resources vary across cultures and Indigenous Peoples' cultures are based on a profound spiritual relationship with their land and natural resources (Kipuri, UN report, 2009), this relation is protected by the article 26 of the United Nations Declaration on the Rights of Indigenous Peoples. In addition, among a clan, lineages are not equal but hierarchical, based on the houses that give them their names. In this way, habitats are comparable to nobility titles of different

¹⁸ Haudricourt, A. G. (1964). *Nature et culture dans la civilisation de l'igname: l'origine des clones et des clans*. *L'homme*, 93-104.

notoriety according to their age of foundation, they are given a higher level of prestige (Boulay, 1990). Then we can note that the importance of the notion of territory which is also part of history and identity reflects the importance of belonging. A respect for elders and tradition implies a kind of trust in the past and a sense of responsibility for the future.

4) Business context

In the first section of this part, we discuss some general aspects of the business landscape by presenting a macro view of New Caledonian resources and economy. Then we take a closer look at on-tribe business context in the Loyalty Islands. We finish by presenting the different types of fishing activities developed on the whole territory in order to grasp a better understanding of the competitive environment.

4.1) General observations on New Caledonian economy and Loyalty Islands

New Caledonia possesses unique natural resources from its biodiversity, landscapes but also minerals. The original geological history of New Caledonia has created one of the biggest deposits of nickel in the world representing around 25% of the world's accessible reserve; also, are present chrome, iron, cobalt, copper and other minerals (Freys, 1995). As underlined by Stiglitz (2015) "Countries rich in natural resource are infamous for rent-seeking activities" (2012:39).

If we compare, nickel economy is preponderant and generate high economic rents, however fishing activity render low economic value and very high social value. The report of New Caledonia 2025¹⁹ shows that subsistence fishing activity account for more than 60% of fishing activity in New Caledonia. This suggests a possible interaction between highly profitable but short-term activities (as extractive activities) and long-term development activities like fishing.

Looking towards the sea, Loubersac (2015) underlines that the whole of French overseas in Oceania, with French Polynesia, New Caledonia and Wallis and Futuna, is characterised by the narrowness of land spaces and the immensity of its maritime domains. To preserve its rich biodiversity (Richer de Forges and Pascal, 2008), New Caledonia adopted the process of creating protected areas and in 2008 around 15000 km² of the lagoon were already considered as Marine Protected Areas. The Natural Park of the Coral Sea (Parc Naturel de la Mer de Corail) was created in April 2014 and covers more than 1,3 million of km². Fishery resources are "critically important as a source of food and employment, a generator of revenues for the government and a foundation for economic development" (FAO, 2011:255). Loubersac (2013) stresses that the richness of the

¹⁹ https://sap.gouv.nc/sites/default/files/documents/diagnostic_et_enjeux.pdf

ecosystem presents interesting biomolecule deposits for research in blue biotechnologies, and he emphasises potential sources of new aquaculture from various species of micro-algae. These aspects underline the many opportunities of development linked to natural resources.

Although the Asian-Pacific region is presented as one of the two big trading spheres in the world, the economy in New Caledonia is found to be quite excluded from these dynamics and isolated between the clusters of far Eastern countries on one side, and English-speaking countries on the other side. New Caledonian economy remains quite closed and displays in average an opening rate of 30% (Matthieu, Couharde, Pestana, 2016), with the development of nickel sector estimated at 25% of the PIB (Couharde, Geonomi and Taranco, 2016). However, Couharde, Geonomi and Taranco, (2016) stress the turn through industrialisation has led to a development of the service sector in three steps: (1) From 1975 to 1989 the economy was view as “assisted”, giving echo to Freyss’ expression²⁰; and (2) after the Events and Kanak claims from 1990 to 2005 the country was in a rebalancing period with a rise of nickel revenues and a decrease of transfers. Finally (3), the period from 2006 to now is presented as an investment period, with the construction of a nickel transforming plant in the North during 2006-2012, since then the part of public transfers in PIB have felt down to 14% (Couharde, Geonomi and Taranco, 2016). The territory faces challenges due to the dependence on nickel rents which create a vulnerability linked to market fluctuations. Sourisseau, Geronimi, Blaise, Bouard and Zugravu-Soilita, (2016) stress that the necessary diversification triggers various debates but also highlight the role of entrepreneurship in the option based on the development of nascent niches, and in the development of tourism which, they underline, is related to a strategy of conservation of patrimony. Yet, Bouard and Sourisseau (2010) stress that in rural New Caledonia, individual, profit seeking strategies are dominated by the development of employment. These observations draw a clear link with the different concept of island economies development developed hereafter.

Linking a geographical concept with entrepreneurship research Baldacchino (2011) notes that islands communities have to contend with the various implications of their “islandness” that enhance their vulnerability. A deductive macro-driven approach would suggest that success may be difficult to attain regard to the limited domestic markets and client bases, coupled with physical isolation, making it difficult for local entrepreneurs to achieve and exploit economies of scales in the local market. These aspects can be illustrated by the remarks made on the situation of the Loyalty Islands where we can observe a form of “double insularity” in a logic core-periphery regard first to Noumea, and in a second level regard the Metropole or other distant cores. In addition, other difficulties associated to the narrowness of the market, the distance from the Metropole, the high

²⁰ during this period public transfers - impacting directly on wages – account for about 19,3% of the PIB

production costs, the economic, social and environmental vulnerabilities which altogether increase operating costs at all levels. However, this vision of a structural vulnerability linked to the characteristics of small islands territories has been challenged by more entrepreneurial and less deterministic approaches. To illustrate this argument, many island territories display very different yet successful ways of development, among some example the case of Åland taking advantage of its geographic position and surrounding waters with the ferry industry (Fellman, Kinnunen, Lindström and Palmer, 2015), or also the example of biofuel made from coconuts in Salomon's Islands (Betzold, 2015) illustrating a strategy based on local resources characterised by resilience, innovation and sustainability. The example of Tuvalu government and the "dot tv" phenomena (Baldacchino and Mellor, 2015) exemplify how island territories can develop original and successful patterns of entrepreneurship, based on their intrinsic specificities.

Emphasising keys capabilities to be developed by the territories, and the relationships the economy maintains and develops with the global structure, the research of Bertram and Baldacchino observe patterns from which they draw "ideal types". As stressed by Baldacchino (2010), these models "are not present in (their) pure form anywhere in the real world" (2010:87), they are referred as MIRAB, PROFIT and SITEs. First the MIRAB describes a situation where in a small territory "cash incomes are derived to a large extent from migrant remittances and public sector employment, the latter supported by international aid flows" (Baldacchino and Bertram; 2009:150), in this case exportations are lower than importations. In the logic of a creative political economy Baldacchino's work underlines five policies areas, or five capacities which are source of power and then source of political autonomy and then allow territories to shift from the MIRAB model to a more autonomous model which he calls PROFIT economies. This category is presented as more focussed on agency with control on its population, finance; policy concerning environment and particularly natural resources and also control on air and sea transportation. These elements sustained by a deployment of para-diplomacy marked by the devolution of representative power below and above the Nation State. The last category, the SITEs, are small island tourist economies. Baldacchino and Bertram (2009) stress "SITE economies intersect clearly with both MIRAB and PROFIT economies; while MIRAB and PROFIT economies have fewer intersections " (2009:151).

Baldacchino's work underlines the ability of island territories to innovate and be entrepreneur by taking advantage of their small size and remoteness. Aside from a "commitment to industrialisation (as Barbados, Fidji, Malta Mauritius)", alternatives roads to development are possible, namely: (1) the strategy of remittance supported by migration, (2) the persistence of rich subsistence and non-cash economies, (3) export of niche products (4) the development of tourism and (5) the development of "geo-strategic rents". In New Caledonia the observation of the economy

displays variations of these strategies. For example, nickel economy offers jobs on the mainland and trigger immigration from the Loyalty Islands impacting the economy through remittance strategies; reminding that the Loyalty's population increase more than the double (2,8 times more) when we include people that live in another Province but consider themselves Loyalty Islanders. In terms of geo-strategic rent, aside the historic administration rent which shifted to a nickel rent, Loubersac, Lacroix, & Henocque (2013) underlines the potential presented by the lagoon and blue economy. During an interview the head of the incubator of the technopole ADECAL in Nouméa underlines that there were very specific projects with high potential but that these initiatives were still anecdotal. At the same time, looking in general in the Loyalty Islands, the main part of the economy is characterised by the persistence of a rich subsistence, non-cash generating activities, the development of tourism sector and the production of niches products such as for example Sandal or Vanilla. Furthermore, Sourisseau, Geronimi, Blaise, Bouard and Zugravu-Soilita, (2016) underline New Caledonian ability to innovate by creating new institutions, and new social regulations with dynamics taking into account the non-monetary dimensions of the economy. However, they stress, the territory still needs to work on the redeployment of its relations in the Pacific, which echoes the development of para-diplomacy in the PROFIT type.

These different remarks illustrate the statement that New Caledonia is in a transition from a MIRAD model to a PROFIT model (Baldacchino and Bertram, 2009) and then help understand the implication of this transition that stem from the political project of independence but are also influenced by the necessity to adapt to the macro-economic context.

In the Loyalty Islands Province, the business context is highly embedded in the institutional context. The provinces hold the competencies related to economic development, and they have developed investment companies, with the status of Société d'Économie Mixte (SEM)²¹ to support local development. Promosud is the financing and development company of the South Province, Sofinor the one of the North Province and the SODIL the development company of the Loyalty Islands Province. The three SEMs finance, support and manage so-called structuring projects, also they enjoy a large management autonomy and flexibility of private sector rules. Their participation in the large mining projects of the country generate substantial budgets and they seek to strengthen the confidence of private investors by taking significant stakes in businesses. The priority sectors are private sector, tourism, fishing activity, or productions vegetal and animal. The SODIL supports upstream and downstream the different branches with technic and economic support providing

²¹ In France, a mixed economy company or SEM is a public limited company whose capital is mainly held by local authorities such as the municipality, the department, the region or the State, directly or through public establishments. and partly by private economic and financial partners.

business guidance, zootechnical and health support. In addition, the Province supports the commercialisation of products with the development of infrastructures like processing unities, or transport companies. In the food unit and in relation with fishing activity, the SODIL own the fish processing unities present on the three islands and the offshore fishing company of Navimon (see next part on fishing sector). For the Loyalty Islands the development of tourism with cruise ships represents a consequent economic windfall for local people. In Lifou the company Mejino Wetr welcome cruises from New Zealand and Australia. Managed by local people and following a collective organisation letting all the tribes participate, they try to deploy a strategy which include all the tribes (cf: Interview with the manager of Mejino Wetr). Artisanal small-scale activity in the Loyalty Islands has also to consider the business context of the fishing sector and New Caledonian fishing activity in a broader view.

Despite the economic support deployed, the agricultural production on the Loyalties remained oriented towards self-consumption. The islands have varied and diversified agricultural productions such as yams, copra, vanilla, sandalwood, beekeeping, and fishing, but the volumes of which do not manage to stimulate the development of a sector, as productions remain punctual and irregular, with different levels of difficulty depending on the industry. The significant informal economy encompassing donations and customary work is sometimes accused of these difficulties. According to IEOM, these activities occupy 56 % of the total inactive population, or 3,623 people according to the 2019 census, which represents a portion of the inactive population who declare being "at home". The interaction between merchant and non-merchant activities is characteristic of New Caledonian economy. Bouard and Sourisseau (2010) note that the pluriactivity is significative in households' strategies. They stress the pregnancy of multiple activity is rooted in territory's history with on one side direct and indirect job opportunities stemming from the administration or rural development programs and on the other side the vitality of tribal and customary activities, despite their low commercial weight. David (2004) stresses the link between pluriactivity and risk management within islands economies, explaining it would be impossible to cover the daily food needs of an individual without the multiplication of food sources and the exhaustive use of biologically diverse environments to ensure the survival of communities.

Illustrating Curry's (2005) observations on the mixed embeddedness of customary and non-customary activities, the customary system can be seen as a system of action coexisting along the market economy but non-exempt of transactions. However, when it comes to business, the Custom is sometimes presented as a burden. In Kanak culture, custom rules are a function of cosmos, equilibrium, and the notion of "invisible world". Faugère (2000) stresses fears toward the custom, it is believed that something bad can happen to you if you don't respect the rules and values of the

custom. However, the aspects of the custom are beyond the scope of this work, it is important to understand that they can impact fishing practices as well as fish commercialisation.

Bensa and Freyss (1994) describe how the Kanak subsistence economy and the capitalist economy mainly controlled by European evolved and coexist. They stress that after the World War II, the end of the "Code de l'Indigénat" progressively opened salary positions in the public function to Kanak people marking a shift with the introduction of money into Kanak society. They describe this move as limited and with contrasting aspects. Faugère's works investigate monetary transactions in Maré Island. According to Faugère (2002), money has somehow disrupted the traditional sphere by interfering with family relationships. She notes that despite their long experience of monetary and market transactions, it does not seem that (or very little of) this type of exchange existed within the family before the 1960s. Until the 1970s and 1980s, European settlers ran local stores, and only in the 1970s and 1980s did Maré people open their own stores. They then faced an ever-present problem: "how to get close relatives to pay?" Faugère (2000) underlines that the money is used both in the socio-cultural circuit during traditional exchanges between groups, and in the market economy between individuals. In addition, she notes that someone materially "too successful" might experience the pressures of rumours of jealousy, which are feared because often linked to practices of sorcery, her observations also stress the burden of relatives taking advantage of kinship ties to avoid or delay payments. Faugère (2000) highlights the paradox of equality in an unequal, hierarchical society, whose appearance of equality is maintained through fear of custom. These observations echo Curry's work (2005, 2011) in Papua New Guinea who stresses "the recognition of the social embeddedness of village-based enterprises provides a less Eurocentric and market-centric view of small business development which opens up possibilities for a type of rural development that meets the needs of people in culturally defined ways." (2005:243). His work elaborates on the possible overlap of the activities that impact on the sustainability of the activity. Relating to the importance of fishing activity traditionally it offers a way to think about the mixed embeddedness and its implications. We underlined that agricultural production on Loyalties is oriented towards self-consumption, and supported by the public authorities, but it is also important to note the element of widespread pluriactivity. According to Bouard and Sourrisseau (2010) the diversity of agricultural practices and the choices for promoting rural products illustrate the result of a hybridisation between market and non-market logics. It is important to take these elements into account to apprehend entrepreneurship on the island, but also fishing activity is complex and different kinds of fishing practices coexist. The next section settles the context of fishing activity in New Caledonia.

4.2) Fishing activity and fishing sector

Fishing activity is traditionally and commercially developed in New Caledonia and particularly in the Loyalty Islands. There are specific sea clans in charge of customary fishing activity for the chieftainship, especially for customary events. Fishing activity is presented both as a source of food security and also it has a high symbolic social value. Herrenschmidt and Sabinot (2014) precise that fishing activity has an important socio spatial function that delimit the territorial legitimacies of clans and inhabitants. Three types of fishing activity are usually recognised in New Caledonia (IRD, Zoneco program²², Leblic, 1999):

- Lagoon areas involve women and men with small boats, they can troll for tuna and other pelagic species, otherwise long line for snappers, or night diving to catch lobsters. Shells and shellfish are collected at low tide in reef and lagoon areas by foot or by boat (of less than 10 meters) in the surrounding islands. In Lifou there is no lagoon which excludes them from this type of fishing activity.
- Coastal fishing takes place up to 12 nautical miles outside the lagoon, using boats (of less than 15 m) and fish aggregating devices used to focus on pelagic and deep-water fishes, and feeds in majority the local market. In Lifou the reef cliff falls to a depth of 200m in the surrounding areas and there is no lagoon but access to resources such as snappers. In Lifou the Province of the Loyalty Islands is a principal actor within the fishing sector as thanks to the fish processing unity it permits artisanal small-scale fishers to market their catch whilst respecting the food and hygiene requirements.
- Offshore fishing activity is practiced between 12 to 200 nautical miles out, which concerns tuna long-liners. Japanese introduced this technique in the sixties. At the time of writing, in New Caledonia fishing activity with longliners had developed since the 2000s, with a total of six “fishing fleet”: Navimon, Pescana, Baby Blue, Seahorse, Albacore and Munun as well as with four processing companies: Pacific Tuna, Albacore, Menu and Pescana to which 94% of their catch is sold. Important to note, 82 % of their production is sold on the local market, compared to 18% dedicated to exportations. The Province is also active in offshore fishing activity with the company Navimon which is an historic and main actor of offshore fishing activity.

Coastal fishing activities encompasses different practices, and another distinction is possible between formal and informal fishing activities. In principle only the fishermen with a professional

²² Program dedicated to the evaluation of living and non-living marine resources in the exclusive Economic Zone of New Caledonia.

license are allowed to fish with a commercial goal. However, informal reef fisheries are complex, and between customary and subsistence fishing activities on the one hand and professional fishing on the other hand, other cash generating punctual fishing is practiced. Herrenschmidt and Sabinot (2014) note that in tribes, fishing activity seems to escape economic logic in the sense that it is not economically driven apart for some cash generating species which make figure of exception like lobster, shells, or octopus and allow people to supplement their lifestyle. Each “clan” had a determined function attached to their land and this relates also to fishing activity. For example, Bernard, Lacombe, Lancelot, Herrenschmidt, Sabinot (2014) explain that sea-turtle fishing is a collective activity. Clans of the sea are in charge of this type of fishing and can allow people from the other clans to participate.

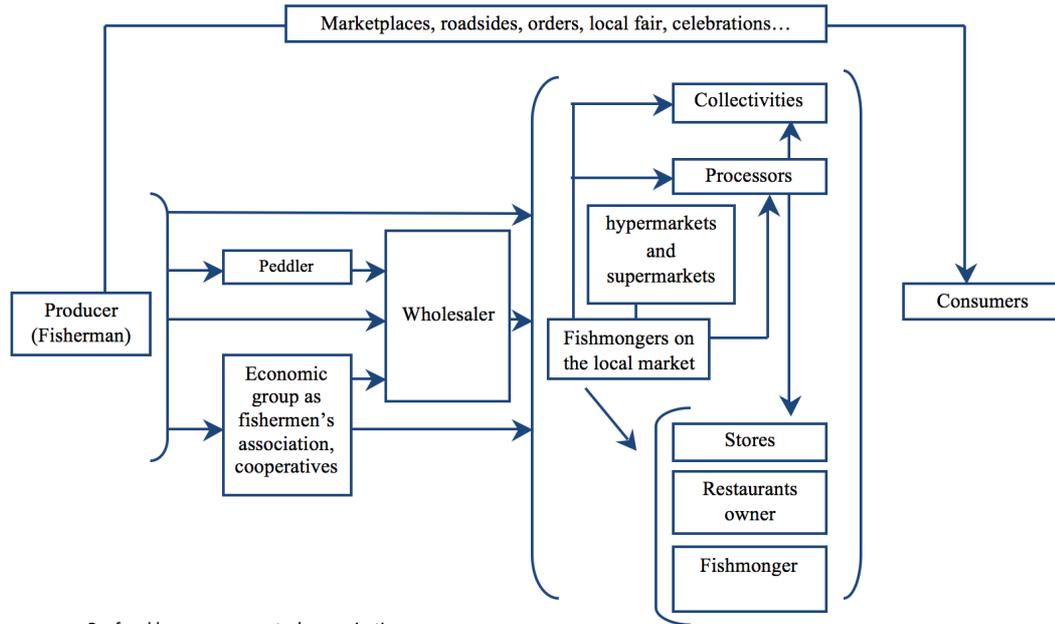
Looking at it under the lens of commercialisation professional fishing activity can refer to two different types: small scale artisanal fishing activity and offshore fishing activity. As Noumea is the capital where all the infrastructures have long been concentrated, most of New Caledonian companies, the few who export, are concentrated there. Based in Noumea, Navimon is the biggest and oldest operator in the offshore sector in New Caledonia. In the offshore fishing sector, the SODIL²³ own shares of Navimon and Pacific Tuna²⁴, while in the artisanal fishing sector the SODIL has developed fish processing unit on each of the islands.

Hereafter from the Secretariat of Pacific Community is represented the artisanal fishing sector, this diagram does not consider the informal networks of subsistence fishing, and customary fishing activity.

²³ holding company created by the Loyalty Island Province in 1992.

²⁴ processing and packing company and based in Noumea.

Figure 7: artisanal fishing sector



Reef and lagoon areas sector's organisation
 (from « Étude de veille économique: la filière pêche en Nouvelle-Calédonie, Théo Gontard et Guylain de Coudenhoze, Lettre d'information sur les pêches de la CPS n° 141 – Mai-août 2013)

The Province of Loyalty Islands also promoted the development of supporting institutions as the management centre/incubator called “*La Case de l’Entreprise*” which aims to help entrepreneurs in the islands. Along with the Province other institutions are linked to the fishing sector, locally, as for example the non-governmental organisation called ADIE²⁵ or internationally as for example The Secretariat of Pacific Community on the assessment of the different stocks including coastal fish with a bottom-up participation with communities.

²⁵ Mentioned p.14.
 Page 93 of 229

Conclusion

This chapter highlights key elements to better apprehend the role and development of professional artisanal fishing activity in the Loyalty Islands. At the level of the territory, the abundance of nickel has created a substantial source of revenue for New Caledonia, however its long-term environmental impacts, its effects on social inequalities and the vulnerability of the rent model, have encouraged to consider other pathways to development, illustrated in the politics deployed (Sourisseau, Geronimi, Blaise, Bouard and Zugravu-Soilita, 2016).

Overcoming the political instability and social conflicts New Caledonian people have been able to innovate by searching peaceful solutions through dialogue leading to the transformation of former institutions in a more culturally sensitive framework for economic development, aiming to build "the common destiny". The mitigated success of rural development programs, including professional artisanal fishing projects, raise question towards the factors that can influence, impact, or hinder the development of projects, especially how Kanak people perceive fishing activities.

The question regarding self-determination sheds lights on the complexities of its articulation. The Noumea agreement, which provides a framework for the decolonisation process, arrives to its end. In this process, people need to decide the degree of independence or sovereignty for New Caledonia, and maintain the consensus treasured by the signatories. In this context, the question of how entrepreneurship can be a vehicle for self-determination, with the example of fishing development, call to a need first to examine closely the meaning and perceptions related to this activity and better understand how is articulated the social economic fabric in the island. Chapter 5 will present the data collected concerning the sectors observed and profiles met during the field of study.

Chapter 4: Results

The previous chapters have paved the road to better appraise the data collected, or to phrase it more precisely, the theoretical framework invites evaluating fishing practices under the lens of opting-in and opting-out the global economy, with varying degrees of transformation considering the impact of different kinds of capitals. The context emphasises the importance of formal and informal institutions with the changes leading to the formalisation of current New Caledonian institutions, marked by the role played by the provinces in economic development, as well as the permanence and re-composition of Kanak cultural capital.

This chapter presents the results of the field study with contextual observations on tribe environment, complemented by interviews with key informants to better contextualise the practices observed. Then from the interviews carried on Lifou and Ouvéa I present the cases of on-tribe fishers relating to opt-out activities, followed by the cases of commercial fishing projects which relate to opt-in activities, and the profiles are completed with the field notes and information from the documents collected on the field. Then, to complete the view on opt-in strategies I present the information collected on the case of the fish processing unit in Lifou.

1) Setting and transversal overview of the sectors

1.1 General observations

Figure 8: Map of New Caledonia



Source: <https://geology.com/world/new-caledonia-satellite-image.shtml>



Figure 9: Chateaubriand bay, Wé, Lifou (from top of Luecila) photo by author



Figure 10: Province's offices, Wé, Lifou, photo by author

Life on tribe is marked by the prevalence of a vision linked with the idea of “living together”. It is in a sense reflected in the political project of common destiny, and linked with the values of solidarity, sharing, welcoming and hospitality. The Kanak custom is manifest in everyday words and gestures, but also in great rituals. These elements reflect a certain worldview specific to the

Kanak culture. The exchanges during a visit represent the humility of one and the hospitality of the other. These values are reflected in the Charter of Kanak People and have also marked my experience in the field where I was generously welcomed into the tribe of Jokin. The Charter underlines the importance of the link to a family/ clan, the Chieftainship and at the same time how the openness of Loyalty islands' culture marked by the values of humility and tolerance. In this sense, referring to our interview with Albert Sio it can be seen as an “in-between” on the continuum from tradition to modernity.

On tribe, local events linking people together are many and the calendar is spread on the whole year. The wedding season is from June to August and during these three months tribes from the three districts organise their weddings on each weekend. Then from September start the fairs and each tribe organises a fair. Sport tournaments fill the day, with bingo, and local food including traditional *bougna*²⁶ with music and group performances in the nights. Alongside serving a social function the events are a source of additional funds for each tribe to carry on their projects.

The chapter on context stressed the importance of religion on tribe, a phenomenon that dates to the beginnings of colonisation. The Charter of Kanak People draws a link between Kanak spirituality and Christian spirituality as they are based on the same belief in a Divine Being / Spirit. The text explains that for the Kanak believing in God is an extension of belief in the Spirit of the ancestors, and by this means was accomplished the rooting from the origin of Christianity in the Kanak world. Many of the fishermen cite the pastor of the tribe when asked to whom they distribute fish and when I was in Jokin the money collected by the fair aimed to finance the upgrade of the church.



Figure 11: Church of Jokin, Lifou, photo by author

²⁶ Traditional dish made with yams and local vegetables cooked with coco milk in banana leaves.

Aside from the presence of religion persists another belief, as when people like to refer to the invisible world. This conception is linked to that which is hidden, secret or taboo. It was crucial to consider the influence of these perceptions on behaviours when going to fish, such as places that are taboo or non-taboo, and how they impact on fishing practices.

I took the opportunity in Noumea to attend a conference at the Center Jean Marie Tjibaou where Professor Patrice Godin presented a lecture on his ethnographic research on the Kanak case (traditional hut) and Kanak tribe in Hienghène (East coast of the mainland). During his presentation he stressed the hybrid character of the household where in a traditional case the house often neighbours a tin shack where the kitchen or showers are usually situated. More recently there is the development of houses in cement, and depending on tribes, families have become accustomed to use this as the principal house and keep the hut for accommodating travellers and guests.

The traditional Kanak hut is symbolic in several respects. The solid and carefully chosen timber materials, which were usually built by the "elders" before, are future-proof, and only the straw needs to be changed every few years. Its round architecture defies the storms and strong winds from the Pacific. Inside, the different mattresses are arranged around the central pillar and the fire where stories used to be recounted in the manner of oral tradition.



Figure 12: Kanak case, photo by author.



Figure 13: Inside the case photo by author.

Lands are rarely separated by barriers, and traditionally natural markers such as fir trees are used to separate the different fields. Coconut trees also have an important role as markers because they are not endemic species so their presence means they have been brought by the elders. The

existence of coconut trees on a plot of land therefore testifies to the previous belonging of this land to someone who somehow protects it.

Each Kanak has a field, I often heard "if you don't have a field, you are not a Kanak!", or "you are not from Lifou", and indeed all the fishermen I had the chance to meet had a field, as well as the people working in offices at the Province. It is dual in function, since providing yams for customs is at least as important as providing subsistence. The field is also intimately linked to the logic of pluriactivity observed in tribes and in parallel to the fish processing unit. The processing unit for the Agricultural Products (UCPA) also plays a central role.

In the whole bouquet of activities carried by people the punctuality or seasonality of most activities have caught my attention. As mentioned in the precedent chapter, fishing activity is developed along with other sectors targeted by the Provincial support for development. One interesting element in our first interview at the Province was their intention to allow development on tribe without perturbing the way of life. In this spirit on-tribe life and the activities already carried by people has been supported, in addition to the necessary infrastructures to carry on these activities. At the province they mentioned they work on a logic of formalisation with the will "to integrate a bit the informal".

The decision to stay at the tribe is presented as a conscient decision, as an expression of Kanak's way of life, in the respect of the tradition and the elders. At the same time the interviews conducted underline the attraction of the city for young people, and the necessity to study, which drains lots of young people far from their tribe. Pluriactivity is still, as noted by Bouard and Sourisseau, (2010), characteristic of on-tribe household strategies and it is interesting to underline the complementarity between the activities supported. At the tribal level, the small volumes of possible production require diversification into high value-added products such as vanilla or honey. The Kanak people interviewed were participating in at least one other activity like tourism, honey, or vanilla, and as mentioned everyone takes care of a field. The research explores these aspects to understand the spectrum of trajectories carried on, relating to the objective of better appreciating the strategies developed.

1.2 Agriculture

The provincial support is determined by the "*Code de développement*"²⁷ of the Loyalty Islands economic department. For the whole province, the agricultural sector encompasses five channels: arboreal, coco, vanilla, vegetable crops and subsistence and we can note a specialisation on each island. To better understand each case, firstly is presented the information collected on the activities

²⁷ [MAGI-NC \(gouv.nc\)](#)

that were also carried by the people I met. The Province via the SODIL participate in the different activities of copra, santal wood, vanilla and agriculture.

Ouvea's lagoon and landscape are caricatural of Pacific stereotypes. Along fishing activity, which is practiced by mostly all families, the elders have, generations before, planted coco trees. Via SAS ISI copra production today and its transformation by the local factory in products as soap or oils allow to generate a little income for many families, where each coconut brought 200 XPF which is about £1,45.



Figure 14: Wadrilla, Ouvea photo by the author



Figure 15: Ouvea, tribal fishing boat photo by the author



Figure 16: fishing ramp, Ouvea photo by the author

Santal wood's production and extraction is an activity carried by some entrepreneurs to complete their revenues, this activity being more important in Maré and Lifou than Ouvéa. We can be reminded santal wood was traded early before colonisation and has even given the name of the west bay of Lifou, *Baie de Santal*. Maré is known to have a greater quantity of santal wood and the implantation of a plant to extract and process the oil was in the debate but apparently has been slowed by customary decisions. An interview with the head of the incubator in Nouméa explained that the project was carried by a Kanak engineer and entrepreneur from Maré who worked at the research institute and came out with a process for santal wood extraction. His project has been described as "exemplary". *"An eco-distillery around a process kept secret and in addition, because there is a whole process around sandalwood when we cut, it is that somewhere we must at least plant the equivalence of what we cut so in addition it has developed within the tribes and by setting up an ecosystem respectful and finally in phase of this tribal organisation, a reforestation program with a fair return to the actors."* Facing the pressures of the international demand, the prices proposed by the Chinese tend to bypass the local project and illegal exportation has been under the spotlight. In 2015, just before the research the government had blocked every exportation of santal wood: *"Because here we are on dry cutting without reforestation behind, the Chinese do not care whether we will have a reforestation dynamic or anything"*.

On Lifou, in Hnathalo, a factory to process vanilla called "*Maison de la Vanille*" has been developed managed by "*SAS Vanille des îles*" which is also a subsidiary from the SODIL. Vanilla cultivation takes patience, as it takes four years for a first harvest to emerge from the first

plantation. A leaflet collected in the field informed me that vanilla arrived in the Loyalty islands in 1860, brought in the trunks of Pastor Mc Farlane who had come to spread the gospel on Lifou island. Today the vanilla pods produced on the three islands of Ouvea, Maré and Lifou, after being checked for their ripeness and they are bought by the *Maison de la Vanilla*. The harvest is sorted and weighted, then scalded, sweated and sun-dried for about two months, then shade-dried for about four months and then conditioned in wooden boxes for about six months.

Finally, the arboreal and food sector have also been supported by the Province, with mix results. It is important to consider the geological characteristics of the islands. In an interview they stressed that the land is unfit to a large-scale agricultural development because of the quick impoverishment of the soils made from coral cover with a light primary forest. The elders have achieved to develop a low scale agriculture resting the soils for about seven years in average, clearing some new spaces. The abundance of coral "stones" makes the use of machines close to impossible and the work difficult. Indeed, preparing an area to turn it in into field is tedious: after clearing the bushes, removing the prominent coral stones is the longest part. First, a fire is made on the stones and then, with a crowbar, called the "*barre à mine*" they break the stones on the surface. The fields, however laborious to arrange, produce a variety of products from tubers as yams, taros or sweet potatoes (see on figures 12, 13 and 14) and an arboreal production of fruits from litchis, mangos, pineapples (see figure 15), bananas (figure 13 and 14) but also avocados, or custard apples.



Figure 17: Lifou, preparation of the field, woods settled for yams, photo by the author.



Figure 18: Lifou, yams and banana tree, field, photo by the author

People take care of their field every day, the crops are source of pride, especially the yams which provide for customary ceremonies. Along with the seasonal crops and the symbiosis between activities the feature of permaculture was another noticeable element which reflect harmony.



Figure 19: Lifou, banana tree, field, photo by the author



Figure 20: Lifou, pineapple, field, photo by the author

1.3 Tourism,

Tourism has developed along different lines in Lifou, from traditional accommodation, through to hostels and contracts with the cruises which we have mentioned previously. The Province of Loyalty Islands is also a pivotal actor in the tourism sector thanks to hotels in which it invested, and the many on tribe projects which have been granted.

As well as the wedding season, there are many on tribe events across the year. The “*fête de la vanille*” for Lifou, “*fête du vivanneau*” or “*fête de l’avocat*” in Maré or even “*fête du lagon*” in Ouvéa attract tourists from all over the territory. Fishing is an essential actor; the moms cook plates made with local fish; and fishing activity is under the spot of “*fête du vivanneau*” (snapper fair) in Maré and “*fête du lagon*” in Ouvéa. These activities allow to develop individual initiatives with rural gîtes, artisanat and snacks. Other smaller fairs are still inter-tribe events and tend to develop their attraction across the territory as “*Fête du miel in Easo*”, “*Fête de la patate*” in Hnatalo, “*Fête du Pahatr*” (local fen) in Muchaweng, or “*fête de la paille*” (straw fair) in Tingueting.

In addition, as mentioned above the development has been supported with cruises from Australia and New Zealand. The ships visit Lifou and Maré but not Ouvéa as the population have decided to not let the ships land in the lagoon for conservation reasons. The main fears declared been the spread of ciguatera, presents in the other islands but not in Ouvea and the overall impact of the ship. The company Mejino Wetr has developed in Lifou along the development of cruise-ships coming to New Caledonia. During the field I could observe the organisation in Lifou. The tourists prebook from the cruise-ships their activities like the visits of the main spots of the island, the visit of vanilla home, hunting the coco crab or enjoying the visit of the other special sites as intriguing caves, deep natural pool, or paradisiac beaches.

Figure 21: Cruise in Easo, Santal Bay, Lifou, photo by the author.





Figure 22: Tourists landing from the cruise in Easo, Santal Bay, Lifou, photo by the author.

The manager of the tourism sector was from the same tribe than the one where I stayed, Jokin, so I could meet her thanks to the family who welcomed me. She explained:

“At the boats’ arrivals, it's always the same organization: in the morning at 8am the first boat arrives with the people, all service providers including 120 self-employed. They come; they settle. So, over there you have the braiding and the massages, here you have the kayak canoe rental, mask and snorkel rental which is normally around there. After you have the bike rental. Afterwards, at third level all the carriers come as there are packages sold on board, so we already know the day before the number of people who go in different tours, so we have: visit of the cliffs of Jokin, with inside the stop to visit the vanilla plantation, botanical garden in Muchaweng. The second round is on Nhatalo so it will be more cultural with the visit of the big hut of the chiefdom with explanation in English of all the custom of the culture and a demonstration. So that's for the tour of Nhatalo, then we have the tour of the vanilla house which is the vanilla factory in Nhatalo which explains the process from planting to marketing, of (?) vanilla: visit of the factory itself .Next to it there is a small animal park with wild animals, after at the level of other towers we have the cave visit which is 5-10 min from here, between Muchaweng and Xepenehe. It is a private tour which offers a pedestrian route. So, in the first par there is the explanation of the medicinal plants and culinary plants, that we use every day, normally by every Kanak ... So medicinal in everyday life normally

every Kanak knows here are the people of Lifou know. So, for example, a tree is used for this, we take the leaf of this tree to boil to cure ... This is traditional medicine; and the second part will be the visit of a small cave to end this tour, and there will be a demonstration of traditional traps. This is the fourth round, and then there is a last round which is the beach of Luecila where there it is a little more relaxation and swimming.

Regarding development they stress the advantage of the cruises in bringing external input of revenue in the local economy. Everyone participate to a certain extent to the activities developed, pluriactivity is often referred to as “having various hats”. The moms develop different kind of activities backed up by their families selling traditional dishes called “bougna”, made with yams and sweet potatoes slowly cooked in coco milk with other vegetables and sometimes with some additional pieces of fish or chicken. Some others selling service of traditional braiding, massaging, and presenting traditional wicker-works workshop with coco trees leaves. Moms from the whole island come and participate. On the road to the activities, people set up little stands and even sell both in pacific Francs and in dollars.



Figure 23: Stand in Easo, Lifou, photo by the author.



Figure 24: Stand, Lifou, photo by the author

Thanks to the regular flow of some 2000 tourists per boats, the objective of creating a little source of income for the families, and of allowing everybody from the island to participate was clearly affirmed. Apart from the food and services sold, the organisation tends, for example, to turn in the participation of the group of dancers between tribes coming from the three districts.

As mentioned, the seasonality and the fact that these different activities are not developed in an intensive way seemed important to note with the result being an ensemble of activities to which the whole household regularly participates. These observations build and echo the observations

made by the IAC. In addition, they echo other observations on fishing communities where the whole household carries on a strategy made of an ensemble of activities.

The interviews underline the importance of cycles and seasons which reflect the vision of time within tribes. The seasonality and complementarity of human activities draw a balance with nature's rhythm. The precedent chapter stresses that people are connected to their land and to its elements by the means of totem animals and specific beliefs. These observations encouraged me to consider this complementarity when looking at the various fishing activities and to seek understanding how they are embedded with the way of life.

2) Fishing activity:

This part presents the different cases in which the fishing unit was our unit of analysis. Two types of cases appear, first when I met groups of people who used to fish together in a regular basis, these cases often relate to customary and subsistence fishing when fishing is practiced by people of a same clan or tribe; they are presented in the first part. The second type of cases is when the fisher is an individual and sometimes as captain he fishes with different people of his choice. A coding has been elaborated for naming the fishing units in order to keep the anonymity of the participants, fishing units are sometimes made of one individual, and sometimes a group of few.

2.1) Customary and subsistence fishing.

As previously mentioned, fishing activity is part of tribal life and is performed during the day or by night, on foot, swimming or with little boats. Diving by night is efficient as the fish are asleep but it requires dexterity. In the evening people dive and catch fish and lobsters with spearguns. Another popular technique is to practice the line, where people use baits like fish crabs, or a traditional technique which consist in collecting the pocket of octopus ink when they fish an octopus and let it dry in the case. Then on the reef with the line this technique is very efficient for local *signanus lineatus* locally called *picot-rayés*. People have specific technics they shared one which constitute of rat-shaped lures to catch octopus. Based on a legend, which has several versions across the Pacific, a rat shaped lure is made because the octopus seeks revenge on the rat who misbehaved with it in the past. Another popular technique used to catch small fish at rising tide, is with the net as for example on the figure 20, to catch small picots. These observations corroborate with Leblic (1990, 2008).

Interesting research from the IAC, looking at the activities developed on tribe, stresses that fishing activity is also seasonal and for most of families is practiced about half of the year to only a third of the year. As these figures are constructed with aggregation, they reflect that people fish for few days and might not need to go at the sea everyday as there are also other sources of food.



Figure 25: Catching fish with net, pointe Daussy, Lifou, photo by the author

I have been welcomed by a family from Jokin, in the North of the Island. The people interviewed in Lifou were from different tribes²⁸, and a particular attention has been placed in interviewing people from the three districts. However, it was difficult to interview everyone (*see chapter 3 method, difficulties*). As I stayed in the North, the fieldwork started in the Wetr district, making observations on the different tribes, and travelling to Wé thanks to the dad of the family. Renting a car after all allowed me to travel to the other districts of Lösssi and Drueulu, to complete the interviews and observations. It made me realised that if someone does not have a vehicle and relies on the bus, it is very difficult to develop an activity, and any administrative process is long as the province's offices are in Wé.

ObK

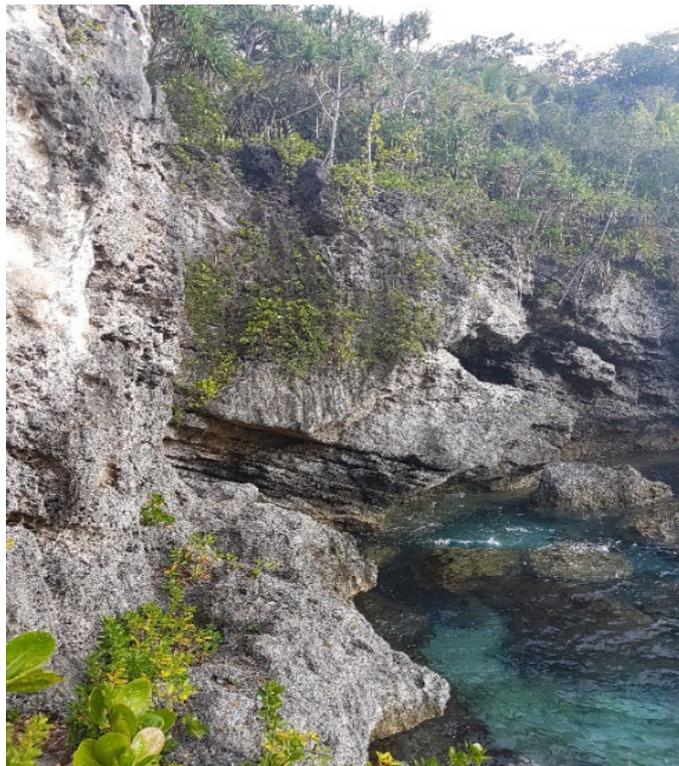
ObK is a group from the North in the district of the Wetr, they are in their twenties to thirties. One explains that like other boys who stopped their studies after the baccalaureate, he came back to the tribe. They are four boys at home, and they go fishing in Jokin's bay, for the house or for customary events. Most of their techniques are traditional and adapt to the specificities of costal fishing on Lifou. For example, they use long solid lines when they want to fish from the cliff, which hight can be appreciated on the figure 21 on the left. In addition, they often go hunting either

²⁸ For an example of interview please refer to annexe 2.

goats or wild pigs in Lifou's dense vegetation. They are not used to sell fish; the catch is reserved for the family and for the events. Fishing is not planned, a nice weather and a calm sea call people to the sea, on foot or with the tribe's small craft harbour boats of about three meters long. ObK explained that the boats belong to the tribe association created previously by some other young people who have now left for Noumea. There has been a turnover in the association and now it is their turn to use the boats for fishing. They take care and watch the bay, and he explains that he would not like the cruise to stop here. One expressed concern about the impact of development, worrying about the coral dying because of the pollution from the cruise ships and about the possible disappearance of fish if people catch too much. He also witnesses that fish are disturbed by human presence and adds that tourism and reserves does not coincide very well.

We went to fish with three other boys from the tribe to provide food for the dinner organised to fund the travel of the volley team of the tribe, qualified for the tournament in Noumea. When we went by night, they explain they use the mountains and stars to be able to guide themselves in the night and locate the fishing spots. People helped me to prepare my line, and when we started fishing, it was very quick. Despite my poor experience I achieve to catch some fish too. The two diving brought back lobsters and fish; it was a good catch. When we finished, we made a fire at the shore and shared a lobster. The moms organised the event at the common house of the tribe. There, everyone helped, some to prepare the dining room, some to bring food and drinks, other helped to cook and the local group of the tribe played music. Everyone participates and people from other tribes also passed by for the event. Tickets were sold 2000Frc which is about 14,5£, to which more than 50 people attended, maybe some were invited.

Figure 26: North Cliffs, Jokin, Lifou, photo by the author



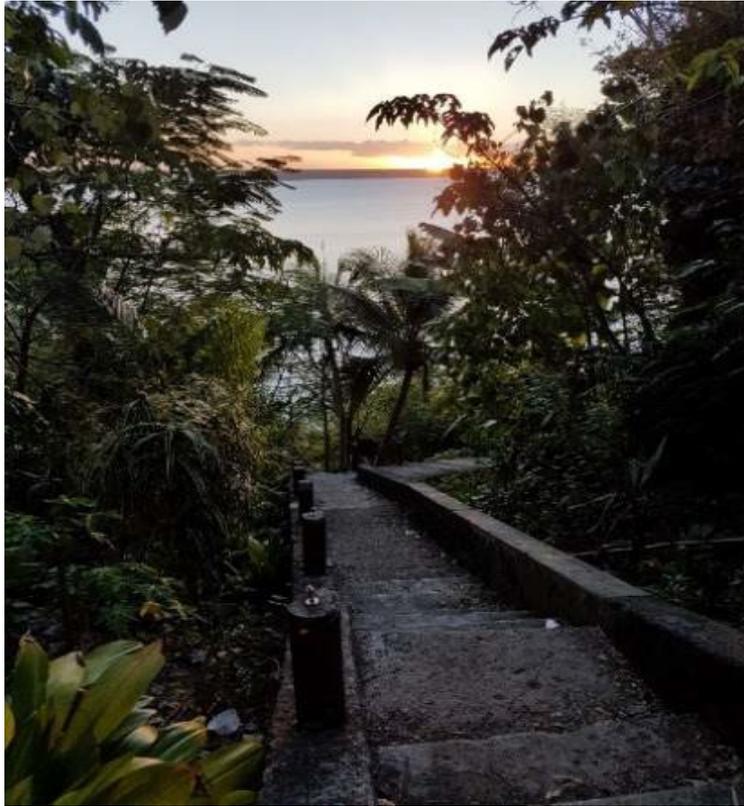


Figure 27: Stairs to tribal fishing ramp, Jokin, Lifou, photo by the author

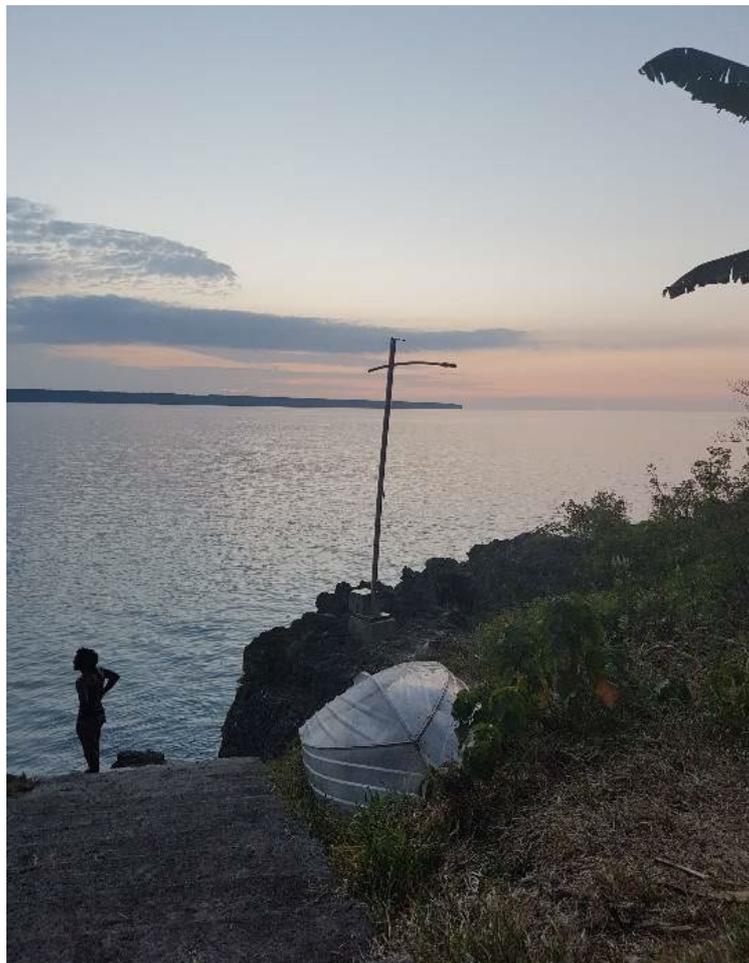


Figure 28: fishing ramp, Jokin, Lifou, photo by the author



Figure 29: boats at the fishing ramp, Jokin, Lifou, photo by the author

BmM

BmM are also between twenties to thirties years old. They are from the tribe of Luecila in the centre of the island, in the north part of Wé (the capital) which neighbours Chateaubriand Bay. One related that his grandfather arrived to Lifou from the mainland by boat with a specific fishing technique similar to an artisanal creel, thanks to which he explained, the chief gave him a place near the seashore, and that now his dad's older brother stays there. He learnt fishing when he was young, like a family activity, but now they find the area busy, and the fish becomes rare and "smart". In addition, there are concerns for ciguatera in Wé. When he used to go with his uncle, brother, and cousins he used to enjoy fishing, the patience it requires, and he stresses spending times with his brothers and cousins, as it was just little fry fish, grilled on coco, not much. Now sometimes they do a retreat going by 30 km from the tribe, crossing a large coconut grove to go toward a place they know there is no one, diving and hunting with spearguns and searching for coconut crabs. They stress this does not happen often, this like a gate away from the civilisation, however they then stressed that they like the animation where they live.

Their education ended with the baccalaureate, and they do not have a formal job, but thanks to tourists in Wé and from the cruise, they organize tours, adding additional features to enhance their trip. Their preferred method of payment is to let them give what they believe to be fair.

BeI

BeI are from Hnatalo, the tribe of the great chieftainship of the Wetr district, and they are from the same family, uncle and niece. The youngest is in her twenties; she started fishing with her brother but now usually fishes with other girls from the same tribe at the seashore. For subsistence fishing they use to go by little groups of two or three people by night, she explained she usually goes with her cousin (another female).

Sometimes they go in bigger group with the boys. She described a gender specialisation explaining " *the cousins (boys) they go diving and the girls stay close to the shore "to pick up the animals that are easy to catch (laugh) while guys, they're going to hunt.*" This supports Leblic's observation that fishing is often carried by males and the woman are more specialised in shell collection (Leblic, 2008). These occasions are often to fish for customary events, in Hnathalo, there are different kind of events, the main ones are the potato festival and the tribe's fair, in addition to the religious events. Hnatalo is the only catholic tribe on Lifou, all the other tribes of the island being protestants.

When we went to the shore, we walked for about two hours, first crossing the fields, and vegetation, then climbing the coral relief where we had a view on Lifou and Hnathalo. Then we crossed a coconut grove and arrived at the shore. They use simple material, for example she uses the coco leaves to take out the winkles from their shells. At the shore, everyone can come and fish for its needs, but they need to follow customary rules, for example respecting rare species like sea cucumbers. Also "strangers" are not welcome alone, each family watch a part, each one look at a piece of the sea as an extension of its territory.

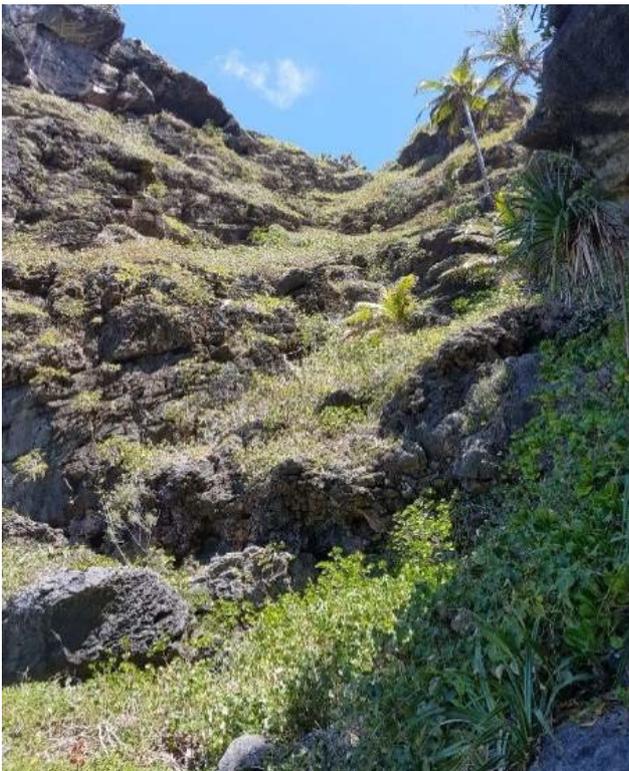
Her uncle, in his fifties, fishes during the day but not every day, for subsistence and for sharing with his family. They are fourteen brothers and sisters and nine people in his own family. He only fishes with the line, in the area where only the line is allowed. Techniques are kept simple to preserve the resource, and he explains the area isn't very big and that you must be careful of what you do. He adds that each person has his or her area and take care of. On the side he mainly lives from agriculture cultivating yams and vanilla.



Figure 30: Hnathalo, line fishing on coral, Lifou, photo by the author

BmU:

This was one person I met, in Easo. He was here for the cruise, explaining that aside tourism, he also practices fishing, mostly in apnoea, to catch fish and lobsters in addition to coconut crabs' hunting. Usually, he fishes in team with two or three people from his family and neighbours, principally for home, and sells aside but does not have a fishing licence. His boat is a zodiac four stroke engine, very economic. When alone he will usually go to fish at the back his land by foot. There the access is tedious with a cliff (see figure 26) to climb down or up to access a rocky shore (figure 27) and we can easily understand that the catch would be limited by our capacity to carry it.



*Figure 31: Cliff on the way to fish, Tingueting, Lifou
photo by the author*



*Figure 32: Cliff on the way to fish, Tingueting, Lifou
photo by the author*

The reality for most of the tribes in Lifou is being shored by a rocky coast and few ramps. When we went fishing by the cliff, it took us about 15 min to go down the cliff and then a long walk across the rocks of more than an hour to arrive to the fishing spot. We found the baits on our way, using little crabs. Equipped with flippers goggles and scuba I followed BmU into the blue. With his speargun he caught a *saumonée* (*Plectropomus leopardus*) and then we came back by the same means. At home his brother had killed a wild pig and prepared it in the traditional Kanak oven (into the ground), we were invited, and he kept the fish for the family in the freezer.

I have been fortunate enough to also go fishing with them at night during a full moon with the zodiac from Wé on Lifou's East coast. We were in team with another fisher KbL, and KbL's

son. From the Marina, where his boat is moored, we went diving along the coast leaving at about 8pm and finished up to the North near the coast of Tingueting, around 11pm. We progressed slowly as we were three in the water and one stayed in the boat, progressing parallel to us, with a distance to the shore. The two others were equipped with spearguns, and I followed observing. We also had underwater torches. Their knowledge about the area was key to find the lobsters' nests in the dark. A shark of a good size appeared, maybe attracted by the lights of the torches lamp, and came calmly toward us passing by. Coming back toward me, BmU made a sign to go up to the surface, and asked "Have you seen the shark, Julie?", the question seemed ironic, but he was serious, pursuing "don't worry, we gave him a fish!". I must admit few minutes after I came back to the boat with his uncle. Yet, the anecdote reminded me of the special relationship the people from the Loyalties have with sharks and their perspectives on them. Sharks are totem animal and for some people and can symbolise ancestors or grandfathers.

They only took few lobsters per nest and threw them in a large buoy when full, and the buoy was emptied into the boat. This operation is repeated up to when they achieved their goal, we followed a good hour. When we saw another boat fishing upfront of us, the capitaine in our boat, explained that we should move forward if we want a good catch without impacting on the resource. At the end, we shared a lobster at his home.

Ouvea is an atoll, and the context is a bit different from Lifou, the territory is smaller and endowed with a lagoon which make fishing activity more accessible to the families. The family from Lifou helped me make contact and I was welcomed at the pastor's house in Gossanah, in the North of the island, where they connected me with two old fishermen.

TjX

TjX is around 65 years old and in the family everyone fishes. Yet he stresses that his life is punctuated by his plantations; he explains "fishing can happen every day, but the field needs to be prepared in August". He usually goes fishing two to three times a week behind his land, only with the line, and uses to catch *picots*. His son practices commercial fishing two to three times a week with his boat. Hector explained he had a boat before and uses to go with a group of men. They were always four people, but he uses to swap people to allow everyone to fish. At the shore, women and girls are used to wait to help scaling the fish and subsequently get a share. At these times he uses to sell fish to the shop in Lifou in Chepenehe where a grand dad was from his family use to be. Now

he grows a traditional sweet yam called *Walei*, a special fair in Saint-Joseph district in the North of the Island is organised every year for the new yam.

EfV:

EfV is about 55 years old. Even though fishing is a part of his family culture, he does not need a boat neither does he sell fish but rather considers fishing to be a customary activity. He has two children, an older son from whom he has a grandson, and a daughter who is still studying. He uses to fish for the needs of the house, just going down his land. Because of the sun, he prefers going in the evening or at night, swimming up to the coral, fishing does not take more than 30 min. In the tribe everyone goes down his house to fish. In the area, only the line is authorised, if one wants to dive and hunt with spearguns he needs to go behind the reef. Even the net is forbidden apart for some customary ceremonies. He explained the importance of the seasons. During spring tide cycles, at low tide, families stay at the shore picking shells and fishing, however when it is the season to start the field, they still fish a little.

Aside, in his field he grows cassava, yams, and collects coconuts to sell to the local factory. The factory project aimed to reduce the pain associated with copra production before they had to shell them and heat them in the oven. Now he brings the coconuts to the factory and receives an income, which completes the allowance he receives from the state.

Among the fishermen without a licence, some may fish for customary purposes when it is required, such as for family events like weddings, or any other events for the tribe. The discourse around the fears, objectives and goals of customary fishermen relate to different aspect of the territory, practices, and habits. Some people use the word “combat”, another, “duty to protect” to describe their role. In Lifou, fishermen explain the resources of fish and coral are perturbed by cruises, and boats. Where boats stay in Easo the coral is completely damaged. They explain they have put in place big block in cement underwaters so the boats can stop there and not destroy all the coral. In Jokin a respondent explains “it’s our battle here now with the boats, in Easo they start to complain but it is a bit too late”.

2.2) Fishermen with a licence

The second type of cases were people engaged in a commercial fishing activity with a licence²⁹, and in a project requiring a boat, which entails working with the fish processing unit. As many people fish but at different degrees and with different techniques, the fishermen who were engaged into

²⁹ For an example of interview please refer to annexe 3.

regular fishing activity were sometimes referred to as “true fishermen” in the discussions. Although the distinction is not so clear cut, in the population some people fish everyday but don’t sell, some people fish and sell occasionally, and even the professional fishers I met, generally had to work aside to complete their revenue. The element which made a real difference is that people engaging in a project with a boat face different kind of changes. Firstly, taking a credit for the boat, even if there is an additional support from the province, implies engaging in a regular activity because of the monthly payments. But also, artisanal professional fishing activity implies changes of material, as well as the species targeted, and changes of fishing areas which consequently implies changes of fishing techniques, knowledge and business processes associated, due to the new cost structure.

The boats, 3rd category, allow to navigate up to 20 nautical miles. Taking the example of Lifou, the interviews reported that staying one night at the sea some fishermen mentioned sailing up to the North of Ouvéa, or even to the island of Tiga (on the right). These locations are indicated with red crosses on the map hereafter and allow appreciate the distance from the port of Wé (in yellow). These elements stress an extension or displacement of the fishing area compared to traditional fishing grounds which used to remain close to the shore. Considering the threat of the “blue boats” (Song, Hoang, Cohen, Aqorau, Morrison 2019), to which people often referred to on the field, it is worth noting that the support of the boats could help the monitoring of the species and reduce the risks of illegal fishing.

Figure 33: Fishing area, line 20 nautical miles



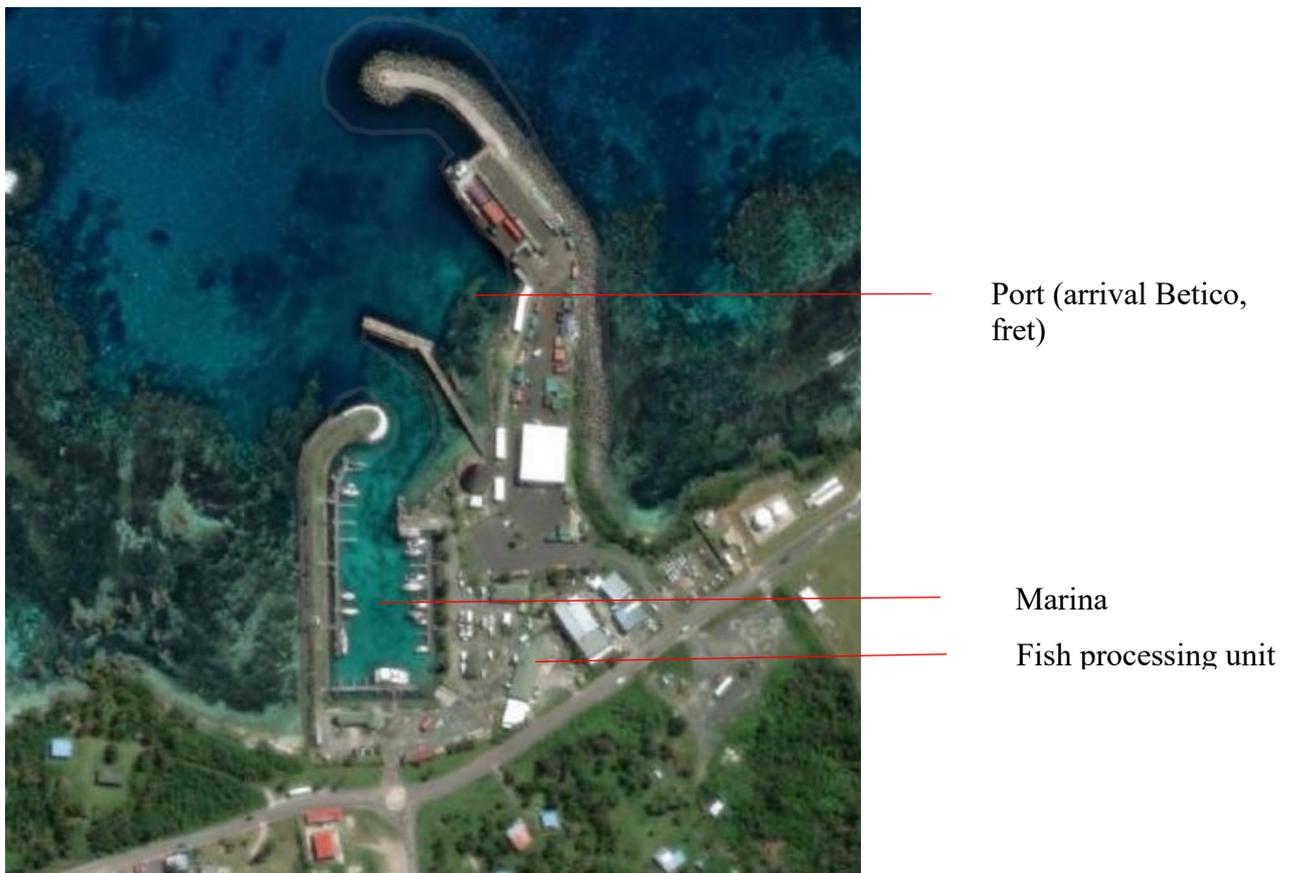
Source: <https://georep-dtsi-sgt.opendata.arcgis.com/> (modified by the author) Licence Creative Common BY-NC-SA

Commercial fishing involves human capital (Becker, 1964) as the deep-sea fishing was not traditionally practiced and requires a different technique to bring the snappers from about 200 to

400m deep. A fisher explains “he sent us his fishing technician from Maré to give us a training in fishing the snappers because here we do not really fish snappers”.

In Loyalty Islands fishing activity has been spotted as a priority sector, and a small cluster to support the development of the fishing sector has been created in Wé. The fish processing unit, the marina, the administrative centre, and a few shops to purchase materials can all be seen as a localised economy.

Figure 34: satellite picture of the port, marina and fish processing unit, Wé, Lifou



Source: <https://georep-dtsi-sgt.opendata.arcgis.com/>

In addition, Loyalty Islands’ Province, via its politic of economic development, supports the fishing sector by a form of start-up program: the subsidies are numerous and cover job creation, aid for equipment, compliance with regulatory standards, training, aid for environmental protection equipment, help to comply with the formalities of creating a company, as well as studies concerning installations classified for the protection of the environment, feasibility studies for a project and also assistance with social security cover for the Company Manager (RUAMM). And

finally, there are commercial subsidies so that fishers can get subsidised for fuel consumption, when they are registered with a professional fishing licence and to provide monitoring of their captures.

Further down the line, the Province is involved at different levels for the animation of the sector with for instance, the participation to "*fête du vivanneau*" (snapper fair) and the commercialisation of the production with the fish processing units. From the province, the fishing sector is organised with a fishing technician on each of the islands of Lifou, Maré and Ouvea. This person is in link with the head of the syndicate to address the issues faced by the fishermen. The technician oversees the attribution of fishing licences and proposes solutions to help sectors' development and solve the difficulties faced by the fishermen. In addition, he is the contact for the fishermen to set up a claim and access to financial support, up to 60% for socio-economic projects (boats less than 6m). In 2014, 100 fishermen contracted a fishing licence, 44 in Ouvea, 28 in Lifou and 28 in Maré.

Each Province has its particularities but in general artisanal professional fishing activity is practiced with the same techniques. However, the head of the confederation emphasises that the rules are not applied uniformly across each province. Regarding the rules and laws, the head of the Confederation of fishermen stressed that the articles are been written bits by bits. For example, at the time of the research fishers in New Caledonia did not have a professional status in the same sense as farmers who are represented at the government level in the chamber. The questions regarding the status of the fishermen stem from the question of retirement schemes, and of insurance when the fishermen can't go at the sea, therefore being able to have an appropriate accounting system and a professional tax regime. The head of the confederation of fishermen explained that their goal at the time of the study was to catch up with the agricultural sector which was already represented at the government.

Through the confederation, the unions of the different islands organize and communicate. There are different dynamics between Lifou and Ouvea. In Lifou the cohesion of the collective organisation was challenged by ethnic differences like for example for the organisation of meetings. In Ouvea, the syndicate has raised the collective organisation of the fishermen which was manifested in the syndicate. For example, they developed a support scheme to finance material when the fishers have mechanical problems on the boat so they can pay for the repairs later, or they helped with the collection of fish. The Confederation of New Caledonian fishermen groups the syndicates of the fishermen from the South Province, the Federation of the professional fishermen of the North and the Federation of the fishermen of Loyalty Islands. At the time of the field of the research, the representative of the syndicate of the fishermen in Lifou was also the representative of the federation of the Loyalty Islands Province, and head of the confederation, and confessed to be

very busy. The role of the confederation is to encourage the fishermen to gather and to raise their voices as well as being represented.

DmU:

DmU is about 30 years old, he is from Touarek, a tribe in the centre of Lifou Island. He is the head of his family and is from a family CW is about 30 years old, he is from Touarek, a tribe in the centre of Lifou Island. He is the head of his family and is from a family of eight people, including three brothers. He also has a family on his own, father of one teenager with whom he sometimes fishes. Aside from fishing, he plays music, sings and performs at events, as well as taking care of his field. He explained that he teaches his son to fish and that ultimately, he hopes the boat would be for him.

The tribe he comes from is at the centre of the island, on the plateau. There, the culture is more oriented toward land and crops so when he brings back fish, he explains “*It is very far from the sea, and it amazes them that I manage to take a boat and go fishing. Because we are rather hunters... pig hunting, cattle hunting.*” In consequence he tries to bring some fish for everyone as people are happy to buy fish, and aside these private clients most of his catch goes to the fish processing unit. When I started the field research, he had recently received his boat and, in 2016 he had delivered 120kg to the fish processing unit in three months.

KpE:

KpE is in his 30's he is from the great chieftainship of the tribe of Dreulu in Gaïca on the West coast of the island and is married with children. He was the only son with four sisters, who don't live here anymore as they are married on the mainland. He has developed other projects on the side. Principally, he is growing hydroponic salads and declares that his first activity is agriculture, with his field. However, he has been spotted has one of the more productive fishers by the people from the sector (province and other fishermen). He says that when he fishes, he does it “to the maximum” but explains: “*you see, it always hurts when you fill a cooler and you say to yourself, my gosh... here we made quite a guerrilla... It's a bit... you see...*”.

He likes to fish both with young people to make them discover the activity with the boat, and with the elders, to compare techniques and experience. He started his project in 2013. For the province, he is one of the active fishermen of the fish processing unit, and indeed he is the one who brought the biggest amount in 2015 with about 2700kg of fish, an average of 225 kg per months and a great variability among the months, from no catch in January, to 905 kg in September.

BmX

BmX is from France. He was retired at the time of the research and practice fishing activity with a professional licence, selling his catch to the fish processing unit. He arrived in New Caledonia as a civil servant working for the province of Loyalty Islands, and lives with his wife in a tribe close to Wé. He became interested in fishing after arriving in Lifou, and the project of the fish processing unit motivated him to become a professional fisherman. At the time he started, there were no professional fishermen on Lifou. He underlined the importance of learning to do everything, being smart and resourceful to be able to make the little repairs. He is one of the only fishers to go out for two days consecutively. When the weather forecast allows it, he goes at the sea two days in a row and comes back for two days, using that time to sell the fish, as well as cleaning and maintaining the boat, and doing little repairs. He accentuates the importance of the maintenance for the security, because the algae slow down the boat and increases fuel consumption. In 2015 he brought back about 1855 kg to the fish processing unit, with an average of 155kg per month, noting that he was abroad for three months.

BcN:

BcN is from the South of the island in the district of Lösssi. He is the president of the union of the fishermen of Lifou, and the president of the confederation of the fishermen of New Caledonia. He explained that most of his catch is sold to the fish processing unit and he keeps around 40% for the custom and home. He uses to fish during the day, in the South, near the tribe of Mou where he comes from. Mou is about 45 km from Wé in the South, sometimes he comes back directly to the marina by sea, and sometimes the manager of the fish processing unit collects the fish of the fishermen in the South as he stays in a tribe nearby. Aside from this activity, he also has a snack and with his wife they have a gîte to welcome tourists to whom he can cook some fish. They are three fishermen with a licence in the South of the island.

Abel was one of the first to make a demand for a fishing project in 2006. In 2015, he brought about 2240kg to the fish processing unit with an average of 187 kg per month. The variability of the catch is high with only 172 kg between April and August, no catch in April but it culminates in September with 720 kg of fish.

GsU

GsU is from France and was one of the first fisherman to participate in providing the fish processing unit. He settled his project alone and is the only fisher who did not have any other activity on the side. He explained it was very difficult to fish enough, and to be able to cover the

costs, and he did not participate to the local customs easily. For him now, fishing is much” more relax” as he took a new job at the high school of Lifou teaching cooking skills. He has a daughter with a woman from Lifou, and his new situation allows him to share more fish. In 2015 he brought back 1800kg of fish to the fish processing unit with an average of 150kg per month but noting that during 6 months in the year the catch brought was inferior to 100kg.

JtI:

This interview was one of the last one I made; I did not meet him before. He started his project after the start of the research. JtI is from the great chieftainship of the Wetr from the tribe of Hnatalo, and he is about 30-year-old. He fishes since he was a child and used to dive to catch lobsters. At the time of the interview the situation was very critical in Lifou because an oil spill caused by a grounded boat on the reef and he could not go fishing. Aside from this fishing activity, he practices agriculture, selling yams to the fish processing unit and selling some santal wood. He was in a difficult situation because the agricultural product processing unit would not take his yams, and when he arrived with a dump truck, they told him it was too much. He also had one container of santal blocked in Noumea because of the customs. Maybe due to the difficulty of the conjuncture, he expressed that making a living with fishing seemed easier without the boat compared to now, when he dived to catch lobsters, facing the costs of the investment to repay although his sources of income are blocked.

The Kea trader grounded on the reef on the 12 of July 2017. The shipowner had activated mandated antipollution means in August after the government signal some leaks³⁰, but by the end of November the pollution arrived on Loyalty Islands impacting the east coast of the mainland. People were very concerned and waiting for some news from the government, asking what the province was doing. The fuel was aggregated in small balls and people collected it on the beach. Some groups of people organised the collections but not everyone knew when and where, depending on the tribe they were in. This episode highlighted a paradox of proximities between the strong social capital, connecting people, supported by the traditional networks and the disconnection when this external tragedy happened. However, the government sent professionals to handle the situation and a press communication explained the operations taking place to clean the petrol from the Kea traders. On tribe it created a shock as people did not know the extent of the catastrophe but were told that swimming was forbidden from a government order, as eating fish was discouraged. For most on tribe people, it was entirely unknown how the catastrophe would be

³⁰ Press release from the CABINET– Bureau de la communication interministérielle, 28 novembre 2017
Page 121 of 229

handled, or the severity of it. The little local shops were out of tuna cans, and all of this seemed Kafkaesque.

ZpU:

ZpU is from Tiga island, a little island located on the right of Lifou and considered part of it. He practices fishing since childhood and wants to set up a project. I met him in Lifou when he was collecting information, the access of which being central. He knows about fishing and use to fish for the house and customs, but he would like to set up a project.

Our discussion unveiled the difficulties in setting up a dossier for his project. He was assisted by relatives at the province, but for the elements he had to prepare it proved difficult as he did not have computer nor an education in computing. Hopefully in Luecila in Wé, a cybercafé was providing internet, advice and computer access to the young and to the students. For this reason, he could not stay in Tiga and had to stay on Lifou to organise the administrative process.

During the time of research, he decided to follow on more the training to pass the diploma *capitaine 200*, which allows to sail with bigger boats and to transport passengers.

KbI:

KbI is from the South, but his tribe is very close to Wé. He has three children, two boys and a girl, but he also takes care of the children of his brothers and sisters, then they are about 15 people at home, and everyone participates. He practices different activities, both customary activities but also different professional activities, he holds different professional licences not only for fishing as he also upkeep green areas, taking care of the football pitch, the sport complex and also the maintenance of the marina.

KbI is a lobster fisher, specialist in apnoea, and dives usually by night. When they need a fish for the house they go out, dive, and catch a fish for the dinner. They 'don't need boat to fish for the house. KbI wasn't selling to the fish processing unit when I did the field study due to an accident that happened to his boat, but he was initially part of the team of the fishermen at the initiation of the fish processing unit.

His dad was one of the first person to fish with a pirogue (dugout canoe), so his dad taught him fishing. KbI loves to fish and practices spearfishing, diving, targeting fish and lobster. In addition, they also practice troll and bottom-line fishing targeting snappers or catching Pacific sea breams. His children used to go with him fishing; the two boys are good divers and the girl fishes and collect shells.

In Ouvea, I met with two professionals as well as with the head of the fishermen syndicate. He explained that they are organised by districts, and that in each district they have a person in charge. In total there were about 50 fishermen with a licence, bringing their product to the fish processing unit. He depicted an organisation with *palabres*³¹ when someone decide to settle a project. He also explained that the decision to refuse the cruises was also a choice to prove that it was possible to live only with fishing activity, and that one common goal was the development associated to the preservation of Ouvea.

BtT

BtT is from the north of Ouvea in the St Joseph district. He learnt to fish with his grandfather. He practices professional fishing and has been very involved in the fishing sector in Ouvea. Before being the president of the union of fishermen in Ouvea, he was working at the fish processing unit hence has a wide vision of the development of the fishing activity on the island. BtT is active in the sense that he helps organise fish collections and other key aspect of the collective organisation, as for example the support to the fishermen when they have a mechanical problem. He also worked on Lifou before, and his experience allows him to reflect on the difference in values, especially regarding the act of selling of fish. In Ouvea, the president of the syndicate is elected for a two-year term, and for each term they change the region of the presidency between the three districts of the Island, in order to avoid politics and regionalism.

He is also active with an association called ASBO, which advocates for the biodiversity of the island, linking the fishermen between them, they develop awareness activities, for the children for example, with the relation between the size of fish and their age, information on the species and how to preserve them.

MvN:

MvN lives the South of the island. Bearing in mind that most people declaring an activity and having a licence in the island are men, MvN stands out as she is also the president of a popular event called “*La fête du Lagon*”. She comes from the north of the mainland where she learnt fishing with her dad. Developing her project, she followed the fishing training provided by the province and explained that she changed what she used to do for the fish processing and conservation, is proud of the quality of her fish but does not work with the fish processing unit. She sees the development of the fishing sector as a politic project, which she designed as the “economic will of

³¹ Customary discourse performed in front of the clan to explain a project or make a demand. Then the decision is made following the path of the custom.

the Province” while expressing reserves toward her possible participation, because the sea is a resource to preserve and fishing a way of life.

She shares her love for fishing, the patience it requires and the surprises it brings “*you never know in advance what will happen, what species you will meet, shark, turtles ... even just by walk, fishing is unpredictable*”. She described fishing on foot with passion, the joy brought by the hazard of the tide, today's catch is never the same as tomorrows, and at low tide she enjoys the encounters with other families when everyone goes at the shore.

The objectives of commercial fishing and customary fishing differs at various levels. Regarding the output, the objective of commercial fishing worldwide is often the maximisation of profit, but among customary fishermen in New Caledonia there is an understanding that people should fish as much as needed but not more than necessary. For some people fishing is a necessity, in Ouvea, MvN explained that people eat fish daily, for protein and vitamins she follows “*nobody fishes to earn money for meat; we fish to eat.*” In contrast, commercial fishing is carried out with the purpose of earning money; as BmX points out, “*when I go it is to earn my living.*” A project is initiated by the demand from the fishermen when he submits a file to the Province. For the people interviewed, setting up a project flows from a passion for the sea and curiosity. People want to learn deep-sea fishing. For all fishermen interviewed, none of them have developed this activity to “become rich”. Among the professionals a main goal justifying selling a catch was to be able to repay the boat, face costs and not fail when times are more difficult for the fishing³². We can note these results support the observations from Dana and Light (2011) with Sámi people who content with making a living from their business. Echoing a discussion with the head of the fishing sector, the fisherman in charge of the union explained that the activity is also seen as strenuous with the constraints associated with the fishing projects and the exigency of fishing. He fears the difficulties are making the activity lose attractiveness for the youth and the new generation seems attracted to other activities.

2.3) Commercialisation and fish processing units

Due to the small available market, the professional fishermen would have had difficulties to sell their products only to private clients and it is also difficult to maintain individually the high necessary standards for fish processing. While on the other side, some professional sell directly to individuals when the catch is not abundant and selling to the fish processing unit would not allow

³² It is important to remind that the discussions also stress the technical aspects concerning the size of the boat which does not allow to go at sea everyday because of the capricious weather, and the difficulties to solve mechanical breakdowns.

them to enter in their costs, or also to some regular clients. Among the different actions put in place, the Province has built fish processing units on each island to prepare the product ensuring quality processes and support their commercialisation. In Lifou, SAS Munun is the oldest fish processing unit in functioning since 2007, based in Wé; SAS Maleuleu (Takedji) was opened sein Ouvea since 2012, and SAS Maré (Tadine) was just starting at the time of the field research. With a processing capacity of 100 tons each per year, the fish processing units are equipped with a laboratory where the fish can be transformed, and deep-freezing chambers which allow to maintain high quality standards, proper to export. Also, like other provincial facilities, they employ local people. The facilities provide various benefices to the fishers. First on the economic side, with the costs relative to the activity they need to fish at least 40 to 50 kg per trip, and a good catch is around 100kg (see figure 29), if considering Lifou's market it would be extremely difficult one fisher to sell the totality of the catch, it would be impossible for various fishermen at the same time. If the cold chain is respected and the species are the same as previously agreed, all fish will be purchased, except for fish killed with spearguns and coastal fish, due to the possible presence of ciguatera. Then, the processing units provide financial security for the activity by allowing the fishermen to fish and not to worry about the commercialisation. In addition, they ensure quality processes as they offer free ice and after they take care that the product is well processed, packeted, and stored.



Figure 35: Fish brought back at the fish processing unit, Lifou



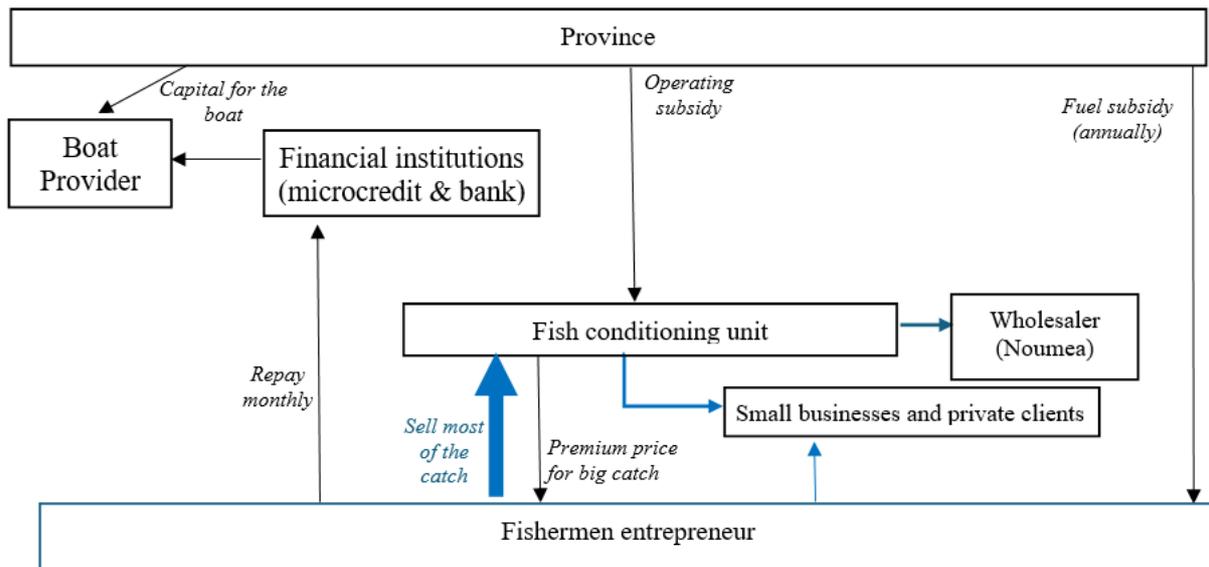
Figure 36: One good catch, artisanal professional fishing

To complete the catch brought by the fishermen and increase the volume at the fish processing unit (see ANNEXE 1) , the Province invested in a longline, named after the processing unit, which was just starting its activity. The Munun operates differently as it is managed by the fish processing unit, with a crew of fishermen also from the island, but also this new fishing unit is not in competition with the artisanal fishermen as it targets only pelagic fish, its size allows them to go further and for campaigns of three to four days. With the Munun, the fish unit hoped to increase its production of about 30t/year.

The Indigenous entrepreneurship framework and especially the works of Peredo, Anderson, Galbraith, Honig, and Dana, (2004) and Anderson, Camp II, Dana, Honig, Nkongolo-Bakenda, and Peredo (2005) stress the possibility of different ways to participate into the global economy with different degrees of transformation possible. This view highlighted the interaction of locally specific modes of social regulation linked to the global regime of accumulation. Referring to the introduction chapter, as a mode of social regulation is characterised both by informal and formal elements and acknowledges flexible adjustments and relational mechanism, the framework calls attention to the different actors in relation with the community including the state, the supra-national bodies as well as the civil society and the companies. Our observations have highlighted varying networks of actors in relation with the fishermen comparing professional and subsistence or customary fishing activity.

The physical attributes developed by the Province to support the professional development created a particular ecosystem:

Figure 37: schema of Stakeholders in the professional artisanal sector



A vehicle for development:

The first objective of the fish processing units is to help commercial artisanal fishing activity and in addition, to support the local sector, *gîtes* and restaurants, in the sense of being autonomous and import less fish. The fish processing units are subsidiaries of the SODIL, the Indigenous corporation of Loyalty Islands, the ambition of the project can remind of Kivallic arctic food (Mason, Dana and Anderson 2009) for the desire to opting into the market economy by processing food and the diverse innovations the project promotes. However, the results are still mitigated, and the project seems in its infancy phase, these aspects are developed hereafter.

In 2014, the fish processing unit of Wé (Lifou) processed 10756kg of products and about 14400kg, in 2015. Although the fish processing units are independent in their management³³, they are all dependant on the Province’s subventions and according to Lifou’s manager the fish processing unit needed more fish to find a balance. To achieve this goal, they hope to federate more fishermen to the project, this vision was shared with the head of the fishing sector at the Province. According to the manager the fish processing unit has an objective more social than commercial, but this vision was not shared with the head of the fishing sector who believed in the potential of fishing activities in the islands to support the development.

The catch at the fish processing unit is sold directly on Lifou’s local market, to the hospitality sector, to some private clients or to Noumea via a wholesaler. When fishers refer to “private client” they referred usually to small businesses as restaurant or *gites*, and few individual people. To understand this situation, it is important to remember that when it is for the house,

³³ The three processing unit even have different status and according to the manager of the processing unit in Lifou they do not work in the same way in the processing and for the prices.

individuals use to catch reef-fish diving with spearguns and share the catch. However, the prices for fish catch with boats remain high for the average population, in addition, in some cases, people, on the name of the social bond, might expect not to pay. This remark can be link with Faugère (2000) who highlights an often-cited criticism of people using the custom to avoid paying. This leads to think that another benefice of the fish processing unit would be that it allows in a sense to subvert the social dilemma of selling fish to acquaintances. The unit exports regionally but not internationally, the views of the different managers (head of the fishing sector and head of fish processing unit) differ also onto which extend they could export, the fish processing unit's manager suggested that international market are out of reach because of the high local costs and global competition while the head of the fishing sector would have hoped such development for high value catches.

Hindle and Lansdowne (2005) stress the importance of the reconciliation of tradition with innovation in Indigenous entrepreneurship and this is illustrated by Loyalty Islands' development. The end of chapter 4 and beginning of chapter 5 illustrate how the provincial support allows maintaining the social fabric as well as developing entrepreneurial initiatives in harmony with tribal's life and organisation. Additionally, in the realm of renewable energy and green development on Lifou³⁴, the fish processing unit focuses on circular economy as they started the production of green fertiliser using fish wastes that can be used for local agricultural production or even be exported to the mainland. When the field of research was conducted this business unit was still developing. Environmentally, the respect towards the resource is supported by the institutional framework and norms and values of the community. Regarding pelagic fish, tunas fishing is supported by the Province with fish aggregating devices which allow fishermen to know where to go and save fuel. In addition, the size of longlines are limited by law: fishing practices fall under the code of the protected area of the Coral sea. Concerning the snappers, their assessment is challenging defined due to the difficulty of access to the stock (between 200 to 400m deep in the water) and their unpredictable behaviour, as, according to the fishermen, they can remain without baiting various days. The feedback highlights a slight decrease in the size but suggest that these stocks in Loyalty Islands remain healthy. Regarding lobsters fishing, it is practiced respecting traditional values, and it is seasonal, mostly hunt for the Christmas season. People dive and use to only take few and leave enough to "don't kill the nest".

³⁴ In terms of energy independence, Lifou is one of the first Pacific islands to have 100% solar power.

Expectations and frustrations:

The vision of sustainability and responsible fishing is mitigated by the concerns regard to the rhythm imposed by the processing capacities, which outpace the local production, and fishermen who do not achieve the level to be profitable yet. A quick calculation for Lifou illustrates the situation. Considering the two thresholds, profitability, and full yield, versus the number of fishermen, active fisher, vs potential fisher with a licence. To be profitable the processing unit need at least 40t from the fishermen, if the actual 30 fishers would be fishing 100kg per month in average, the objective would be attained. However, on the field many people complained that many licences are convenience licence, granted to people who not fish and that many boats granted were not at sea. Then according to what we observed if the only five fishers are active for this objective this would lead to a mean of around 666kg per fishermen per month in average, which is technically impossible. At maximum yield, the processing unit is able to process 100t, which would be attained if all the 30 licenced were active fishers and would bring more than 266kg in average per month; or only possible if the actual five active fishers would bring more than 1600kg in average per month. This last situation is of course only hypothetical, representing the upper limit, but it shows the gap between the reality and planning and looking only at volumes suggests that one processing unit could process the fish for the whole Province, fishermen concerns seem justified. The manager declares *“Well my goal is to try to federate the fishermen, it's not really my job”, ... “I do my job as a salesman, I still go collecting fish so well I try, but it's not easy ...”*. In our interview he explained that only five fishers regularly bring fish (see ANNEXE, quantity of fish), and the few others being occasional fisher or only lobster fisher for the celebration of end of year.

The professional fishermen explain they have not been consulted for the establishment of the processing unit and that its difficult economic viability exercises a pressure on them to always bring more fish. The support to the fishers, offering an additional 100 XPF/kg when the fishers bring more than 50 kg, as well as the obligation to fish continuously to repay loans reinforce this aspect and traditional values seems incompatible with the volumes demanded by the fish processing unit. One fisher explains:

“We were educated like that to really take what we need ... here we come to the evolution... And then above all we embark on a project we have things to pay we have... Which makes it really go against what we learned. you see you fish you fish you fish... After a while we say enough but some continue to fish because they have that to pay, that to pay, that to pay ...”.

Compared with Lifou, Ouvea's fish processing unit recorded double the catch the year previously our investigation, but as explained, it is not the same context, and the lagoon makes fishing easier since it is more accessible and very rich, but it might not be the only factor. The group of fishermen is more active in the management of the syndicate which might have supported the catch to the fish

processing unit. They emphasised that however the project was still in deficit, it was in clear progress, reducing of more than half their debt. But they stress that the fish processing unit is perceived negatively because it “asks for fish constantly”, the volumes seem disproportionate to the fishers interviewed. Although less interviews were conducted in Ouvea, they all supported this vision.

In both islands they questioned the dimension of the project implicating it is oversized and that it does not fit with the way they use to fish. *“The freezer, what is in the freezer I know it's enough for me. I know I'm going to sell some fish; I'm going to keep some for us to eat and once it's going down, I'm going to go back at the sea and this doesn't go at all with the logic down to the fish processing unit where you have to give fish, you have to give fish. It's been four years that it's in Ouvéa we still put nothing in place for stock management... really nothing”.*

Instead, various fishermen questioned the transformation and valorisation of fish, which would be another avenue to find solutions for the profitability of the processing unit. In Ouvea fish were sold entire: *“Filleting or make steaks... really try to stop selling it in its entire and transform it for precisely ... then to be able to fish less from the lagoon but what we fish we draw more value so that compensates a little” ... “Our goal is not to release 100 tons a year... There the most we did is 30 tons... but if with the 30 tons we manage to do something good... all the better for this... But here we are now at a standstill, and I think that the best to develop is if we manage to transform it and this goes with a lot of modifications, a lot of changes in our way of working you see and see and change imply a lot of time, a lot of discussion ...” (Ouvea)*

On Lifou the fish are filleted, yet the feedback stress more would be expected: *“the fish shop ... in any case at the start, it was designed to do everything that is filleting with a tunnel and processing and normally it was planned to sell trays... now I don't know what has been done ... they had to remove the ... But the initial project, the initial project had this catering and smoked side too! They never do it, but they have everything!” (Lifou)*

On its side, the fish processing unit expressed concerns toward working on transformed products due to the irregular supply. Islam and Berkes (2016) observe the Indigenous commercial fishery at Norway House Cree Nation searched for a better use of existing fish resources. Shahidullah and Islam (2018) highlight the benefices of value addition activities which lead to social value creation in the cooperative by offering new jobs for the community at large as well as new market possibilities. These remarks invite to a reflexion on these possibilities and the how to manage the irregular supply via transformed products. Other concerns expressed by the fishers relate to the prices proposed by the processing unit. Hereafters are the average prices on Lifou based on observations and feedback.

Table 5: Prices of fish products

for 2016 prices in XPF	<i>Average price from fishermen to individual clients (Loyalty Islands)</i>	<i>Purchase prices at the fish processing unit in Lifou</i>	<i>Noumea's market</i>
<i>Pelagic fish (sea bass, tunas, mahi-mahi...)</i>	1200	800	(filleted) 1952
Demersal fish (types of snappers)	2000	1200	2000
Lobsters	3000	2800	2385
	5000 (Christmas season)		

Source: observation by the author and feedback interviews

It was difficult to set an average with our small qualitative sample, it is important to note for example that on the small island of Tiga neighbouring Lifou the fish were sold at 500 XPF/kilos to be affordable for local people. In the interview they stress, if the fishermen do not achieve to catch more than 50kg he would have not compensated the fuel he uses for the fishing trip. Regarding the boats the capacity of the tank is about 150 Liters some of them has 200L which represents 20000 to 30000 Frc Pacific of investment for each fishing trip just for fuel. Then you have to take into account the baits, the material for the lines, and the food on the boat. In total a fishing trip represent about 40 thousand of Pacific franc, which is close to 300 pounds. One fisherman explains “*I sell sometimes to individuals when there isn't much, for example 40, 50 kg well I prefer to see like that with individuals I earn a lot all the fish I sell at 1200 CFP or 1500 sometimes. While at the fishmonger's each piece has its price, the most expensive is the snapper, with the lobster: 1200 for snapper and then lobster, 2800 CFP ... after the rest of the fish it's not ... If you sell it like that (to individuals) there you go, the lobster you sell at 3000, 3500 CFP at the end of the year so you can go up to 5000. In this case you win but here I'm going to ruin myself*”.

Often in the interview the fishermen say they were disappointed with the prices at the processing unit as they think they were lower than any other output. Comparing with Noumea shows that it is true for the fish, less for the lobsters. And we must note that the discussion on prices is linked with the discussion on the whole provincial support encompassing the other subventions as it led to a specific business model.

The unused boats, the irregularity of fishing coupled with the low volumes triggered disappointment from Province. The projects were on hold for Lifou and Ouvéa and rumours on a decrease in the subvention was at heart of the discussions. In the Loyalties, the fishing ecosystem is highly dependent on the Province's subventions and the fishers experience recurrent delays in decision making processes and regaining their money of fuel subventions. Speaking about the prices of snappers, other fishermen stressed “*we left negotiated at 1200 CFP because we have the*

bonus, we have fuel subvention, now if he wants, we can negotiate that. and then we want more bonus and we want more of all that but at this moment we would we sell our fish at 1450 CFP there and then here it is”.

These aspects can, in part, explain the difficulties to federate fishermen to the projects, but in addition other aspects have been mentioned. Regarding the visibility of the activity and its direct impacts, the fishermen stress that the prices remain quite high for the local population, and most of them redistribute some fish to elders who cannot afford these prices. The catch from the boats is mainly sold at the fish processing unit and the rare private clients are often restaurants and gites which make the contribution of the activity less visible for the entire community. Concerning the institutional framework, the rules and especially the obligation to have a fishing licence (RIDET) in order to sell to the fish processing unit was seen as cumbersome or even illogical for some of the fishers who consider fishing on their territory, and they do not have to ask for authorisation. On the Loyalty Islands this obligation was not enforce strictly and in Ouvéa, where there is no risk of ciguatera even fishermen with a licence collect the fish of other fishermen.

Conclusion :

The variety of activities developed in the territory suggests a vivid entrepreneurial spirit with a predominance of subsistence self-employment activities for individual households and the wider community. Although on Lifou the wider context encompassing fishing activities is marked by diversity, especially for the individual purposes. The number of fishermen starting projects and working with fish processing units is small in comparison to the expectations of the Province, threatening its economic viability even with the subsidiaries and aids afforded them, which only exacerbates the concerns regarding the success of the professional development within the fishing sector. According to some professionals starting a project is a simple task, “you just have to ask the Province’s office” or “start knocking on doors”, however many aspects appear to undermine the process. The sector is in a start-up phase characterised by a lack of institutional safeguards for the fishermen, a sparse network and an absence of role models linked with a singular vision regarding the sale of fish. At the moment, all are dependent on the need and motivation of the individual fisher but also their connections with the recipient, if not the customer. In addition, the feedback reflects negative perceptions and questioning of the Province’s actions. Fishermen complain about delays and lack of information; for non-professionals, this perception arrives with criticisms of the development of the fishing sector, as well as concerns related to the lack of awareness on the environmental impact of these types of fishing activities, the encouraging benefits and reasons for support. Although the interviews did not specifically focus on perceptions of the Province,

references to informal institutions such as rules, clans, and customs, as well as formal institutions, were obvious and recurrent. This underscores the significant influence of institutional capital.

Moreover, the observations regarding different types of practices on how fishermen and residents of the Loyalties envision fishing activity stress specific points and different kinds of collective strategies (Astley and Fombrun, 1983). Firstly, the results indicate that customary and commercial fishing activities do not compete for the same resources nor for the disposal of products, yet the two activities seem more disconnected than complementary. From the perspective of subsistence and customary fishing, the activity is practiced within a strong network of clans and families on what is considered “sacred”, culturally significant grounds. Subsistence entrepreneurship and customary activities involve the whole population. On Lifou, taking care of the fields is an everyday activity, to which fishing involves a smaller portion of the population due to the difficult accessibility of fishing grounds, while in Ouvéa, fishing is part of the way of life and involves almost everyone. Adjustment is informal and the coordination is stimulated through customary activities, during events that people bring their contributions. As described by Bouard and Sourisseau (2010), rural strategies have hybrid characteristics mixing both market and non-market activities, in tribes we can observe a preference towards subsistence enterprising activities and sharing. Often, people emphasise their responsibilities regarding the work on the field and their contributions to weddings or tribe fairs. The whole traditional organisation, anchored in a hierarchical network, attempts to preserve and transmit Kanak values and culture. The Province’s politics of development also support the traditional fabric by providing subsidies. But from the perspective of the artisanal professional fishing sector, things seem more disconnected as the actors come from different tribes and the network remain fragmented despite the Province’s effort to “federate” people around the development of the whole sector. At the start of the project, they are bound by contract with the Province, entitling them to bring their catch to the fish processing unit. In addition, they do not have to compete to make a living as the fish processing unit processes the entire catch, though they stress that you cannot become significantly wealthy with fishing activity.

People are not pushed into launching a project, speaking about the environment in the tribe an individual stressed “*there is always a way to eat ... There are no beggars, here there is no one on the street. Everyone can find a house and be fed*”. For daily needs, they fish from the shore or the reef, where they can dive and catch them. The projects are supported but barely profitable, in addition, there are other more financially beneficial alternatives than launching a project with a boat. People with a project are motivated by their deep personal connection with their boat, a love of the sea and the objective of repaying their boat fees, whilst making enough to live on.

Mason, Dana and Anderson (2009) proposed a classification of economic activities from their observations in Rankin Inlet, Nunavut, based on the types of transactions that range from formal enterprise to covert economy, contributed by informal entrepreneurship and subsistence self-employment. Interestingly the same range of activities is deployed for the purpose of encouraging subsistence self-employment. Building on their nomenclature, table 2 summarises the types of transactions occurring in the fishing sector.

Table 6: Transactions in the fishing sector

<i>Economic activity</i>	<i>Status</i>	<i>Examples</i>	<i>Target species</i>
<i>Formal enterprise</i>	Legal transaction,	Fishing project, selling at fish processing unit,	Demersal and pelagic fish (deep water snappers, Tunas, mahi-mahi ...) and lobsters.
<i>Informal entrepreneurship</i>	Not always 'in the books',	Direct clients, selling to individuals and small businesses	Demersal and pelagic fish (deep water snappers, tunas, mahi-mahi), lobsters, coconut crabs, and sometimes reef fish.
<i>Subsistence self-employment</i>	No commercial transaction,	Subsistence and customary fishing,	Mainly reef and coastal fish, shells (coque shells, giant clams), crustacea (lobsters, coconut crabs).
<i>Covert economic activity</i>	Illegal transaction,	Extraction and sale of protected species,	Turtles, sharks

Source: adapted from Mason, Dana and Anderson (2009)

With the objective of improving the comprehension of the strategies developed, I have considered the scope of transactions carried out by the individuals. It was interesting to note that subsistence and customary activities was common to everyone³⁵, while regarding professional artisanal fishing practice, one individual is involved various types of transactions. In addition, it is important to note that Kanak artisanal professional fishers were active in formal, informal, subsistence and traditional networks of distribution. The next chapter shall consider these elements and reflect on the strategies developed regarding our research questions.

Chapter 5: Observations and patterns

³⁵ Everyone in the tribe is, to some extent, engaged in customary activities. Everyone has a role and contributes to the community. Among the fisher population interviewed, regardless of ethnic origin, everyone also contributes. Even non-Kanak fishers reported participating, although their involvement was less regular or more sporadic. This observation highlights the influence of the context on the community's dynamics and practices.

The previous chapter presented the data collected on the Loyalty Islands' context, the profiles of the fishermen interviewed, along with the observations made throughout the field of study. This approach helped to start discerning between the strategies deployed as well as the types of transactions occurring. Following on the description of the sector, the relation of the fishermen with the fish processing unit and the other attributes deployed by the Province, this chapter discusses the results reflecting on the research questions as a guideline as well as recent advancements in the literature

The first research question is interested in the assessment of existing rules in Indigenous Entrepreneurship as a framework³⁶. Linked to the regulation theory, the first step reflects on the characteristics observed on the field, as well as stakeholders' relationships in link with the elements described in the previous chapter in relation to the typology of strategies between opting-in and opting-out the global economy (Anderson, Camp II, Dana, Honig, Nkongolo-Bakenda, and Peredo, 2005) and this, in relation to the question of self-determination.

The second research question is more specifically concerned with the roles of social and cultural capitals in shaping entrepreneurial strategies developed by Kanak fishermen. This part reflects on the themes related to social and cultural capitals discussed during the interviews, emphasising the importance of collective social capital linked to specific values such as the one associated with the concept of the invisible world.

The third and final research question aims at reflecting on the characteristics of Indigenous Entrepreneurship (Dana and Anderson, 2007; Dana, 2015) and discuss the differences³⁷ presented by the artisanal fishing sector with regard to the characteristics discussed. Modernisation and innovation are present in traditional fishing and artisanal fishing respectively. The observations on the mixed embeddedness experienced by Kanak fishermen across the various kind of fishing practices led to considering two distinct ecosystems. The analysis highlights the different facets of trust and links regard to the different attributes of the ecosystems.

³⁶ In reference to the operationalisation of question 1 chapter 3 p.10.

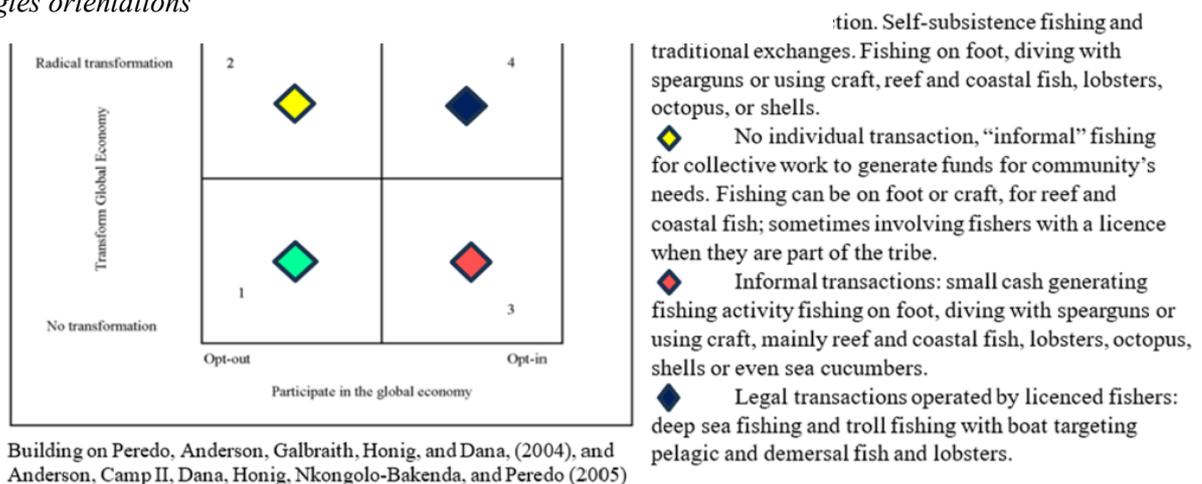
³⁷ Illustrated in chapter 5 and with elements discussed in the precedent question regarding social and cultural capital.

1) Self-determination regard to opting-in and opting out strategies.

1.1) Strategies.

The theoretical framework has guided data collection in looking for uncovering the perceptions and goals of the fishermen, considering how and why they fish, the challenges they face, and if and how the product was commercialised. The types of transactions³⁸ led to reflection on the nomenclature proposed by Peredo, Anderson, Galbraith, Honig, and Dana, (2004) and Anderson, Camp II, Dana, Honig, Nkongolo-Bakenda, and Peredo (2005) in view of the opting-in and opting-out typology of strategies. Opting-in strategies concern the boat-projects and encompass informal small cash generating strategies whereas opting-out strategies relate to subsistence fishing for the clan and customary works for ceremonies or events.

Figure 38: fishing practices in Lifou in perspective of indigenous strategies orientations



In the Loyalty Islands, aside subsistence fishing the fishermen practising opting-out strategies report different activities in relation to caring for the place, as for example, they monitor new entrants in the fishing area, watch for changes in species and their environment, or take care of the giant clams by grouping them at the same location. They know each coral heads and their residents. Building on Williamson (1985) and ex ante and ex post transaction costs in association to contracting activities Abdullah, Kuperan and Pomeroy (1998) organise the transaction costs in fisheries co-management into three major cost items: (i) information costs, (ii) collective fisheries decision-making costs, and (iii) collective operational costs" (1998:107). The latest being composed of three subcategories: costs related to monitoring, resources maintenance costs and resource distribution costs. The testimonies of on tribe fishermen show that these practices are part of seashore clans’ daily

³⁸ Classified at the end of chapter 5 (table 2)

activities. People explain that protecting the “pantry” is a primary objective, which relate directly with maintaining biodiversity and protect coastal ecosystem. These observations echo Ostrom's work on the benefices of self-governed institutions. Customary fishing fulfils traditional cultural needs and obligations but does not generate direct economic income. Values are discussed in the 2.2 of this chapter; the specific cosmovision, connecting clans’ networks to the land and species, in turn impacts on the rhythm of fishing resulting in a specific way of life. The observations are echoing the various activities and technics described in previous research run in other parts of New Caledonia precited as Leblic (2008), David (2004, 2008).

Concerning the type of opting-out strategies with transformation of the global economy, the research witnessed very few exchanges in the fishing sector that could represent this situation. Yet, when the fishermen of the tribe fish for the preparation of a dinner-event or for the annual tribe fair allowing leveraging funds to meet collective needs, the collective strategies at the level of the tribe could be considered as opting out with transformation. In these cases, fishing activity is part of a larger set of activities contributing to help perpetuating traditions and to reinforce life on tribe in this sense, they use the global economy in a transformative way to meet the objective of the community.

Informal strategies are pursued by people fishing or chasing coconut crabs, and selling them directly to individuals, sometimes including professional artisanal fishermen. As explained in the interviews, the situation of professional fisher selling directly to individuals usually occurs either when the amount of the catch is too little and selling to the fish processing unit would not allow them to recover their costs, or when the fisherman has regular clients. MnV explained *“the people who are there they are not professional but at least they eat fish. They sell fish sometimes. Sometimes when they fish a bit too much there is someone who is there who says... “Well, I buy you at 800 CFP per kilo” ... these are small family transactions, it doesn’t mean they are professional, no it’s because there is a need there”*. During the field study I found a minority of people selling only to individuals, while the observations allowed me to link these behaviours with a punctual need for cash, or for example, when the catch is transformed but stays in the kin or more extended network such as the tribe. In this case it is then transformed by another member of the household or community, for instance to sell food to tourists, or during an event. These collective organisations such as fairs, holding dinners, bingo events, or organisation of a little concert, were punctual, with goals linked to community’s needs, such as the renovation of the tribe's infrastructures or for sponsoring the sports team.

Legal transactions are operated in the artisanal-professional fishing sector. This sector has been heavily innovative and the state, via the Province, creates a particular non-competing

ecosystem. No one claims to seek profit among the professionals. Yet, they must generate some cash flow as to repay the loan for the boat and to manage the costs associated to the activity. The discourse of “being a professional” stresses the importance of fishing properly, starting with respecting fish, following hygiene standards, taking care of the material, and generating the paperwork for the Province. The interviews highlight various types of constraints impacting on this type of fishing activity, making it barely profitable, the last part reflect on these elements regard to the support deployed.

The first approach to the field opposed professional and customary fishermen which makes sense as setting up a professional project entails many changes. Then during the development of the research, other differences turned up as being important to consider. Professional fishermen are characterised by having a licence, a boat, and selling to the fish processing unit. Yet, they themselves challenge the appellation and emphasise the “craft” dimension of their activity. Most of the time Kanak professional fishermen practice different types of strategies at the same time, thus reducing risk. The difference between Ouvea and Lifou also stresses the impact of the natural context and heterogeneity among Indigenous entrepreneurial strategies. In Lifou the network of stakeholders associated with professional fishermen, represented by the union, the fish processing unit and the Province, was different from the network supporting customary fishing with the clan and or the tribe. In Ouvea³⁹ the discussions reveals that often a typical professional fisherman works with his close kin and there is often a collective organisation around boats.⁴⁰

1.2) Indigenous entrepreneurship development

Keeping in mind the theoretical framework, and the successive approaches to development reported in Indigenous Entrepreneurship literature (Peredo, Anderson, Galbraith, Honig, and Dana, 2004; Anderson, Camp II, Dana, Honig, Nkongolo-Bakenda, and Peredo, 2005). The types of fishing activity observed indeed illustrates the suggested mix of the different approaches. More specifically, we can observe aspects of modernisation strategies in the change of material for instance with the boats, which in turn impacts on the way the activity is performed. Yet, the dominant dynamic observed is more influenced by the regulation theory as referred to in chapter one. In the case of opt-in, it is noteworthy that the access to a global accumulation regime has been changed to allow people to obtain boats. In the case of opting out, the Province's support for

³⁹ The constraints associated to the field especially time to contact people and the short field study of one week in Ouvea allowed to meet with less fishers (Chapter 3 methodology).

⁴⁰ Reminding that fishing is more accessible in Ouvea and more anchored in the culture, as discussed hereafter in the second part of this chapter.

cultural events, traditional activities, and subsidies for house renovations helps maintain the social fabric of the community.

Regarding the outputs of opting out strategies, the links between Indigenous Entrepreneurship and environmental sustainability has been acknowledged among various streams of research. This acknowledgment spans from the importance of traditional ecological knowledge (Berkes, Folke, Gadgil, 1994) to the theorising of environmental sustainability as a growing area of research (Fan, 2024). Indigenous Entrepreneurship comes out as a source of environmental innovation based on traditional knowledge and specific social organisations based on singular ethics. The results reflect that Indigenous worldviews embody a relational ontology (Fan, 2024) which is illustrated in the feedback related to the invisible world and principles of ethics in the way of fishing as well as in relation to the fish catches and their destination.

Fishing practices in New Caledonia present a practical case where Indigenous worldviews help rethinking our practices, especially regarding the discussion on the rhythm of the activity with regards to the cycles of nature. In this sense the research is in line with the contribution of Indigenous entrepreneurship to "the business ethics research by foregrounding the role of Indigenous worldviews in (re)imagining the ethics of human–nature relations" (Fan, 2024). The strong vision and values expressed by Kanak fishers when describing their activity and their concerns stress their connection to nature and their environment, pointing to their key role in its preservation.

This research follows the rationale that, as regulation theory in Indigenous entrepreneurship focusses on the goals and visions of indigenous people, the dynamic is self-determined. We can note that self-determination is articulated differently among opting-in and opting-out strategies and among different levels, namely the individual and the institution; this idea is developed in the next section.

1.3) Self-determination and opting in strategies

The feedback collected in the field regarding the deemed failure of fishing development programs triggered special attention towards opting-in strategies with a boat. One interrogation was with regards to self-determination in the process of opting-in, firstly by looking at fishermen's goals and their vision of the fishing activity, and secondly by looking at the pivotal role of the Province. The growing representation of Kanak people at the government was an important first step in the construction of the country by granting a political level of self-determination to Kanak people. Referring to the introduction, there is a link between indigenous entrepreneurship and self-determination, where internal self-determination is developed as a strategic choice and is neither automatic nor imposed by an external government, nor by colonial practices. The review of

historical landmarks in chapter four stresses the link between the separatist Kanak program and the will to further develop entrepreneurship within the tribes, and in this way, it echoes the view of Indigenous entrepreneurship as a vehicle for development. Although there is not one unique vision regarding the development of the fishing sector among all the informants, the opinions have been influenced by the performances of the previous programs and initiatives. The questions on the adequacy of the measures taken highlighted how essential the role of the Province is in the opting-in process. The discussions suggest that the stakes are high as internal self-determination can impact on external self-determination when Noumea's agreement is supposed to prepare the country to act on its future. One needs to remember here that one of the objectives of the creation of the Provinces was to rebalance the New Caledonian economy⁴¹. Various interviews reflect on past actions and share the opinion that since the 90's, with the creation of the Province, the State has done a lot in terms of supporting development. In addition, the feedback points to the link between entrepreneurship and politics as well as to the important role of communication. For example, one respondent stresses *"let's say, in the years when happened the Events; the regions were created; all these things are political decisions. Those are things put in place by politics and after the population tried to adopt them at her best; yet when things are put in place, the public must be made aware. Why (have they done this)? ... Politicians put it because there are some people who want us to be emancipated also on, how to say, on the economic side."* (Ouvea). The conclusion from these observations is that self-determination in opting-in strategies is articulated at different levels. Such as at the Province level, where strategies can be seen as self-determined and playing a role that is essential towards impacting on individual strategies.

Building on these elements, opting-in and opting-out strategies in the fishing sector presents different facets of self-determination with opting-in as self-determined by commercial development goals and opting-out strategies as self-determined by cultural and social resilience. These observations suggest that "opting-in projects" with a boat might be perceived differently depending on the social position and acquaintances' perspectives. The permanence of some resulting stigma seems to subvert, or at least hinder, the goals of the whole project to build a mode of development towards sovereignty. In addition, Spigel (2017) warns against the dangers of importing an ecosystem and concurs with Indigenous entrepreneurship literature to highlight the supporting role of cultural capital and social networks when he points to the interconnections among the social, cultural, and physical attributes. The second research question was interested more precisely in the

⁴¹. Chapter 4 stressed that to achieve this the Provinces have been given "economic competencies" meaning that they are leading the strategy of development, the budget and can legislate.

specificities of such cultural and social capital and understanding how they can impact on the development of each type of strategies.

2) Social and cultural capitals, nature and impact in opting-in versus opting-out.

Following on the first research question and the observations on the stakeholders, the second research question looked further into social and cultural capitals and the kind of networks associated to the different practices, as well as the values and perceptions linked to the different ways to fish.

2.1) Social capital is mobilized in order to reduce risks.

Family bonds link tribes and clans across the territory in a tight and dense network, yet along with the principle of living together the review of chapter four stresses the complexity of Kanak society in which each clan has a role and a place. There are several sources of power, ranging from the traditional hierarchy and religion, or from new opportunities created by jobs⁴². To illustrate this, one explains that hierarchy starts at home: KpE is the chief above his two brothers as he is older. A position in a network impacts upon a person's role and the way they perform the custom. Identity has a geographical and a social component (Horowitz, 2001) and these elements stimulate heterogeneity among groups. The observations support the permanence of different levels with the dimensions of clans, districts, and islands.

The literature review and observations stress that most fishing activities are dominated by customary and subsistence and are thus anchored in these strong ties which they help to maintain. Artisanal professional fishing involves fishermen from different tribes and often even from different clans. Investigating along the suppression hypothesis (Light and Dana, 2013) among groups might help with understanding different levels of entrepreneurship within clans and even regions, clans being anchored in territories. This hypothesis would imply that some clans might be more connected than others in terms of information access, i.e. links with groups at the Province, this being conducive in helping develop a vocation for commercial fishing activities and by this means, highlighting the role that professional artisanal fishing activity can have in the development of the island and its resilience. Graille (1999) pointed to two different kinds of groups that have emerged to form new Kanak elites along history, those who fulfil a religious function and those from the training program now called "Cadre avenir" and may be examples of advantaged groups of people as they might have been closer to information allowing them to conceive entrepreneurship as a vehicle for development and think about ways of how it could be developed along with the

⁴² Paid positions can provide a relative autonomy and by easing the participation in custom can be source of prestige, while also triggering jealousy.

specificities of their local culture. For the people met who settled projects and were in activity were aware of the possibility to settle projects and the launching of the fish processing unit's project by getting the information directly by the Province or by someone from their close network. In addition, it is worth to note also that they all have affinity with the sea and habitus to fish, even if it is not the same type of fishing, which might be linked with their curiosity to discover new technics and the motivation to have a boat. Yet comparing to other more popular sector, as tourism, the weakness of the professional fishing network might illustrate the influence of task contingency for the mobilisation of different networks (Adler and Kwon 2002), as, due to the weather and technical constraints, and also traditional activities; professional fishing is not an everyday activity.

These observations highlight the importance of existing strong ties and close network as well as the influence of cultural capital and habitus. The group of artisanal professional fishermen report having received support from family members of different nature and at various levels.⁴³ Following on the observations from Jack, Drakopoulou Dodd and Anderson, (2004) on the benefits of strong ties in a business context, different elements must be considered. As the Province sustains fishing activity development upward and downward, the sector's suppliers and customers seem not to have a central role. Fishing material is imported on Lifou and the fishermen interviewed did not have strong ties to suppliers. Regarding the customers, when fishermen do not sell to the fish processing unit, they have regular clients or relatives which are strong ties, yet they did not seem able to bring any additional support to the fishers. Acquiring general market information was not strategic in this static configuration, as new product ideas were present but stifled by technical constraints at their level. Then, among the strong ties present the family node seems the most important to look at, especially concerning the emotional support and hands-on support as well as possibilities of commercialisation. For informal opting-in activities it is important to consider that the high level of pluriactivity⁴⁴ combined with large extended families result in offering regular opportunities when people have a business, or one-off events. Yet, Light and Dana (2013) note the presence of a strong and dense network of family ties among indigenous context does not necessary support entrepreneurship, as a vocational orientation needed to be present to support it.

For the group of fishing projects with a boat, along with the family, the node composed of "competitors" seems important to consider. Yet the group composed of professional artisanal fishers active in providing the fish processing unit holds specific characteristics, as it has been

⁴³ The sample of people interviewed only comprise people who fish yet concerning the boats who are not in activity some rumours pointed to the complacency of some projects relating to people in power position but who were not used to fish. This led to think that in some of these cases the information and power position might have been used for personal benefit.

⁴⁴ Pluriactivity is further developed in the next section on cultural capital. It echoes the observation from the literature review on New Caledonia in Chapter four (p.25).

formed by the creation of the activity. Among distant families, people know each other, yet it seems to be a mistake to consider these ties as strong ties for the people live in different locations and are neither used to working together nor meeting very often. When people launch a project, they meet with other professionals as they enter into the process of trainings, returning from fishing or during some meetings with the union. The professional fishermen report exchanging information on fish's geographic locations which allows them to save on petrol and prevents fishing from not resulting in a good catch.

Regarding the relationships between the fishers and the Province, because most people working there are Kanak and from Lifou the first assumption was that people were close and the dense network allow easy transfer of information and adjustments. A fisher stressed *“So here in Lifou... we know almost everyone ... Well, it's little Lifou. Here it is small ... In Wetr district I know almost everyone Lösi, I know almost everyone... and worse Gaïca too (...) So in the same province, you know almost everyone logically ... Everyone knows each other (...) Here it is connected, and it is communal, everyone lives together”*, yet this contrasted with other observations. Kilduff, Crossland, Tsai and Krackhardt (2008) compare the perception of a tie versus real networks of acquaintance and suggest that perceptions might emphasise the clustering of relationships with reinforced features of “small world” (Travers and Milgram, 1969). Maybe this is also true on tribe and although people know each other there is not such a dense network oriented in supporting the information and help needed to set up projects. Even if people are connected through the clans' linkages and even more now with the mobile phone⁴⁵, the communication from the institutions, especially the Province, seemed top down or at a certain distance. For example, I heard more than once the planning and decisions regarding the infrastructures being called into question. In Ouvea, a respondent explains the place where the fish processing unit is implemented, being far from the docks and far from the airport, is something which does not make sense to him. In Lifou the discussions were mainly in relation to the project of the construction of a dry port in Xepenehe. The feedback reports that the initiative was led by a GDPL in the West part of the North district of the Wetr. Outside the district the project created confusion and was seen as having been settled for the benefit of people in the Wetr. In fact, most of professional fishermen were not aware of this initiative, even at the fish processing unit in Wé the feedback suggests the project is not linked to the collective of professional fishermen, the manager of the fish processing unit was neither involved or that aware of the project developing in Xepenehe.

“- The GDPL it must be ... That's ... how to say ... it was fishermen who went into GDPL. Because in fact the GDPL is going to be what? it's going to be two or three people.

⁴⁵ Facebook and other social media platforms are very popular, people sharing about events and ceremonies. Everyone has cellular and social media platforms reflect the daily life.

- *Researcher: So, it's going to be like a parallel strategy?*
- *Well, it's because they don't want to be in the association. Or instead of creating a Sarl they created a GDPL ... It is actually the status of the company. Which is going to be more GDPL...*

One interpretation leads to considering the weight of the French bureaucratic culture (observed by Dana 1990; 2018) which, mixed with the complexity and the secrets of customary decision making, in this instance seemed to block the mechanisms for adjustment and validation that would only be possible with a tight network of social relationships. I did not expect this dynamic before going to the field as there is a strong and dense network on-tribe. It contrasted with the examples discussed by Peredo and Chrisman (2006) where community-based, grass roots process shapes entrepreneurial dynamics, whereas here we can observe a top-down approach. The discussions brought a more complex image into focus, where the strong network is impacting on decisions in an informal way; for example, when assessing the trustworthiness of candidates for projects. One of the fishermen stresses: *“You must knock on doors. it's (at the Province) ... or see if ... You know it's small we are on an island you bring a file and “clack” it's in the day that he will know if it's a serious guy or ... you see, it's word of mouth...”*. Yet once in the cogs of the institution the information was institutionalised and followed a process which seems opaque and long. Another element illustrated the top-down approach contrasting with a sense of community-based process: most of the fishermen were not aware of the new environmental code⁴⁶ that the Province was putting in place. Yet, the discussions I had on this initiative stressed the willingness from the Province to integrate a customary vision into the legislation, as part of the process of the crystallisation of customary rules in the rules of law⁴⁷. As an outsider the lack of consultation and communication seemed like a missed opportunity to mobilise people with the Province whose role in this instance was to guarantee respect and preservation of Kanak's values and rights, especially towards the protection of natural capital. In addition to this top-down dynamic, observations and feedback on Lifou regarding the dry port point to feelings of regionalism by districts and also mitigate the image of a strong and dense network encompassing the whole community. *“I think it's really a question of regionalism. It's always been like that here... Then they wanted to create... Not they wanted but they created somehow their association in each district so... after it successful or not but there was the association of fishermen of Wetr, it has always been a little complicated*

⁴⁶ <https://www.province-iles.nc/sites/default/files/2019-03/Code-de-lenvironnement-PIL.pdf>

⁴⁷ For example, it stresses that, following the principle of Kanak society, the unitary principle of life means that man belongs to the natural environment surrounding him and conceives his identity in the elements of this natural environment. According to this conception of Kanak life and social organization, certain elements of Nature may be recognized as legal personalities with rights of their own under applicable legislation.

here". The vision of the community at the scale of the Island became more complex, and the impact of districts, which reflected the chieftainships, also seemed to impact on network formation.

2.1.1) Mutual aid & cooperation

Entrepreneurs in similar firms may be competitors and yet co-operate for mutual benefit (Felzensztein, 2019). In New Caledonia, fishermen also cooperate, but for various reasons. Among the commercial fishing fleet there is cooperation along the lines of information concerning the localisation of catch, technical advice, or joining resources under the guise of the union of professional fishermen, for example to bring over a mechanic and thus to share costs. They also help each other in case of breakdowns or dangers when they are out at sea. In relation to information exchanges, they often refer to one or two other professional fishermen with whom they have developed strong ties. The cooperation expected by the Province, which entails the mobilisation of subsistence and customary fishermen to cooperate by setting up projects and deliver fish to the processing unit, has nonetheless not happened yet.

Bengtsson and Kock (2000) investigate co-competition dynamics and stress the existence of both cooperative and competitive relationships according to the type of activities developed. They show that these types of relationships can appear in different degrees according to their distance from customers. For example, in the lining industry competitors compete on marketing and distribution whereas they cooperate in product development, or as in the dairy industry they compete on products whereas they cooperate in the distribution. Although different from these industries, the nature of professional fishing activity in the Loyalty Islands and the cooperation among artisanal professional fishermen providing the fish processing unit highlight a form of co-competition around the line distribution, whereas it has been stimulated by the Province. Among the three main characteristics found by Granata, Lasch, Le Roy and Dana (2017) in their exploration of small firms' co-competition we can note that two dynamics are reflected in the management of the fish processing units, namely the strong formalisation and separation between competition and cooperation, but the third regarding the involvement in cooperation seems different between Ouvea and Lifou. More precisely they observe that highly formalised processes facilitate the integration of new members without upsetting the rules of the game. The strong formalisation was noticeable with the contract they made when the boat has been funded by the Province, and in rules fishermen have to follow in providing the fish processing unit concerning the product they can bring and what they can get from the organisation, as for example the provision of ice, fuel aid or incentive bonus. *"The boats that were financed by the Loyalty Islands' Province; we are obliged. There is a law that obliges us. Which means that if we want to benefit from fuel aid, we must sell our fish to the*

*processing unit and then we fill in the fishing sheets... and at this time when you are over 100kg and well you have a bonus” (BmU/ KBL)”. Once the project is launched, the framework put in place seems to provide the formalisation to establish the cooperation of fishermen and new entrants in the collective. Secondly, as noted by Granata, Lasch, Le Roy and Dana (2017), small firms’ collective organisation often entails a separation between competition and cooperation (for commercialisation) that occurs outside the individual firm and the cooperation as with large firms happens in a collective structure outside the individual firms. This statement is observed in the setting of Loyalty Islands’ artisanal fishing sector, yet the success of the cooperation in this instance can be subject to discussions as the fish processing units were designed to welcome more fish than the amount currently processed, highlighting resource constraints and difficulties to exploit economies of scale. The management of the processing unit was different among islands, as well as the involvement of the fishermen in the functioning of the units. In Ouvea the fishermen cooperate by bringing fish. One respondent, a professional fisherman, even worked for the fish processing unit. He explains “*After the morning for example we come from the north when I worked to go collect fish from Moulis (in the South) you see the journey we get off Moulis we recover the fish, and we go back ... We clean it we condition it and a close we go down ...*”. The situation in Lifou was different as the fishermen report going individually and usually come back by the marina to the fish processing unit. They were not involved in the functioning and seem to have a lower collective participation. Even for the union the participants explain that it is difficult to organise meetings. These observations must be appreciated with regards to various elements mentioned during the field of research: on one side the physical characteristics of the islands, especially a more difficult access to the sea and the absence of lagoon in Lifou, and on the other side the social characteristics as the differences in population density⁴⁸, added with the fact that in Lifou there were fishermen from different ethnic backgrounds. This last element was source of exchange and mutual help for some but also has been reported to sometimes refrain collective organisation between others.*

Support and mutual help are often characteristics of strong ties. Jack, Drakopoulou Dodd and Anderson (2004) stress the different kind of support brought by suppliers, customers, and family. In the context of the Loyalty Islands, the Province has supported the sector both upfront and downward. For the procurement of boats and material, there are no suppliers on Lifou, while in Noumea there are few of them who work with foreign companies, there are no strong ties between the fishermen met and the suppliers. Regarding the distribution, the fish processing unit is a subsidiary of the SODIL⁴⁹; being supported by the Province although being independent in its management. In this configuration, most strong ties held by the professional fishermen are situated

⁴⁸ Chapter 4 explained in 2014 the population density was of 7,6 hab./km² in Lifou against 25,7 hab./km² in Ouvea.

⁴⁹ For more information on the SODIL, see Chapter 4 p. 23.

in the family node and the position of the member in the family seems important as they provide support. Emotionally as the fishers often refer to the family as the first motivation for the project and instrumentally as for example the partner is also often quoted as having a key role when some months are difficult because of the weather and people cannot go out at sea. And, as mentioned above, it was stressed in the interviews that professional fisher have developed strong ties at least with one other professional, these relationships being influenced by geographic proximity, if they belong to close clans, same district or neighbouring tribes, and also by the frequency of their encounter at the fish processing unit. For informal opting-in activities it is important to consider the high level of pluriactivity and large extended families ties offering opportunities, either regular when people have a business, or punctual when there is an event.

2.1.2) Norms

Indigenous communities often observe specific norms linked to the diversity of behaviours. Norms have been presented as an essential element of collective social capital. In most part of the globe, the ocean is considered as open to everyone, the International Maritime Law supporting this view. However, in Kanak communities, as well as in other Pacific communities (Johannes, 1989, Teulière-Preston, 2011), shore territories are considered to belong to the coastal tribes and inhabitants. Customary fishing involves territorial respect⁵⁰. Various respondents explained that not everyone can fish anywhere at any time. ObK elaborated that tribes have reserved fishing rights in given areas, and outsiders are reprimanded if they trespass. He explains *“Here in the bay, the spot here, “at home”, is ours with another tribe that is there and another tribe. Sometimes when we cross paths, we talk a little, sometimes we exchange some fish. We ask: “What did you catch?”. Occasionally, if we find other people here, we will tell them that they are not allowed to stay. When they come here, they don’t know the area. They don’t know where this or that is. Because we can’t go to the other spots because we don’t know what it’s like... Maybe you see there are currents that aren’t... Here we used to come here because it’s home; you know, we know the spots. It’s not like other people who would come... they might think I’m going to go there because I’m going to try to see how it is there in their area”*. This explanation illustrates David (2008) and the observation on the territoriality of fishing regulation. BcN also explained the importance of asking permission before fishing in the domain of another. These observations support that traditional habits are not only, as Johannes proposed, linked to an ethic of conservation. Ostrom (2000) points to different design principles of long surviving self-organising resource regimes. For customary fishing (1) the presence of clear boundary rules is evident as the groups follow clan’s and tribes’ territories. There

⁵⁰ These observations can be taken in reference to the different conception of territory (chapter 4 p.14).

are also (2) informal local rules which restrict the amount, timing, and technology of harvesting the resource, the use of only the fishing rod has been stressed at various occasions, as well as not killing the nest and harvest only what is needed (3) the participation of the users in making and modifying the rules was also present. For example, at the end of the field of study a fisher explained that a ban nearby the reef Jouan has been promulgated to preserve the resource; another example can be the regulation of mackerel fishing⁵¹. Ostrom (2000) also points to (4) an endogenous system of trust and reciprocity, meaning that people monitoring the area are accountable to the users or are user themselves. In the customary system each one is responsible of his spot, and as OBK stressed this is linked to their knowledge, the presence of sea clans with specific responsibilities also illustrates this statement. (5) The existence of graduated sanctions was mentioned as first a talk or a warning, and then possibility to be chased, with machete or even guns. Finally, Ostrom points to (6) the importance of conflict resolution which should be fast, local, and cost effective. Most conflicts are in this way resolved quickly, the vision as a pantry maintained, and the resource preserved. The artisanal professional fishing sector was organised with its own rules, deferent from the one traditionally in place. (1) Being a professional was marked by having a licence, owing a boat, and selling to the fish processing unit. There were not (2) local rules to restrict the amount, or timing at the time of the research but the technology of harvesting the resource as controlled as the Parc of the Coral sea has specific rules with limited hooks for example. Also, on the other side, the Province was validating the projects and then also controlling the size of the boats in a sense. There was no (3) participation of the user in making and modifying the rules as these territories are controlled by the State, and then there was no (4) endogenous system of trust and reciprocity, meaning that people monitoring are accountable to the users or are users themselves, (5) the existence of graduated sanctions was also guaranteed by the State and finally (6) the importance of conflict resolution, fast, local and cost effective, concerned more international boats known as blue-boats who fish illegally in the area. The network of stakeholders associated with professional fishermen with the union, the fish processing unit, and the Province, was different from the network supporting customary fishing with the clan and or the tribe.

The observations highlight that social capital has different specific effects in this context. The two types of fishing activities display different characteristics in their associated networks regarding to norms, structure, and nature of links. Customary and subsistence activities are oriented towards the preservation of natural capital and customary fishing embedded in the dense network of clans, while professional fishermen's network appears to be more scattered and poorly organised in Lifou. Evans (1996) suggested that the role of the government in creating synergies was crucial

⁵¹ Example developed p18-19 of this chapter.

with both complementary actions and political embeddedness enhancing ties between the population and government's actions. Yet the observations and feedback highlight the disconnection between the collective of professional fishermen and the Province. Previously in this part we suggested there might be a missed opportunity for the Province in mobilizing more people regarding their communication on the new environmental bill ("*Code de l'Environnement*") they were putting in place⁵² here there might be another one in triggering more participation creating complementary and synergistic relationships.

As the preservation of rights, natural capital as well as the crystallisation of Kanak values in the Law were deeply important to people⁵³, this project presented complementarities with artisanal fishing activity as well as customary and subsistence fishing regarding the establishment of rules related to marine resources, and the monitoring of the various areas. From that point, actions concerning these subjects could involve people from different parts of the territories, from customary, subsistence, and artisanal fishing and by this mean create ties with the Province. This would be a way to cancel the effects of the suppression hypothesis and, while blending artisanal professional fishing in the socio-economic landscape of the Islands, it could help build a more positive image around the context of the projects with economic development and the political program which, at the end, aims to increase the island's sovereignty and develop their economic independence. These elements stress the crucial importance of perceptions and lead us to our next part on cultural capital.

2.2) Cultural capital

In Western cultures, automobiles are considered personal assets. In parts of New Caledonia, a private vehicle is personal, yet, it has a cultural liability in that it is socially incorrect to use a car solely for personal benefit. On the island of Ouvéa, people explained to me that a driver is criticised when he/she does not stop to pick up a hitchhiker. This is somewhat like the situation in Lesotho where a privately-owned cow cannot be sold nor killed by its owner. Among Indigenous Basuto people, the proprietor of cattle has the obligation to allow others to use cows for transport or other uses (Dana, 2007). While some values are shared by Indigenous people in different contexts around the world, within New Caledonia, we identify important differences between fishing only for custom and fishing commercially. In New Caledonia, customary fishing practices and artisanal fishing activity involves specific cultural capital where cultural values associated with Customary fishing are often incompatible with the basic assumptions of mainstream theories that relate to commercial fishing, which may be based on a different set of cultural values. For example, it was

⁵² P.9 of this chapter

⁵³ Both fishermen and non-fishermen expressed concerns regarding pollution and the resource during the research.

not acceptable to fish for profit with a boat on the territories of the tribes and for some elders met on the field, it was not even conceivable to sell any fish.

2.2.1) *Rhythm and the pace of nature*

In Pacific Islands countries, coastal and traditional resource management practices are acknowledged for their specificities in fishery science (Johannes 1978, Veitayaki 1997). In customary and subsistence activities as well as for punctual informal economic activities the pace, anchored in the territory, is marked by seasons and crops. People use signals from the environment to guide practices, for example, *“when the water goes down, I know it is the time for me to quit my field and go catch some octopus for lunch”* (MnV). Nature signals and traditional knowledge based on observation and practice assist decisions. ObK explains that *“when the moon starts to take shape it means the tide is rising. The elders taught us, we don't need to watch the weather forecast to know how it will be tomorrow, we read the sky and the stars. But mainly we watch the moon for the tides. There is always ebbing tide at the waning moon. Each fish has his moment. We know already there are seasons for fish. Sometimes we catch mullets or when there are jack fish, then we know we do not see them the rest of the year on the same spot, they go a bit further.”* Some knowledge links the land and the sea, for example sharks and whales are important as these signal seasons. ObK illustrates this by explaining: *“Here the whale arrives between August and June, July, August it is the season we are starting to plough the land.”* Observation taught them to be careful when the flame trees are flowering and the algae are growing, as this indicates that the risk of ciguatera is high.

ObK explains that you cannot eat fish all year long, as for instance when you work in the fields. EfV further develops on the rhythm of customary fishing activity: *“There is a way to fish. First, we start with the field because there is a moment the fish just... it is too small but then they grow up and then, when we harvest, that's the moment we also fish”*. Fisher's feedback suggest that the rhythm imposed with higher yields and larger catches volumes may go against the rhythm of nature which is in relation with traditional practices and by this, questions the acquisitive character of capitalist dynamic. BtT explicates *“We were educated like to really take what we need ... here we come to the evolution... And then above all we embark on a project we have things to pay, we have ... Which makes it really go against what we learned. You see you fish you fish you fish ... After a while we say enough but some continue to fish because they have that to pay that to pay that to pay ...”* (Ouvea). KpE further states *“You see, it always hurts when you fill a cooler and you say to yourself, my gosh... here we made quite a guerrilla... It's a bit... you see...”* (Lifou). These observations support Leblic (2006), who explains that the experience of time is lived according to the rhythm of the nature, of the hot and the cold, the rhythm of old age and youth and the events

that animate the community. She illustrates her point by citing Jean Marie Tjibaou (1976:287) who considers four types of time: the time of yam culture, the time of clan history, time, the time of myth, and the social hot times (which includes all the social events). Indeed, fishing activity is part of the rhythm of nature, and rhythm of community's life; it links generations by customs and gifts and participates by providing for community events. The sharp difference with the rhythm stimulated by the fish processing unit and the whole projects created reactions. Feedback critics the constant need for cash as fishers must repay for the loan of the boat, and manage the costs associated with the activity. This leading to the comparison of catching the fisherman in a trap where he is forced to fish, and this is seen as much more than just a shift in yields, but a change in philosophy. Looking at the perception of nature, Horowitz (2001) points to the specific beliefs systems influencing Kanak's statements and actions regarding the conservation of their natural environment. Her research points to the social component and the geographical component of Kanak's identity, reminding us that the concept of the division between nature and culture derives from Western worldviews, these remarks are supported by the observations and feedback on the field. The rhythm imposed on fishing by the projects with the repayment of the loans contradicts sharply with the pace people used to fish. Welter and Smallbone (2011) stress "Where formal and informal rules conflict, previous experience and tacit knowledge are typically the main influence on entrepreneurial behaviour" (2011:114). Then the traditional values, especially regarding the rhythm of the activity, might stifle the vocation for the development of this activity. Building on De Clerck, Li and Ho (2013), developing a vocation for entrepreneurship should be materialised in the institutions in their orientation. If the financial system has become much more accessible thanks to the Province and micro-credit organisations as the ADIE⁵⁴; the educational system does not seem oriented in encouraging the young to think about entrepreneurship as a vehicle for development. In addition, with regard to the capacity of the fish processing units, the worries concerning profitability and the possibilities offered by the facilities, the feedback tends to point to other valorisation of the catch with transformation. The interviews highlighted that the processing unit is vulnerable to resource constraints as it impacts on its competitiveness making it difficult to exploit economies of scales and to provide a reliable and sustainable offer to export potential customers. Other example from Indigenous entrepreneurship literature stress specific challenges as, for example, the aspects of remoteness or the seasonality has been reported in Mason Dana and Anderson, (2009) with Kivallic Artic Food. The example of this company suggests avenue of development regarding branding as the product from Loyalty Islands have a good image, or also organisation as Kivallic Arctic food regroup a wider range of product.

⁵⁴ *Association pour le Développement de l'Initiative Economique. <https://benevole.adie.org/association/adie-nouvelle-caledonie>*

2.2.2) *Pluriactivity and collective orientation:*

On tribe, way of life and rhythm are characterised by pluriactivity which, as described in the precedent chapter, is present both in commercial and non-commercial fishing. Dana (2008) illustrates how Sami people in the North of Europe have learnt to reduce the uncertainty caused by harsh climate with the mastering of the art of herding. In remote pacific territories as in the Loyalty Islands, pluriactivity, with the alternation between fishing, hunting, and agriculture stresses specific resource management knowledge linked to resilience and risks reduction. These observations confirm Bouard and Sourrisseau (2010), in that pluriactivity is still significative in households' strategies. They stress that the pregnancy of pluriactivity is rooted in the territory's history with on one side, direct and indirect job opportunities stemming from the administration or rural development programs and on the other side, the vitality of tribal and customary activities. Pluriactivity is "natural" on-tribe to perform customary works. Everyone has a field and most of the fishers, as other islanders, have developed economic activities on their side. The feedback highlights that artisanal fishing activity does not generate a sufficient salary as one fisher stresses that *"you can't just do fishing for a living"*, otherwise the low frequency of the activity impacted by forecast conditions, coupled to the obligations to repay the loans even when you cannot fish can create precarious situations. Another indicates *"One, he is a little chef, he has a shop, KpE he makes salads in hydroponics ... Everyone has, pretty much several activities."* All interviewees express their passion for the sea, share their knowledge, stories, and some special encounters they made in the ocean, yet they also stress the harshness of the activity, marked by difficult times on a sometimes-cruel sea.

The characteristics of pluriactivity on tribe suggest a collective orientation, as activities are often practiced in group, on communal land and for collective purpose. Yet, the projects are individuals but articulated with other household activities. Such as, for example, when the entrepreneur has a snack shop or is developing a touristic activity at home, then it articulates with the other activities of the household. As one respondent said, *"it is for the family"*, while another is hopeful his son will take over the boat. When it comes to facing the needs of the household, in Lifou, individuals could have other alternatives since the land mass is bigger than in Ouvea and the tourism sector is more developed, resulting in a situation where the fishermen are not pushed into fishing. These observations support the choice of Bouard and Sourrisseau (2010) to take the household as a unit of analysis to better understand strategies yet even if developing a project seems to make sense with the household strategy in Lifou the local economy is dominated by the tourism and the professional fishing sector seems apart. Unlike tourism which is related to a strategy of conservation of patrimony (Sourrisseau, Geromini, Blaise, Bouard and Zugravu-Soilita, 2016), professional fishing development, with this type of boats and technics, is associated to a new

Page 152 of 229

practice and trigger some questioning. This is illustrated by the concerns about the resource linked to the difference in rhythm.

In Ouvea, the population stressed its choice (in this island) for the development of the fishing sector and preferred not to allow cruises to come. This was justified by the fear of coral degradation and contamination with the ciguatera. Concerning paid work, although there is not as much employment in Loyalty Islands than on the mainland,⁵⁵ individuals living in tribes can consider searching for a job by developing a project in some of the other sectors supported by the Province or seek employment in one of the hotels or institutions. Unlike tourism which is related to a strategy of conservation of patrimony (Sourisseau, Geromini, Blaise, Bouard and Zugravu-Soilita, 2016), professional fishing development, with this type of boats and technics, is associated to a new practice and trigger some questioning. This is illustrated by the concerns about the resource linked to the difference in rhythm.

Fishing teams' dimensions differs between commercial and customary fishing situations. Commercial fishing involves an entrepreneur who owns his boat and has the option to either bring or not to bring a crew. It is the boat owner who decides whether he goes alone or if he sails with people, choosing the composition of his team. Commercial fishermen do not present their activity as being practiced in a team, but at times take passengers, mainly family members or people from the same tribe. For example, KpE explains that by taking passengers when fishing, he enables them to discover the activity of deep-sea fishing, like catching snappers. In his words, they are usually "brothers", then people from the same tribe. DmU also explains that he takes people "to have a look at "modernity". Yet, the activity remains mainly individual. BmX thinks that boats are not big enough to fish in group, often lacking room and so prefers to go alone. Observations on the field note that most professional fishermen returning to port alone from their fishing trips. By contrast, the composition of a team going to customary fishing is a function of tradition. For example, when customary fishing is required due to a ceremony following a death, it is expected that the fishing team usually includes the closest kin of the deceased. The size of the group depends on the work to be carried out. The elder brothers bring the younger ones in order to teach them. This type of fishing practice provides for the diverse needs of everyday life towards a variety of situations such as weddings, baptisms, or mourning. And also, when there is the construction of a new case or to provide for events which generate money for the tribe as for example fairs, dinners or games of bingo to finance new projects. The articulation of the collective then seemed different according to how and why the activity practiced staying in the close to the kin for customary and subsistence fishing and practice in little group whereas for artisanal professionals while the activity is more

⁵⁵ Referring to the dynamics introduced in Chapter 4 on the job market impacted, among other elements, by the nickel economy.

individual the collective of professional fishermen come from all over the island. In addition, sharing practices inform on another dimension of the collective. Much sharing takes place during customary fishing. Generally, in commercial fishing, an owner often has employees who are paid a fixed wage, while profits go to the entrepreneur. By contrast, ObK explained that as soon as he has a team of four people, he sets to sea. He pays no wages, but each of the four persons takes home a share of fish. He elaborated that when there is a large catch, some of the fish are given as a gift to the religious leader and to the chief. He explained that fishermen who share their catch consider that they are given a blessing in exchange, this allowing them to have a larger catch in the future. Sharing is rooted in the philosophy. In Ouvea, TjX explains *“Yes, we give in the houses ... the neighbours ... Yesterday, me, when I came with the boat down there were three houses opposite there, well I took three fish and I have them hang on the courtyard... in grandmothers and then here she gets up in the morning and there’s fish. But otherwise with us if you go fishing at this place you come with the bag of fish you meet someone from the gives the fish "here you are". You can’t pass ...Without doing anything here. That’s the old way of doing things ... still now I do, it if I meet people on the road, we tell them “hey there is some fish, we give you fish?” Sometimes they refuse”*. For commercial fishers the activity is mostly performed alone and when depending on a team the catch is also shared. Concerning the catch in artisanal fishing, as mentioned, the main part is destined to the fish processing unit. Yet various Kanak artisanal fishers used to share a part of the catch to their relative and to people who are there. For example, KbL explains that he used to give fish when he has a good catch, mainly to people who can't afford to buy the fish at the fish processing unit. Jtl explains *“Well, sometimes it's the guardian of the road down there in Luecila, well since he's the one who has the key to the chain, well, we think a little about him, we give fish up there. Or sometimes my father's brother, he is on the road... Or for old people walking down the road there, they come from the field. We stop and give some fish... when there's a lot a lot!”*. Here ethnicity seems to impact on sharing behaviour, BcN stress *“on 100 kg, I keep 40 kg for custom, to distribute. But that’s the Kanak fishermen but the whites one it’s all at the fishmonger”*.

Collective resource management practices at the scale of a tribe, or various tribes, meaning involving a greater number of individuals rather than one or two clans for example, was still punctually practiced, with people fishing for home.; as for instance with mackerel fishing in Lifou: *“When mackerel arrives... Someone, the designated person, says, "Well... This month we do not fish mackerel but on the other hand we come to feed ... So, it's... It's a long-standing habit. Then they have fun crushing the crab (to feed the fish). In the morning... It is each one after the other, and then the owner comes to look at the fish’s size and he says "ok, from tomorrow, the mackerel fishing is open... But it's not with the net, it's not with the casting net, it's not ... it's all at the ... that's all*

what it's called... a system for preserving this... And every year it's the same, every year, every year ... from the month of February... January, February, we are not allowed to fish, but we come to feed... The owner of the place he comes to say ok well now that's it, fishing is open, it is open to everyone... that you are from Jokin that you are from ... already from Xepenehe... Whenever you say that it is open to all, everyone is welcome to fish, but it always involves a line! It is forbidden with casting nets... With any net." In Ouvea, an elder describes a collective fishing practice at the scale of various tribes, which he suggests is disappearing. It was a specific fishing to catch *picots*⁵⁶ at the scale of various tribes, during which people were clapping the water to scare the fish towards a net held by others on the other side of the reef. After fishing, each participant eats together and then bring fish to their home. The notion of collective is manifest with different levels of analysis, from the family, the clan, the tribe, or even the district.

Finally, the notion of the collective extends to the notion of invisible world. This construct is described as the link with the world of spirits, encompassing elders and living beings. The invisible world impacts on and brings into consideration the perception of what is acceptable or not, but also provides a justification for events, even tragic one. For example, misfortune in fishing, accidents or even death are sometimes explained with a link to the invisible world. People find justification of woes thinking something has been done incorrectly, or the person did not respect the custom. Myths reflect notions and aspects of the invisible world. The myth also relates to the path of an individual and his place in the group; this kind of myth relates to the family, the elders, spirits and totem animals. This perspective of the collective reflects a wider dimension of link to social capital. Kwon and Adler (2014) point to the notion of ghost ties where the relationships materialised in the myth shape perceptions and behaviours. Kwon and Adler (2014) invite to consider these forms of cognitive ties which can influence people's attitudes and aspirations; they stress "networks can be constituted in the minds of individuals as memories, thoughts and desires in the form of ghost ties, without any corresponding actual ties" (2014:414). Customary fishing involves symbolism linked to Myths, for example, the story about the octopus and the rat illustrates the link with practices. The rat is believed to have had fun and treated the octopus badly, the legend is told across the Pacific. This story has been told to me in the North but there are various versions of the same story reported by Petit-Skinner (1978), resulting in the octopus caring a revenge towards the rat, this story has implications in the practice. In traditional fishing, people explained that a rat shaped bait will help catch an octopus. This story illustrates how myths, and the vision of the invisible world, can be linked to ecosystemic knowledge. The rational behaviour for an artisanal fisher would be to search to protect his site, KBL explains they do not fish rare animals and have to

⁵⁶ Type of *Acathurus triostegus*.

be reasonable. This was illustrated by their carefulness when fishing on lobsters' nest to only take a few and not to kill the nest. In Ouvea, the feedback reinforces this vision of respect and measure, TjX stresses "on the spot you take three here then you go further... You have so many fish, it is the same with lobsters, you must be reasonable, and you need to maintain fish stocks" (TjX). Redpath and Nielsen (1997) suggest that management approaches taken by Indigenous communities address actual governing challenges as flexibility, adaptability, and an inclination to be less ethnocentric than our Western models. Their review of Hofstede's model compares native and non-native cultures, and stress that the individualism versus collectivism dimension is one of the greatest differences between Native and non-native cultures. Yet, in Canada, Missens, Dana, and Anderson (2014) also observe concern for sustainability and at the same time, stress the evolution of practices, and highlight "traditional harvesting of wildlife from the land and water continues to play an important role in Aboriginal communities by supplying country food and by reinforcing traditional customs and values. At the same time, commercial use of natural resources by Aboriginal firms and individuals has increased, as Aboriginal people participate more actively in the market economy, sometimes sustainably and sometimes not." (2014:498). Such observations give ground for the concerns expressed regarding the loss of traditional management practices and collective fishing practices. One person suggests that the needs of people have changed compared to ten years ago, and with this also the mentality of people have changed. For example, the purpose of the tribal fairs held on weekends was discussed in various conversations, with some people suggesting that while in the past people used to hunt and fish, now the younger generation prefers to go to sports and listen to music, with the worst part being the cannabis and alcohol consumption. Other feedback concerns directly the sustainability of marine resources. For example, Ouvea is known for its lagoon and its unique population of *bec de cane* (*Lethrinus nebulosus*)⁵⁷; yet some people started to express concerns towards the stocks' sustainability because of commercial fishing. Concerning the snappers in Lifou one fisher share "*When they first started fishing for snapper about ten years ago, we could see this fish everywhere. As of now, catches and volumes are both stable around 15 tons a year, while before we reached 30 tons.*" We can notice some difference among the groups of customary and professional fishermen. Customary fishermen fear that fishing too much would quickly deplete the fish of the area. Indeed, custom and subsistence fishing activities target fish that are sedentary, while commercial fishing target migratory pelagic fish, like tuna⁵⁸, or deep-sea

⁵⁷ Fourmanoir, P., & Rivaton, J. (1979). Poissons de la pente récifale externe de Nouvelle-Calédonie et des Nouvelles-Hébrides. *Cahiers de l'Indo-Pacifique*, 1(4), 405-443.

⁵⁸ Tuna's stocks assessments in the Pacific are a serious concern in the Pacific (https://oceanfish.spc.int/en/publications/cat_view/116-ofp-publications-a-documents/131-stock-assessment-and-modelling/181-stock-assessments/228-latest-stock-assessment-publications); for the fishermen interviewed they seems to escape the logic of the pantry.

snappers. Snappers are caught in the mesopelagic areas which depth make stocks assessments difficult. Yet, aside from these considerations various feedback from Kanak professional artisanal fishermen from Lifou and Ouvea stressed their concern for the resource concerning rhythm and volumes mentioned above. The research has developed with the curiosity to understand indigenous communities' vision on fishing activity development. Their habits, beliefs and perceptions serving as guidance, and even reflecting onto our own fishing practices, for example concerning fish stocks depletion in North Atlantic especially herring stocks (Christense, Guénette, Heymans, Walters, Watson, Zeller, and Pauly, 2003; Thurstan, Simon Brockington & Callum M. Roberts, 2010), or the collapse of Peruvian anchoveta. Change in attitudes with more measure and care towards the resource have carried their fruit already in some part of the globe. In their research compiling the results from the RAM Legacy Stock Assessment Database⁵⁹, Hilborn and al stress that “*the average fishing pressure increased and the biomass declined on average until 1995, when fishing pressure began to decrease. By 2005, average biomass had started to increase*” (2020:2219).

Comparing cultural capital between customary and professional fishing activity showed differences in entrepreneurial orientation, values and rhythm. Although there is no direct interaction between both types of fishing, the vision attached to customary fishing, anchored in traditional networks and practices, seemed to question the new system promoted for the development of commercial fishing activity.

3) Observations on mixed embeddedness, ecosystems, and trust.

3.1) Mixed embeddedness

Building on the observations on social and cultural capitals among the different types of transactions, this part presents the themes observed in relation to the mixed embeddedness of fishermen and reflects on the concept of entrepreneurial ecosystems with the implications regarding the development of fishing projects. Obligations and reciprocity in Indigenous exchanges illustrate society's structure. Mauss observed the obligation of giving is as important as the obligation to receive and giving back in return (Mauss, 1924). By observing exchanges and cash flows in Indigenous social and political systems in Papua New Guinea, Curry (2005) points to the high embeddedness of Indigenous exchanges and stresses that the social context of exchange determines whether an individual exchange constitutes a gift or a commodity transaction; echoing Faugère (2000) and her observations on the various uses of money in on-tribe exchanges⁶⁰. These

⁵⁹ ramlegacy.org

⁶⁰ Referring to the observations chapter four p.17.

observations illustrate the mixed embeddedness pointed by Kloosterman and Rath (2001) in a context of minority culture versus dominant culture. The concept is interested in the development of a different opportunity structure influenced by their own capitals but also shaped by the characteristics of the country in which they try to develop their venture. Also, these observations highlight different expectations from the network according to the type of fishing activity.

Various elements have been mentioned regarding the profitability of fishing activity and the difficulties encountered by the fishermen. The economic lever did not seem to be the first motivator for people setting up a project and when asking the fishermen, the family or home related reasons came first. Looking at Indigenous entrepreneurial activities in Papua Guinea, Curry (2005) suggests that when the activities overlap there can be a risk on profitability. The research has considered this comment, as fish can be used in both customary and economic exchanges and tried to understand if it was the “overlapping”, or in other word customary obligations which undermined the profitability of the projects. Curry (2005) stressed that indigenous exchange is a determinant of Indigenous way of life, and that the dominance and permanence of small transactions as sharing and gifts is essential but can seem dangerous for the profitability of the activity, the fisherman having costs inherent to the activity with a loan to repay. For example, JtL explains: *“For every trip, it costs 20,000 francs for the boat. Fortunately, the ice is free. So, we can’t, for fishing you have to bring at least 100kg ...100 kg is good ... It’s already the maximum is good ... If you weigh 50 kg it’s still fine ... It’s just...just to get back on track. That’s it”*. Yet, the importance of participating and doing the work regarding customary duties is never put in question, as BtT explains: *“here we are so called “professional”, we sell some fish in the shops or at the fishmonger but when there is a wedding or a funeral or a mourning well all the product of the fishing we bring it to work, it is our contribution, it is normal. We must try to combine the two”*. Although fishing with a boat is costly and requires cash flow, according to the interviews customary ceremonies and duties are not a problem in the management of the projects, KpE emphasises that the fairs or customary ceremonies are not too often according to him. KpE: *“Because here you marry your brother in the year you do one work... after there are various others, but for me, individually, it’s for my Brother that I work for. Then, sometimes, it happens that I bring the cousin with me, they want some fish for the fair: “hey I need some fish” ... “well you pay for fuel! then I will fish for you... (...) Well, I have the fishing unit ... so I take advantage of the fact that I have my boat, so I fish for them. That’s it. And the fairs are also not too often... It’s once or twice a year ...”*. Instead of being driven by profit, he is practical with regard to the demands, and even if he asks for fuel related cost of the for the boat to be covered, the activity is benevolent, nonetheless. This fisherman was regarded as a “serious professional”, a “true fisherman” according to the feedback from others. Along with fishing with a boat, two elements

compose the appreciation of a good fishermen in the interviews. The first element is that this person would have to fish regularly and long enough so that he can correctly repay for the boat, thus respecting the institution and reassuring on his “reliability” as a project holder. The second element is more related to the seriousness of the technics, especially for the conservation of the product, and for being able to deliver a product of quality, respecting the resource in terms of catch size. The feedback from the fish processing unit and the Province both stress the importance of the consideration given to processes in order to have a product of quality. The fishermen recognise the help provided by the training, and they feel more confident towards their product. Interestingly the feedback highlights two aspects of trust, one being more related to the respect of their engagements with the institutions, more precisely delivering fish to the processing unit and paying back their debt, while the second reflects more the aspect of competence trust regarding the product and the way it is preserved.

The various references to their fields and crops, the maintenance of customary exchanges as well as the respect of shore areas as pantry, support the vision that artisanal fishermen experience a high embeddedness⁶¹ in traditional networks characterized by informal rules involving spatial, social, and cognitive aspects. The mixed embeddedness is reinforced by the strength of the Custom, for example, living on tribe there is security for home and food. The discussions lead to note that one aspect of the mixed embeddedness is related to the local Indigenous regime of accumulation in which the natural capital and territories are integrated. Instead of being based on the rule of law, this regime of accumulation is based on the rule of the Custom which guarantee to people a place socially, in the group, and spatially, in the tribe. The rule of the Custom also provides specific rights to Kanak people. Even if people are not individual homeowners in the eyes of the French law, within the tribe, once you get the right to erect your traditional Kanak case⁶² you can always come back, and your place is respected. This seems linked with the remarks on the spatial component of identity. Yet, societies are not static and as mentioned in the observations, with the use of flashlights and batteries in traditional fishing activities, or in respect of everyday life’s cost, considering costs of necessities, such as schooling or for example the use of phone or even cars; various elements depict changes in people’s needs and the development of a need for cash. The context of Kanak’s claims and one of the objectives of signature of the agreements, along with the peace, was to end the political and economic marginalisation of Kanak people and to construct a common destiny⁶³. The observations regarding the pivotal role of the Province and the context of

⁶¹ The institutional, social, and political embeddedness of fishing activities has been illustrated in chapter four with the literature review on New Caledonia and chapter five for the observation regarding the development of entrepreneurship and more precisely the fishing sector in the Loyalty Islands.

⁶² In reference to figure 5 and 6 chapter 5.

economic development highlighted the aspect of political embeddedness of the sector. A professional fisherman in Lifou elaborates on the concept of “common destiny”: *“it's important to do the custom it's important to participate in a marriage, but for the boat and material, we have not dealt with the clan's chief or with the customary chief, no, we have dealt with the bank or with the province and this side must also be satisfied... that's it... that's the big concern of economic development. (...) In relation to the work, especially in the Kanak culture, the spoken word is very important, but we have the impression that we respect this spoken word only when we are in a cultural structure... No, what you say to the bank is like what you say to your great chief or your clan chief... our culture must not be limited to us (...) you must open to other structures...well, for me, that's the common destiny” (Lifou).*

In reference to the theoretical framework⁶⁴ concerning the link with ecosystems (Spigel, 2017) the observations of different networks, distinct support organisations and institutions, as well as somehow contrasting values, suggest the presence of two entrepreneurial ecosystems. The next section develops this idea which suggests some implications concerning the interaction of the capitals.

3.2) Two entrepreneurial ecosystems

An entrepreneurial ecosystem entails a network of people with a culture of trust and cooperation (Theodoraki, Dana, and Caputo, 2022). In New Caledonia, for the professional artisanal fishing sector, this is shaped by the State that created an environment of non-competition. Spigel (2017) defines an entrepreneurial ecosystem as the “combinations of social, political, economic, and cultural elements within a region that support the development and growth of innovative startups and encourage nascent entrepreneurs and other actors to take the risks of starting, funding, and otherwise assisting high-risk ventures.” (Spigel (2017) stresses three types of attributes: cultural, social and material⁶⁵.

The research on entrepreneurial ecosystems have remarkably progressed during the course of this work and more precisely the development on Indigenous ecosystems stressing the impact of culture with the implementation of Indigenous values in governance and entrepreneurial practices. Explaining that the concept of Indigenous entrepreneurial ecosystems was only introduced in 2017 by Dell, Mika and Warren and building on their inputs Mika, Felzensztein, Tretiakov and Macpherson (2024) propose the following definition : Indigenous ecosystem [is] a self-organised adaptive and geographically bounded community that contribute to regional development and local

⁶⁴ Chapter 2. p.24-25.

⁶⁵ See annexe for observation on fishing ecosystems in Loyalty Islands

economic activity of Indigenous agents whose interactions results in Indigenous enterprises forming or dissolving over time.

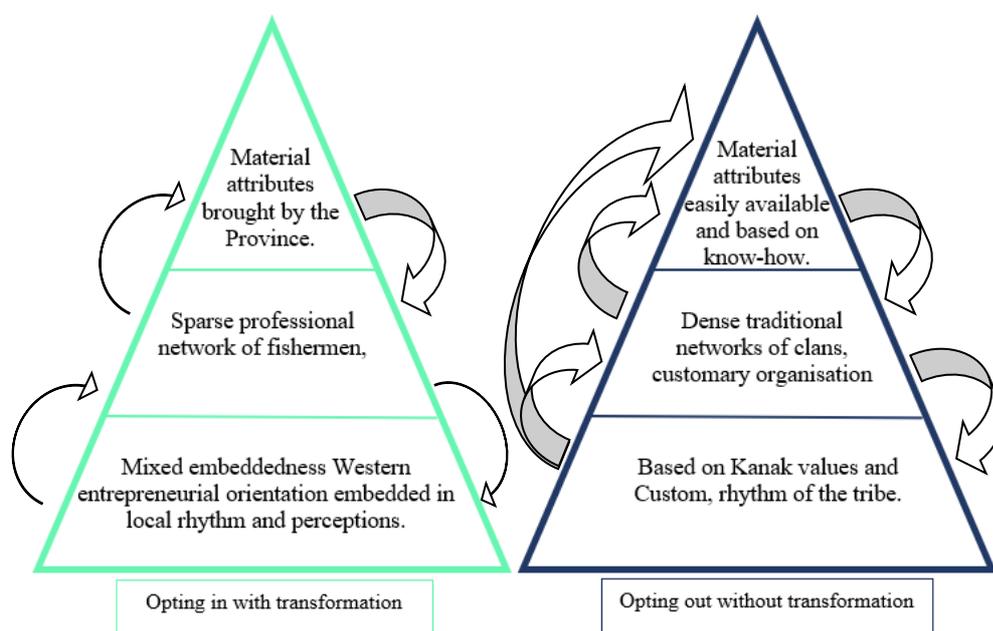
Mika, Felzensztein, Tretiakov and Macpherson (2024) suggest an evolutionary perspective of Indigenous entrepreneurial ecosystem where from an early stage where “Indigenous entrepreneurial ecosystem is characterised by Indigenous entrepreneurs who are highly embedded in their region and in their Indigenous culture.” They describe this situation with relatively few business models; high reliance on Indigenous culture and operation are close to subsistence (Bruton, Ahlstrom, & Si, 2015), with family closely involved. In contrast an “advanced Indigenous entrepreneurial ecosystem differs primarily in the choices available to entrepreneurs. Creating viable enterprises that are deeply embedded in the Indigenous culture (e.g., crafts-based) or in the region (e.g., Indigenous tourism) are still possible, but Indigenous entrepreneurs can operate beyond their regional and international borders and can draw upon approaches to management unrelated to Indigenous culture.” (2024:50-51)

Research on Indigenous entrepreneurial ecosystems explores further the interactions between culture and entrepreneurship. In research from New Zealand, Manganda, Mika, Jurado and Palmer (2023) propose a cyclic framework where situational factors influence the position of the entrepreneur, spanning between the “culturally engaged Māori entrepreneur”; the “culturally responsive Māori entrepreneur”; to the “culturally ambivalent Māori entrepreneur.” Their approach allows to reflect on our results regard to the different degrees of involvement in different types of strategies and encourages further research on understanding the processes at stake. Looking at how Māori values influence entrepreneurship they highlight for example the emphasis on guardianship linked to the importance of sustainability and resource management, also respect as it is imbued in negotiations regard to the cultural values of others, the oneness value is materialised in relation to the collective strength and the generation of opportunities for the community, as well they mentioned the sense of working together and family relationships also salient in this research. Manganda, Jurado, Mika and Palmer (2023) investigated further how aboriginal entrepreneur navigate cultural and commercial imperatives, discussing tensions when rise competing priorities with cultural obligations and challenges of legitimacy. Regarding cultural identity they highlight synergies that goes beyond the business when integrating cultural practices, catalysing social outcomes in both economic and non-economic spheres. They discuss the mediating role of context on the influence culture has on entrepreneurship, they state that “constraining effect of culture was more apparent when dealing with non-Aboriginal people outside their enterprises. Manganda, Jurado, Mika and Palmer (2023) propose a contingency model for navigating Indigenous

entrepreneurial hybridity which presents the same dynamics and concept than the one we used to describe the strategies observed in 1.1) of this chapter.

The model proposed by Spigel (2017) stresses the presence of cultural, social and material attributes interacting with support and self-reinforcement dynamics. Based on Spigel's (2017) representation of ecosystems, the schemas hereafter on figure 2 are adapted from his work with the data collected on the island of Lifou⁶⁶. Please refer to the ANNEXE (II) which presents the details of the observations collected on the attributes of these ecosystems.

Figure 39: Co-existence of two ecosystems



Source: Author's observations, building on Spigel's (2017)

The main difference with Spigel (2017) is that here we are looking at two ecosystems regarding the same activity, located in the same place, with the same actors but articulated distinctly, illustrating the mixed embeddedness experienced by the fishermen (please refer to ANNEXE 5 for the observations by attributes).

Artisanal professional fishing is a business activity that welcomes Schumpeterian (1934) innovation while customary fishing does not need entrepreneurial innovation, as it is based on

⁶⁶ The week spent in Ouvea and data collected, in reference to chapter 5 underlined differences with Lifou as the territory is smaller the network is denser, but also the island has Polynesian roots illustrated in the two languages of the Island the Fagaueva and Iaai. The province is in Lifou, and the culture was said more entrepreneurial in Lifou, yet the network of professional fishermen was said to be more dynamic in Ouvea, the field explained their strategic choice regarding the cruises and fishing activity.

tradition; however, customary fishing does welcome technological progress such as powered boats, flashlights for night fishing, and spear guns instead of spears. The artisanal professional fishing sector is innovative in various perspectives. The method of fishing varies greatly between customary fishing and commercial fishing. This allows one to find differences in (i) bait strategy, as most artisanal fishermen would never waste time to collect bait before fishing, BmX explained that it is a more efficient use of time to buy tuna or calamar tins of 10kg. In contrast, customary fishing is based in traditional knowledge and the baits are adapted to each species, octopus' ink⁶⁷ is used to catch spinefoot fish, bait in a rat shape to catch octopus⁶⁸, or hermit crab to catch *Lethrinus* (emperor fish) or similar reef species. (ii) Fishing team composition also differs with artisanal fishermen being ship's captain and ship's owners⁶⁹ yet customary fishing is practiced in group; (iii) the two activities differ in the perception of the maritime space⁷⁰; (iv) the technology employed, and material, are not the same, neither is (v) the rhythm with the frequency of fishing trips, impacting on the catch. In addition to the change affecting the method, the initiative with boats implies many changes for the fishermen, including different operations, like making catch record and account keeping as well as it is linked to different institutions than customary and subsistence fishing activity. However, opting-in with informal small cash generating activities while using the same technics as subsistence fishing did not involve such levels of innovation.

In customary and subsistence fishing the material attributes rely on the environment and collective owned craft harbour boats obtained from previous development support programs. This situation also reflects Peredo and Mc Lean (2010) who observed that the capital from the development plans deemed failure were in fact reinjected in the local, informal, economy. Sometimes the catch is used to leverage money through different types of activities, as fishing with provide food to sell plates or brochettes⁷¹. Looking at the material attributes (Spigel, 2017) there was no direct connection with professional artisanal fishing and the vivid tribe life and economy seems separate from commercial fishing development with boat projects.

Spigel highlights that the configuration of the ecosystem influences entrepreneurial practices and he precises that "ecosystems represent the presence of multiple overlapping sets of attributes and institutions that encourage entrepreneurial activities and provide critical resources" (2017:56). For example, he stresses the presence of positive attitudes towards entrepreneurship, or also the positive impact of a local culture focused on wealth creation, linking with Light and Dana (2013) and their observations on the suppression hypothesis and the role of network in transmitting an

⁶⁷ Prepared traditionally by drying the ink following a special technic.

⁶⁸ In reference to the observations on the myth in this chapter p.21.

⁶⁹ In reference to the observations in fishing team and the collective in this chapter p.18-19.

⁷⁰ In reference to the observations on perception of maritime space chapter 4. p.14.

⁷¹ In reference to Chapter 5. p.3 on the events developed on tribe.

entrepreneurial vocation. These comments highlight the importance of contingency between cultural, social and material attributes. In the ecosystems described by Spigel, the goals pursued by the entrepreneurs focus on growth, and innovation, in the overall aim to create economic wealth. Yet in Indigenous Entrepreneurial contexts the literature stresses a mix of objectives resulting from the mix embeddedness between Western and Indigenous institutions, our results support these observations⁷². Economic capital creation being one of the objectives but not an end in itself.

The feedback and observations stressed that in Loyalty Islands' context fishing activity and marine resources in general are not associated with wealth creation, some respondents, especially in Ouvea, criticised the act of selling fish. The feedback and stories collected during the field reflect a whole narrative linked to the criticism of greed and in some extent the image of savage capitalism. This, in addition to the difficulties highlighted by the fishermen stressing the low profitability of the projects, and that the sector is drip-fed by the many subventions. The resulting low attractiveness of the sector which, according to the interviews and discussions with the fish processing unit manager and the fishing sector manager, impacts directly on its success. This statement was illustrated in the feedback on the needs of the fish processing unit⁷³ and the questions on how to stimulate the adhesion of more fishermen. Reflecting on Mika, Felzensztein, Tretiakov and Macpherson (2024) these observations tend to indicate an early stage of the Indigenous entrepreneurial ecosystem.

Coming back to the observation on narratives there were no common strategic view for the professional fishing sector, some stakeholders discussing whether to transform more, others whether to internationalise. Considering that with this form of fishing activity, the sector was still at a stage of development, the existence of different options seems natural. Furthermore, on the field, people referred to failed projects concerning fishing. Welter and Baker (2021), on context, stress that "To understand places as contexts for entrepreneurship, it is useful to examine historical narratives and collective memories that shape peoples' sense of what is desirable and what is feasible for the future, which is to ask, what are the opportunities for entrepreneurship" (2021:1157). Considering Indigenous Entrepreneurship, this observation leads to the reflexion on the necessity of role model development, fed with other case studies like the case of Kivalliq Arctic Food which would be an interesting comparison, grouping the different sectors of hunting, fishing and craft under a common brand. The products from Loyalty Islands have a very high image.

The different logics in customary and subsistence fishing compared to professional fishing with the projects are characterized by different values and cognitive elements and point to the coexistence of two fields in Bourdieu's sense. Chapter 4 pointed out to the permanency of local structures characterised by Kanak values and the reshaping of society under the project of the

⁷² In reference to Chapter 5 p 30 regarding the goals of artisanal professional fishermen.

⁷³ In reference to Chapter 5 p.35 on operations at the fish processing unit.

common destiny. The research stressed that for all fishermen the community and respect of rules regarding territories or exchanges, as well as the consideration of natural capital were at play. The precedent sections on cultural and social capital stressed that for customary fishing, the ecosystem is anchored in traditional networks of clans, based on cultural values linked to the custom⁷⁴. The networks and values associated to customary and subsistence activities while they are not focus on making money, are oriented towards the preservation of their environment as well as a specific way of life. They are tinted by the traditional cosmovision considering one as part of a web of relationships, the invisible world, connecting people to the living beings and spirits. These remarks support the observations from Godin (2009) who reported that the preservation of cultural values and community spirit were an absolute priority for Kanak entrepreneurs. Godin (2009) pointed out to the strength of local structures supporting other economic logic in which production is not an end in itself. While subsistence and customary activities, linked to the rhythm of nature and the rules of the Custom develop on one side; with the projects the fishermen are brought to fish with another logic, more economic, and marked by the commitments to the Province. Light and Dana (2013) stressed the role of the network in disseminating a positive image of entrepreneurial activities. In Lifou the network of professional fishermen is dispersed around the tribes, they know each other and exchange information but they see their activity more as a group of individuals working with, or even for, the fish processing unit. Yet, Felzensztein, Gimmon and Dean (2018) stresses cooperation helped the development of market-based assets which diffuse via the network; here the isolation of the artisanal fishing sector from the other sectors and the poor involvement of the population and fishermen seems to hinder the adjustments which would make possible the development of a collective vocation to develop the artisanal fishing sector.

Looking at commercial versus non-commercial fishing as two distinct symbolic systems (Bourdieu 1991) illustrates different symbolic forms with their own construction of the objective world developed among distinct social areas, shared on few elements; like sometimes for the material with the utilisation of boats, or concerning the resource with occasional catch as lobsters, and yet, while institutions seems to differ among the two ecosystems at one level they still fall under the same overall International institutional framework associated to Indigenous coastal fisheries (Capistrano and Charles, 2012) and at another level when considering the group made of Kanak professional artisanal fishermen they participate in both fishing practices across ecosystems. The interplay of capitals with the networks, values and the natural environment seems to act as a construct impacting on how people perceive reality and then impacts on the activities, they are willing to pursue, and the ways they pursue them, which constitute for each one a symbolic system

⁷⁴ As the one reflected in the Charter of Kanak People (2014).

on his own. Taking the perspective of symbolic systems as embedded structures in social relationships, Bourdieu (1991) describes structured instruments which at the same time structure communication fields and by this fulfil their politic function of domination. When people refer to customary contributions or taking care of the field, they usually use the word "work" or refer to the "work of the custom". This element was relevant of the perspective that customary activities are obligations on the one side, and that they produce value on the other side. If the two ecosystems seem to contradict on their basis in the values and perceptions, it is possible that the strong social capital associated to customary and subsistence activities and the differences or even contradictions observed in the values with the rhythm of fishing and attitudes slow or even impair the development of professional artisanal fishing pointing to the notion of power in symbolic systems and illustrating the suppression hypothesis in indigenous communities (Light and Dana, 2013).

Welter and Smallbone (2011) present four types of relationships depending on whether the formal institutional framework is effective or not. Their perspective stresses interdependencies between the formal institutional framework depending on if it is effective, or ineffective. The case of New Caledonia with the perspectives expressed in the interviews reflect the mixed embeddedness in some extents that for some interviewees the rule of law of the Custom seems to overcome or in some way predominate the rule of law of the French state.

Welter and Smallbone (2011) point to two types of relationships in the case of effective formal institutional framework: complementary informal institutions and accommodating informal institutions, while when the formal institutional framework is ineffective the relations with formal institutions content with competing or substitute to informal institutions. The question on how professional artisanal fishing can be accommodating or complementing the traditional fishing sector of subsistence and customary activities and how does professional fishing could also fit with the whole project of development with the other sectors developed, especially tourism seems essential.

Our research emphasises the importance of the context using the lens of social, cultural and institutional capitals. Doing this it is in line with the call from Korsgaard, Wigren-Kristoferson, Brundin, Hellerstedt, Alsos, and Grande (2022) as it took the challenge to explore the embeddedness of fishing practices in Loyalty islands in its multiple dimensions. The discussions suggest different facets of trust at stake influencing the entrepreneurial orientation of fishing activity reflecting the typology proposed by Welter (2012) and the dynamics she suggest among the different levels of trust. Highlighting for opting-in strategies the importance of cooperation of the existing artisanal professional fishers, the role of the family and the concerns between stakeholders. More specifically, chapter 5 reported different types of concerns with on one side, from the Province, regarding the participation at the level of the population for the whole fishing project;

while on the other side concerns regarding this model of development reflected in some feedback as some people worry about development's negative externalities, especially related to threats for the resource⁷⁵ and the changes in traditions. In opting-out strategies the basis of trust was different as the expectations were concerned with the respect of norms and values for the use of the resource, the way to fish, the legitimacy connecting clans and territories, as well as expectations regarding to the participation in traditional customary exchanges. The last section addresses these elements through the lens of the two ecosystems.

3.3) Trust

This part builds on the observations of the recurrent references to the different aspect of trust in relation to the different kind of capital explored. The first approaches to the concept of trust focused on the relational aspects of social capital. Granovetter (1985) argued that “social relations rather than institutions are mainly responsible for the production of trust in economic life” (1985:491). Trust is seen as “a multidimensional concept, with recursive links between different levels, forms and sources” (Welter, 2012:196). The exploration of the stakeholders and their relationships with the fishers in the first research question, stresses for the opting-in strategy the central role of the Province facing with fishers' expectations. In parallel, in the opting out ecosystem, the multiple references to the Custom and the permanence of the practices suggest a strong reliance on the customary system. In relation to the second research question regarding the role of social and cultural capital, different aspects of trust are mentioned several times not only regarding a form of altruism, with catch sharing and redistribution, but also in the habitus associated to fishing practices. In the background, the reliance on religious beliefs and the invisible world, reflect another facet of trust. This last section presents our observations on the relationships between the different kind of trust expressed and the elements of the ecosystem.

3.3.1) Relational, collective, and institutional forms of trust.

To present these results, it seems necessary to precise the understanding of the concept of trust in relation to entrepreneurship. “Trust can have as many dimensions as there are cause of things going wrong” (Nooteboom, 2002:92). Personal or relational, trust relates to have trust in someone's behaviour, or into the output related to this behaviour. Nooteboom (2002) referring to Aristotelian causality presents trust as a four-place predicate: (1) somebody (2) trusts someone (or something) (3) in some respect (4) depending on conditions, such as the context. Here Nooteboom (2002)

⁷⁵ Feedback in chapter 5 stress both slow changes affecting the resource with the pollution brought by the cruises triggering in the corals and bothering fish, and rapid changes due to crisis like when happened the oil leak.

highlights the link with the external conditions, which can be seen as a conditional trust or a notion of confidence, and which is linked to institutional trust.

More precisely, personal trust can be described as the willingness to operate to the best of its competence and to be co-operative rather than opportunistic (Nooteboom, 2002). The difference between 'trust in someone's competencies' and 'trust in someone's intentions' stresses the dualism between 'competence trust' and 'intentional trust' which differ in their mode of production (Nooteboom, 2002). The author noted that while competence trust is more related to membership in professional networks, associations, educational achievements; its institutions are more related to the adoption of technical, or professional standards. In addition, trust building processes in competence trust are more related to mutual adaptation, learning by doing and routinisation. Intentional trust differs from competence trust in the characteristics of its modes of production, which are more related to the sources of cooperation. It is based on family, community, culture or religion membership and its institutions are more in the nature of the rules, ethics, as its processes are based on micro altruistic sources such as loyalty or commitment.

Collective trust, or social trust is more related to the civic virtue suggested by Putnam (2000) and impacting on peer-to-peer relationships with ramification in social and cultural capitals. Welter (2012) stresses that reciprocity, expectations or beliefs about the intentions and trustworthiness of others are common elements in most definitions of personal and collective trust. Fukuyama (2001) notes the impact of culture, especially religion and large cultural systems in the generation of norms transmitted "from one generation to the next through a process of socialisation that involves much more habits than reason" (2001:16). Alesina and La Ferrara (2002) observed that religious beliefs might be important since different religions may have different attitudes toward social interactions and the 'polity'. This notion can be linked more broadly with the concept of radius of trust proposed by Fukuyama (1995, 2001) who investigated the role of trust as a cultural difference that may explain economic contrasts between countries. He underlined differences in degrees of social trust, defining the radius of trust as "*the circle of people among whom co-operative norms are operative*" (2001:8). Then social trust (Putnam 2000, Kwon, Heflin, Ruel 2013) can be more associated to a collective attribute linked to community's social capital.

Welter (2012) pointed to another level related to a kind of trust into the system, relating to high or low trust environment influencing entrepreneurial strategies. Welter and Smallbone explain "*the key concept of institutional trust refers to trust in the institutional environment, which includes formal organizations, sanctioning mechanisms (such as through the implementation of the legal process), and informal codes of conduct and values*" (2006:466). The authors point the difference between collective norms which apply to a group and institutional norms in the sense that they

apply across different sectors and business groups. Welter and Smallbone (2006) emphasise that “*in linking entrepreneurship and context, trust plays a role as a sanctioning mechanism by complementing the overall institutional framework*” (2006:468). For example, Welter and Smallbone (2011) underline the impact of institutional embeddedness in their study on transition economies where trust-based relationships are linked to path dependent behaviours.

3.3.2) Trust and ecosystems

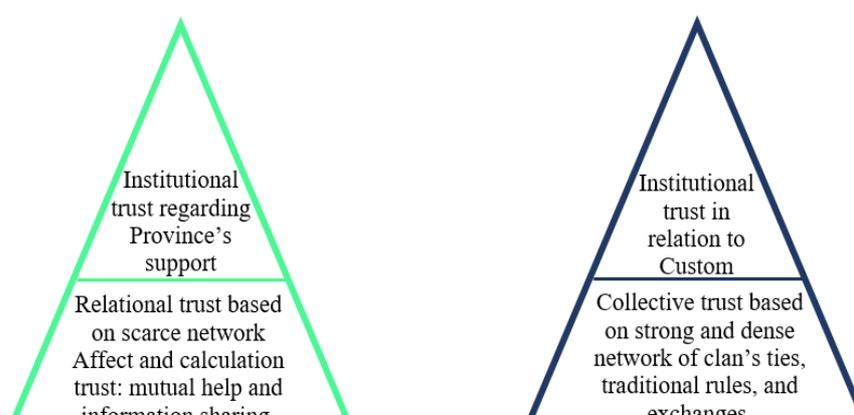
As in the ecosystem configuration, the different levels of trust interact between each other. Building on Nooteboom (2002), Welter (2012) underlines the interplay between the different kinds of trust, for example institutional trust as both an object and a source of personal trust and collective trust, where the example of the country risk score used in business highlights how institutional trust may impact on personal trust or collective trust when choosing a business partner.

Welter (2012) stresses interdependencies between personal trust and institutional trust in high trust contexts. This is illustrated at different levels, as I have discussed so far. For example, personal trust complements institutional trust for collaboration between fishermen. When people knew each other, they were more likely to come from neighbouring tribes and fish together. There is also an interplay between personal and institutional trust in decision making when at the Province level, they assess trustworthiness based on the projects’ initiator. By the same token, institutional trust concerning the Custom is substituting personal trust in the case of the protection and caring of shore areas, as belonging to a shore tribe entitles a person of specific duties and rights.

In the context of mixed embeddedness with two ecosystems, when the legal framework regarding fishing reflects Custom related traditional rules, then institutional trust linked to the Custom complements legal regulations creating legitimacy. The new introduced Code of Environment elaborated conjointly by the Province and scientist of IRD reflected the traditional rules of the Customs.

Hereafter, building on Spigel’s (2017) representation, the various types of trust mentioned in the interviews can be associated with different attributes of the ecosystem.

Figure 40: Different levels of trust in relation to ecosystems’ attributes:



Referring to Welter (2012), Ratten (2014) pointed at the impact of historical events on the economies of developing countries and especially on “trust”, which could be related to the aspect of trust toward institutions and mechanisms underlying the establishment of these institutions in institutional frameworks, affected by mutations. Regarding the Pacific history and the impacts of colonisation, Epeli Hau'ofa mentions the social cleavages, and frustrations when he stresses "*the other level is that of ordinary people, peasants and proletarians, who, because of the poor flow of benefits from the top, scepticism about stated policies and the like, tend to plan and make decisions about their lives independently, sometimes with surprising and dramatic results that go unnoticed or ignored at the top.*" (1993:148). Various comments questioned the actions of the Province and sometimes expressed some wariness towards State's institutions as the volatility of the measures and the overall institutional framework was criticised. These elements suggest an alteration of institutional trust regarding the development of the fishing sector. Regarding opting-in strategies in the context of the artisanal professional fishing ecosystem, the pivotal role of the Province triggered various comments, leading to pay a special attention to the perception fishermen and people have of the Province. On one side with artisanal fishermen, calling out on the delays in payments and sometimes the loss of papers ending in cancellations of payments seems to have threaten trust into the system. On the other side, in link with the population and the role the professional artisanal fishing sector could play in the development and internal self-determination if this choice is made, but the lack of communication and resulting lack of cohesion around this goal drew an answer in part to the question of the weak mobilisation toward the overall project of developing the artisanal fishing sector.

Regarding the relational level of trust in the opting-in ecosystem; Welter (2012) stresses that both affect-based trust and calculation-based trust are at stakes in business relationships. Reminding

the discussions, profit was not the first motivation in the professional artisanal fishing sector. Considering the non-competitive environment and that the projects were merely profitable we can suggest that calculation-based trust is not essentially moderated by profit but by “being able to make it” in the sense of paying back for the loan and daily costs, and then not losing face. Concerning intentional trust, the observations witnessed, in general, loose, and distant ties between the fishermen in the union in Lifou. Relational trust within the syndicate seemed only moderate to low due to the rare interactions of the professional fishermen. While some relational, involving two or few more individuals, strong ties were developed allowing spillovers on technics and adjustments of the organisation of professional fishermen. Here the aspects of competence trust mentioned by the fishers regarding the trainings on fishing technics and conservation suggest some collective trust along the line of product quality and security. This allows to note that a same aspect of trust can take different facets, for example competence trust is manifest in the professional artisanal fishing ecosystem regarding exchange of information on fishing technics and fish location while other aspects of competence trust are manifest in the subsistence and customary ecosystems among people from the same tribe or neighbouring tribes in connection with the territory these associated to traditional ecological knowledge, and specific human and cultural capital associated to the conservation of the place. The ecosystem of customary and subsistence fishing relies on Custom’s rules and habits. It provides guarantees under the rules of the Custom, creating a specific regime of accumulation in which institutional trust appears strong. The different aspects of the collective orientation observed regarding fishing practices and the cosmovision marked by the consideration of the “invisible world” were present among tribes, both in Lifou and Ouvea. Putnam (1995) pointed that social trust and civic engagement are strongly correlated in the sense that trust and engagement are two facets of the same underlying factor: social capital. With the notion of community social capital, Kwon, Heflin and Ruef (2013) emphasise the importance of social trust and voluntary organisations. Then the importance of the activities at the level of the clan and tribe nurturing ties by frequent interactions enhances norms and maintain traditional values. The regularity of exchanges stimulates a collective social capital which is motivated by fulfilling social obligations and caring for the resource, altogether maintaining a strong social trust in the opting-out ecosystem. Nooteboom (2002) encourages to consider the basis and functions of trust and remind us that trust can have many facets. Here we can note that the outputs of the ecosystem are linked with biodiversity, preservation and social cohesion. The perspective of the basis and function of trust illustrates the dynamic between cultural, social and material attributes. Specific elements, as for example the consideration of the invisible world, suggests trust can take different dimensions from the one usually observed in business ecosystems.

The reflection on trust and ecosystems calls for more research as the research project was not initially designed to capture these elements, and because these reflections are based on the observations, additional research and reflexions. Yet, building on my analysis, it is tempting to take the rationale that trust plays a central role on the orientation of Indigenous entrepreneurial strategies. More specifically, the ways institutional and relational trust impact on the decision for opting-in or opting-out the global economy. These levels of trust also impact on the capacity of carrying the possible transformation of the global economy, pursuing traditional goals of heritage preservation and tradition.

Coming back to the initial matrix (Figure 1), it seems that high level of institutional trust and relational trust would be necessary to carry opting-in with transformation. These discussions suggest that for developing a greater vocation towards the professional artisanal fishing, it would be necessary to find action to strengthen institutional trust. Along with resolving the administrative issues regarding the fishermen and the Province, the fishermen status and the creation of a shared vision on the role of professional fishing activity are both paramount too. Yet, the interplay between the facets of trust in the Custom and the enforcement of its rules and vision need to be better understood. Trust in the formal system represented by the rule of law and the diverse support programs for entrepreneurship, in addition to the relationships between the different stakeholders shall be reinforced to truly develop an opting-in strategy or think about some unique arrangements that would allow imagine opting-out strategies with transformation of the economy aiming for the project of building a common destiny.

Conclusion

In this chapter, we discussed the feedback and observations following the three research questions with the goal to better appraise the elements affecting fishing practices' dynamics in Loyalty Islands, using the lens of capitals and the dialectic between opting-in versus opting-out strategies, with or without transformation of the global economy (Peredo, Anderson, Galbraith, Honig, and Dana, 2004; and Anderson, Camp II, Dana, Honig, Nkongolo-Bakenda, and Peredo, 2005)

The first research question reflects on the existing rules of Indigenous Entrepreneurship, especially the observation of the stakeholders and their relationships considering the different types of transactions and their orientation. The results stress the strong political embeddedness present in the opting-in initiative. The Province allows access to capital and make this form of fishing activity possible. The different dynamics observed in the fishing sector among Loyalty Islands illustrate difficulties linked to the newness of the professional artisanal fishing sector that may be linked to a lack of cohesion. This, for example when considering the differences in the organisation of the fish processing units, or even the feedback regarding the initiatives on Lifou involving disconnected group of actors. The discussions on the lack of information and apparent absence of consultation on the element put in place for the development of the fishing sector triggered incomprehension, leading to questioning and frustrations from the fishermen. The results shed lights on the challenges faced by the artisanal professional fishing sector and its potential roles. The formation of the group of professional artisanal fishermen illustrates that network relations vary over time and are influenced by "top-down measures" from the Province, which, Welter (2012) stresses, can trigger cooperation or at worst destroy existing dynamics and ties. However, the observations and interviews suggest that opting-in or opting-out shall not necessarily be mutually exclusive as they fulfil different aspirations of development and can actually be complementary with their differences.

Other characteristics of Indigenous entrepreneurship have been under discussion with the second research question regarding cultural and social capital.

Regarding social capital and the emphasis on the community the dialectic between the individual and the collective echoes the assumption on the collective orientation of Indigenous communities. This case points to the difference between having an emphasis on the community (Dana, 2015) and the collective character of a culture and call for cautiousness on assumptions. Taking into consideration the level of the clan and the tribe, the emphasis on kinship ties also discussed by Dana and Anderson (2011) is expressed at different levels. The observation of the different kind of transactions highlights the complexity of the networks at play for the entrepreneur as the same actors are embedded in various dynamics at the same time. Also, regarding the group of

professional fishers, the support provided and the training organised by the Province has triggered the development of a professional culture regarding the fishing activity, yet the network of is sparse, grouping some individuals from different tribes and different horizons while the interviews suggest that fishing activity at the level of the tribe is relatively disconnected from it. The diverging logics in customary and subsistence fishing activities compared to professional fishing with the projects, characterised by different objectives and cognitive elements, points to the coexistence of two fields in Bourdieu's sense, acting as two distinct symbolic systems (Bourdieu, 2001) and linked to two systems of action (Crozier and Friedberg, 1977).

Dana and Anderson (2011) and Dana (2015) emphasise the importance of cultural values and perceptions pointing to the heterogeneity in values among Indigenous communities, culturally influenced opportunity recognition, as valuation of success, the emphasis on community and kinship ties. The heterogeneity in values is supported by the geographical component of Kanak identity (Horowitz, 2001) and the territorial aspects of fishing activity. These aspects are linked to specific knowledge concerning the species, and the social function of shore areas as pantry for families as well as reserve for ceremonies and events. The entrepreneurship initiatives observed⁷⁶ are highly embedded in the region using primary resource and tribal economy has a high reliance on subsistence and clan's customary exchanges and building on Mika, Felzensztein, Tretiakov and Macpherson (2024) lead to think the entrepreneurial ecosystem is still at an early stage. Yet maintaining the customary grid and Kanak's way of life was an objective common to all the people interviewed. This raises the question of how the ecosystem will develop as it matures. In the fishing sector, aligning with Kanak values, the Province supports sustainable development by incorporating waste recycling within the fish processing unit and recognizing the importance of artisanal fisheries. However, they are still striving to find a balance in economic sustainability.

Dana and Anderson (2011) also discussed the theme of incompatibility with assumptions of mainstream theories and draw a link to culturally influenced opportunity recognition, and valuation of success. These elements were verified when considering the way people fish, their respect for the resource, and the permanence of traditional exchanges. The relation of exchanges and reciprocity point to a specific form of social trust linked to a singular cosmovision characterised by the consideration of the invisible world. The observations on cooperation and collective organisation support Light and Dana (2013) on the mediating character of cultural capital. The clan is the reference for the group, in which families or domestic groups are the basic organisational unit as for tribal work for the fields, or subsistence and customary fishing while when people pursue individual fishing projects, they aim for the welfare of their family. Yet, individual fishing projects seem to

⁷⁶ See chapter 3 "Setting and transversal overview of the sectors"

fail to mesh with overall clan's strategies or tribe's activities. The singular cosmivision characterised by the consideration of the invisible world is also manifest in the beliefs and perceptions people have of their actions regarding animals, places and spirits. Korsgaard, Wigren-Kristoferson, Brundin, Hellerstedt, Alsos, Grande, (2022) stressed that "being embedded in institutions, places and communities carries cognitive framings that fundamentally shape how embedded individuals experience the world and subsequently the opportunities that can be created." (213:2022). The research stresses the relation to nature characterised by the specific rhythm and perception regarding the resource. These observation support Fan's (2024) in that cultural perceptions and values create specific positive externalities in relation to the preservation of the natural environment as well as supporting biodiversity and reinforcing social resilience. The results suggest that the perception of the invisible world influences on harvesting practices and the way people care for the place. In this sense tribe fishing activities help to address the challenges of development to counter climate change⁷⁷ as the way people fish protects their area, such as life bellow water, work for the development of sustainable communities with responsible modes of consumption and production. Finally, sharing these practices helps reduce poverty and prevents hunger and, in this way, also helps reducing inequalities.

The third research question invited us to reflect on how the characteristics of Indigenous communities affect their approaches to entrepreneurship. The consideration of the mixed embeddedness at the level of the community and the feedback in the research led to a reflection on trust and ecosystems and reflect the impact of Indigenous culture in business as explored in Indigenous ecosystems (Manganda, Mika, Jurado and Palmer 2023). With the precedent question, following on the perspective of the social embeddedness of the economy (Polanyi 1957, Granovetter 1985, Zukin and DiMaggio, 1990), we observe that social and cultural capitals are activated in different ways, first according to the fishing situation and transactions, then depending on the ecosystem at play. Building on Spigel (2017)'s observation on the dynamics of support and reinforcement between attributes, the results illustrate dynamics resulting from the mix embeddedness among the two ecosystems. For example, while the network of professional artisanal fishers is distinct from the traditional network of customary and subsistence activities, there is an influence of traditional values and habitus on harvesting practices and destination of the catch. This observation illustrates the mediating role of culture on the perception of entrepreneurial opportunity (Dana, 1995), influencing what people can or cannot do. The results stress the multiple embeddedness effects, and the added complexity brought by the mixed embeddedness, visible in the concomitance of the two institutional frameworks, namely the rules of law of the French state and

⁷⁷ We can note that fishing activity contribute to various of the seventeen goals posed by United Nation ([17 Goals to Transform Our World | United Nations](#))

the force regarding the law of the Custom. As pointed by Korsgaard, Wigren-Kristoferson, Brundin, Hellerstedt, Alsos, Grande, (2022) the embeddedness is articulated “in social, institutional, and spatial relations that significantly shape what entrepreneurs do”, this is relevant in the different facets of trust articulated with the attributes of the ecosystem a presented by Spigel (2017). The absence of transactions observed that could be categorised in opting out with transformation, calls attention and suggests with the precedent question this category would necessitate a real come together, a reflexion on the construction of the common destiny discussed in Noumea agreement. These observations also echo the literature on Indigenous ecosystems regarding the ambivalent position an indigenous entrepreneur can have between culture and commercial imperatives. The exploration of cultural synergies, as discussed by Manganda, Mika, Jurado, and Palmer (2023), highlights the application of Tikanga principles within Māori culture as an interesting avenue for future research in other contexts. In Loyalty Islands the Custom is everywhere and its principles guide the activities from the households to the politic.

Towards the future, the research sheds lights on practical questions regarding the different orientations possible. If the development of the professional fishing sector does not meet more candidates, the support from the Province might probably ends or reduce. Fishing activity would remain part of the socio-cultural fabric, embedded with tribal life. Some of the boats reused for customary and subsistence fishing, which although not creating economic capital directly would produce value for the community, but creating externalities overlooked in traditional economic studies and minimized as invisible (Peredo and Mc Lean, 2010). Discussed with some respondent would be a strategy with introduction of longliners of the same type than the Munun. The development of the fishing sector would eventually happen but with bigger boats which would imply to employ crew of Kanak people.

Conclusion chapter

The objective of the research is theory driven and aims to better understand the diversity of Indigenous entrepreneurship strategies exploring how the elements of social, cultural, and institutional capitals impact on the choices of strategies pursued by Kanak communities in the fishing sector of Loyalty Islands⁷⁸.

Building on Indigenous Entrepreneurship literature, the research makes several contributions, using the typology of strategies proposed by Anderson, Camp II, Dana, Honig, Nkongolo-Bakenda, and Peredo, (2005). This work encourages us to further explore the articulation of various objectives contributing to self-determination, within the complementarity of different levels of participation and degrees of transformation of the global economy. For example, the top-down approach for opting-in strategies points to questions on the articulation of objectives of economic development, with the preservation of traditional values in the context of a stratified society. Anderson, Camp II, Dana, Honig, Nkongolo-Bakenda, and Peredo (2005), stress that Indigenous entrepreneurship is characterised by unique modes of social regulation. Reminding the notion of *Parole* and *palabres*⁷⁹ are key in Kanak culture, and regard to the multiplicity of clans and their role, the achievement of concertation in the operationalisation of the different actions put in place call for cooperation and cohesion. In this sense, the engagement in the opting-in strategy recalls the notions discussed in Hobbe's Leviathan which highlights the role of the government for ensuring collective security. Both the preservation of Kanak culture and economic development were founding goals at the formation of the Provinces. The research points to further exploring the levers to entrepreneurship development on tribe and the role of public policy in influencing the development of a vocational inclination towards entrepreneurship, this, in concert with the nature and the role of cultural and social capitals.

The observations among professional, artisanal fishing activity versus subsistence and customary fishing activity stressed the complexity made from the various contexts in which the entrepreneurs are embedded, highlighting the interaction of concomitant ecosystems (Spigel, 2017) and the mediating impact of cultural capital (Dana, 1995) at various levels of the entrepreneurial process; as from resource mobilisation to network activation, traditional values and perceptions impacts on the development of the professional artisanal fishing sector. Welter and Baker (2020) stress the importance of narratives and point to the phenomenon of creating, shaping and even destructing entrepreneurial contexts. The feedback on the history of the fishing sector, the role of the Province and its personification, the perceptions of the nature of the Kanak entrepreneurs point

⁷⁸ Chapter 3, p.4.

⁷⁹ Chapter 4, p. 8 and 15.

to the importance of narratives in shaping entrepreneurial contexts and call further understanding of how they emerge and decline. In relation to these observations, the ecosystem perspective, and their attributes (Spigel, 2017) suggests clear links with the different facets and levels of trust impacting on the attitude towards the development of the professional fishing sector. The different facets of trust appear as key elements within the entrepreneurial ecosystems influencing on the possibility to carry a transformational entrepreneurship reflecting the perceptions, values, convictions, and habits of Indigenous people. These observations encourage us to further explore the facets of trust inherent in the relations with the various stakeholders⁸⁰ influencing on the mode of development, more precisely in the emergence or decline of opting-in or opting out strategies and their varying degree of transformation of the global economy.

Coming back to the question on the complementarity of the different types of strategies observed and regarding fishing activity worldwide, especially in the Pacific, the stakes are high. Communities are facing unprecedented challenges as ecosystems are threatened by climate change, pollution, and illegal, unreported, and unregulated fishing⁸¹. Yet marine ecosystems play a key role in the understanding and mitigation of climate change⁸². In this complex symbiotic relationship, the activities of monitoring, maintenance and even resource distribution for the preservation of these environments are crucial as well as the values and perceptions supporting these endeavours. The discussions during the research have emphasised the difference regarding the rhythm and the importance of nature cycles. Levi Strauss stressed "*that all cultural progress is a function of a coalition between cultures. This coalition consists of the pooling (conscious or unconscious, voluntary or involuntary, intentional, accidental, sought or constrained) of the chances that each culture encountered in its historical development; finally, we admitted that this coalition was all the more fruitful as it was established between more diversified cultures*" (1952:79). At this time, climate change was not on the agenda, but today his remark is more than relevant to our situation. Indigenous perspectives invite us to question our links with the living world, our distance with nature and think about our relation to natural resources and nature regeneration cycles. The specific ethic linked to respect and humility in relation to the environment including both living things and the territory appears to be as an asset we should consider cultivating as a long-term capability for sustainable development and seems to be linked to the current discussion at the political level we

⁸⁰ In reference to figure 1 from Anderson, Camp II, Dana, Honig, Nkongolo-Bakenda, and Peredo (2005) Chapter 1.

⁸¹ Quantifying illegal, unreported and unregulated fishing in the Pacific Islands region – a 2020 update (spccfpstore1.blob.core.windows.net)

⁸² As an example, the Tara project (Foundation Tara Océan) has monitored changes related to marine biodiversity and pollution during their expeditions and multiple campaigns: <https://fondationtaraocean.org/en/research-fields/marine-biodiversity-climate/> <https://fondationtaraocean.org/en/research-fields/marine-biodiversity-pollution/>

have in Europe⁸³ or as the Tara Foundation stresses, that a more “frugal and circular economy” might be part the solution. In this sense this research calls for further consideration of the impact of opting-out strategies and their valorisation via specific programs. Bernard⁸⁴ presented at IARIMOS conference in 2023 the benefices but also the challenges of these types of programs linked to conservation bonds, especially regarding the articulation of multi-stakeholder relationships. The recent implementation in the European Union of programs for payment of ecosystem services offer hope in this way, for New Caledonia and other communities across the European Union territory, and avenue for future research.

Following on these remarks, the research also allowed to make methodological observations. First, Indigenous Entrepreneurship is at a cross path of different fields, and by seeking to understand the perspective of the Caledonian people interviewed, Kanak and non-Kanak, the research has recovered literature from history, ethnology, and anthropology, but also fishery science and coastal communities’ development in the Pacific. Although it was time consuming, this process has proven itself necessary to be able to apprehend the entrepreneurial context and conducting the field to grasp the perceptions people have of the different stakeholders⁸⁵, and the meanings associated to the activities. In this sense this research has illustrated the need for a multidisciplinary view and advocates for working more with and for the community encouraging the collaboration of Indigenous and non-indigenous researchers.

Secondly, the traditional measures of social capital and trust appears imprecise to appreciate the complex of the customary matrix made of clans which seems not to be a homogeneous group of strong ties, against some preconceived stereotype stemming from the observation that on tribe people know each other and live together. It would be interesting to rethink about our traditional measures, for example with the “position generator” which in a context where “everyone knows each other” brings no distinction between people. In addition, the understanding of suppression hypothesis also encourages to reflect on the boats who does not fish as the diffusion of information does not necessarily seems to lead to the development of entrepreneurship, in this case people are criticised for using the development program for personal interest. Finally, the ecosystem view and their attributes in relation to the levels of trust support the critics on the measure of general trust (Welter and Smallbone, 2010) and encourage us to explore the different levels of trust, individual, collective and institutional, between groups and actors in presence.

⁸³ For example [The Economics of Frugality Between Ancient Rome and Contemporary Western Society | ECOFRUGAL | Project | Fact sheet | FP7 | CORDIS | European Commission \(europa.eu\)](#) or the discussion on “energy sobriety” [“Energy sobriety is not just a matter for individuals” | CNRS News.](#)

⁸⁴ Julie Bernard, Replicating and Scaling of a Conservation Impact Bond: on Nurturing and Maintaining Relationship in a Multi-Stakeholders/Rightsholders Initiative.

⁸⁵ Here the role between the Province’s offices, the fish processing unit, the Union of fishermen and the fishermen themselves was key.

Finally, regarding empirical observation and collective organisation, the differences between the islands of Ouvéa and Lifou and the feedback collected suggested the creation of a service to collect the fish from the fishers at their boat and transport it to increase the volume processed. Concerning fear for the resources and of illegal fishing, developing a presence at sea in water remote from traditional fishing grounds would help to protect the resource face to the rise of illegal fishing, as referring to the aforementioned chapter five, with the example of the blue boats (Song, Hoang, Cohen, Aqorau, Morrison, 2019) it can support traditional goals of protecting territories.

I believe each ethnographic project is motivated by a strong desire of understanding coupled with the sake of scientific curiosity. To achieve this goal, working for and with the community is crucial to the field of Indigenous Entrepreneurship. As an outsider, I feel this experience with the discussions all along the field shaped my views and I take as a personal reward from this fantastic journey the greater and greater attention I have to humility in our attitudes regarding people and towards our environment. Humility is at heart of the qualitative process has one needs to let go any preconceive idea or barriers, and by the mean of listening and rethinking our concepts we can expand our understandings.

At the time of writing this conclusion, end of spring 2024, the ongoing violences on the territory can lead to think that the objective the common destiny and the fragile peace reached after Noumea's agreement has been jeopardised. The revendications stemming from the boycott of the last referendum in 2021 by the Kanak people has been exacerbated by adoption of a law regarding the broadening of the electorate for elections in New Caledonia, lowering the political power of Kanak minority and breaking the delicate consensus reached between the Kanak people and France. An economic crisis is hitting the territory and the prospects for a return to the dialogue seems threatened by a growing rigidity from the French government regarding the exactions. In relation to this thesis work and to build a common project of society, the rebuilding of trust in institutions and among minorities seems central to stimulate the redeployment of entrepreneurial ecosystems, pointing to entrepreneurship as a vehicle for social action, and help exit the current crisis.

Annexes

ANNEXE 1: Quantity of fish delivered to the fish processing unit in 2015

	january	february	march	april	mai	june	july	august	september	october	november	december	Total
Canovas	255,20	60,20	35,50	81,80	210,20	0,00	23,00	134,00	89,50	163,00	192,20	555,80	1800,40
Chombeau	130,05	112,20	210,60	231,90	187,10	74,40	0,00	143,70	0,00	0,00	0,00	0,00	1089,95
Cica	153,88	206,00	140,70	0,00	70,00	43,80	48,30	9,95	717,75	581,30	110,30	156,00	2237,98
Magulu	0,00	16,11	18,37	0,00	0,00	0,00	11,06	0,00	44,32	15,24	24,00	54,33	183,43
Midraia	275,49	193,00	87,70	0,00	42,60	62,50	26,70	0,00	213,70	0,00	67,70	106,50	1075,89
Talabaza	240,10	99,70	400,30	88,50	157,10	38,90	0,00	0,00	0,00	220,90	290,50	317,60	1853,60
Zeoula	0,00	36,00	30,90	69,63	242,00	142,10	394,70	381,90	905,90	285,30	136,90	73,10	2698,43
Lucas	0,00	0,00	0,00	0,00	0,00	49,30	48,70	20,50	276,90	505,80	520,10	111,40	1532,70
Wadrela	0,00	0,00	0,00	0,00	0,00	0,00	0,00	30,80	7,50	0,00	104,30	58,30	200,90
Leblanc	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	154,30	127,10	242,80	19,90	544,10
Rigourd	0,00	0,00	0,00	0,00	0,00	0,00	0,00	106,20	292,90	266,20	284,70	74,40	1024,40
Dokunengo	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	144,00	0,00	144,00
Hapelama	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	13,60	13,60
Total	1054,72	723,21	924,07	471,83	909,00	411,00	552,46	827,05	2702,77	2164,84	2117,50	1540,93	14399,38

References:

- Abdullah, N. M. R., Kuperan, K., & Pomeroy, R. S. (1998). Transaction costs and fisheries co-management. *Marine Resource Economics*, 13(2), 103-114.
- Adler, P. S., & Kwon, S. W. (2002). Social capital: Prospects for a new concept. *Academy of management review*, 27(1), 17-40.
- Aldrich, H. E., & Waldinger, R. (1990). Ethnicity and entrepreneurship. *Annual review of sociology*, 16(1), 111-135.
- Aldrich, H., & Zimmer, C. (1986). Entrepreneurship through Social Networks. In D. Sexton, & R. Smilor (Eds.), *The Art and Science of Entrepreneurship Hardcover*, edited by Donald L. Sexton and Raymond W. Smilor. Ballinger Publishing Company, 1986.
- Alesina, A., & La Ferrara, E. (2002). Who trusts others?. *Journal of public economics*, 85(2), 207-234.
- Anderson, R. B. (2002). Entrepreneurship and Aboriginal Canadians: A case study in economic development. *Journal of Developmental Entrepreneurship*, 7(1), 45.
- Anderson, R. B., & Dana, L. P. (2007). Indigenous entrepreneurship as a function of cultural perceptions of opportunity. *International Handbook of Research on Indigenous Entrepreneurship*. Edward Elgar: Cheltenham (UK).
- Anderson, R. B., & Giberson, R. J. (2003). Aboriginal entrepreneurship and economic development in Canada: Thoughts on current theory and practice. In *Ethnic entrepreneurship: Structure and process* (pp. 141-167). Emerald Group Publishing Limited.
- Anderson, R. B., Camp II, R. D., Dana, L. P., Honig, B., Nkongolo-Bakenda, J. M., & Peredo, A. (2005). Indigenous land rights in Canada: the foundation for development?. *International Journal of Entrepreneurship and Small Business*, 2(2), 104-133.
- Anderson, R. B., Dana, L. P., & Dana, T. E. (2006). Indigenous land rights, entrepreneurship, and economic development in Canada: "Opting-in" to the global economy. *Journal of world business*, 41(1), 45-55.
- Angleviel, F. (2008). Du pays du non-dit à une libération de la parole: L'histoire comme enjeu culturel en Nouvelle-Calédonie. *Historical Reflections/Réflexions Historiques*, 34(1), 104-121.
- Avnimelech, G., Zelekha, Y., & Sharabi, E. (2014). The effect of corruption on entrepreneurship in developed vs non-developed countries. *International Journal of Entrepreneurial Behavior & Research*, 20(3), 237-262.
- Baker, T., & Welter, F. (2018). Contextual entrepreneurship: An interdisciplinary perspective. *Foundations and Trends® in Entrepreneurship*, 14(4), 357-426.
- Baldacchino, G. (2010). *Island enclaves: Offshoring strategies, creative governance, and subnational island jurisdictions* (Vol. 14). McGill-Queen's Press-MQUP.
- Baldacchino, G. (2011). *Small island entrepreneurship*. In *World Encyclopedia of Entrepreneurship*. Edward Elgar Publishing.
- Baldacchino, G., & Bertram, G. (2009). The beak of the finch: insights into the economic development of small economies. *The Round Table*, 98(401), 141-160.

- Baldacchino, G., & Mellor, C. S. (2015). Tuvalu: Entrepreneurship and the Dot TV phenomenon. In *Entrepreneurship in small island states and territories* (pp. 268-282). Routledge.
- Barth, F. (1963) *The Role of the Entrepreneur and Social Change in Northern Norway*, Norwegian Universities Press, Bergen.
- "Barth, F. (1967) 'On the study of social change', *American Anthropologist*, Vol. 69, No. 6, pp.661–669."
- Bataille-Benguigui, M. C. (1988). The fish of Tonga: Prey or social partners?. *The Journal of the Polynesian Society*, 97(2), 185-198.
- Becker, G. S. (1962). Investment in human capital: A theoretical analysis. *Journal of political economy*, 70(5, Part 2), 9-49.
- Becker, G. S. (1994). *Human capital revisited*. In *Human capital: A theoretical and empirical analysis with special reference to education*, third edition (pp. 15-28). The University of Chicago Press.
- Becker, G.S. (1964). *Human Capital: A Theoretical and Empirical Analysis with Special Reference to Education*, National Bureau of Economic Research, New York.
- Bengtsson, M., & Johansson, M. (2014). Managing cooperation to create opportunities for small firms. *International small business journal*, 32(4), 401-427.
- Bengtsson, M., & Johansson, M. (2014). Managing cooperation to create opportunities for small firms. *International small business journal*, 32(4), 401-427.
- Bensa, A. (1992). Terre kanak: Enjeu politique d'hier et d'aujourd'hui Esquisse d'un modèle comparatif. *Études rurales*, 107-131.
- Bensa, A., Goromoedo, Y.K., Muckle, A., (2015), *Les Sanglots de l'aigle pêcheur. Nouvelle-Calédonie: la guerre kanak de 1917*.
- Berkes, F., & Folke, C. (1992). A systems perspective on the interrelations between natural, human-made and cultural capital. Beijer International Institute of Ecological Economics, the Royal Swedish Academy of Sciences.
- Berkes, F., Colding, J., & Folke, C. (2000). Rediscovery of traditional ecological knowledge as adaptive management. *Ecological applications*, 10(5), 1251-1262.
- Berkes, F., Colding, J., & Folke, C. (2000). Rediscovery of traditional ecological knowledge as adaptive management. *Ecological applications*, 10(5), 1251-1262.
- Berkes, F., Folke, C., Gadgil, M. (1994). Traditional Ecological Knowledge, Biodiversity, Resilience and Sustainability. In: Perrings, C.A., Mäler, K.G., Folke, C., Holling, C.S., Jansson, B.O. (eds) *Biodiversity Conservation. Ecology, Economy & Environment*, vol 4. Springer, Dordrecht. https://doi.org/10.1007/978-94-011-1006-8_15
- Berkes, F., Kislalioglu, M., Folke, C., & Gadgil, M. (1998). Minireviews: exploring the basic ecological unit: ecosystem-like concepts in traditional societies. *Ecosystems*, 1, 409-415.
- Bernard, S., Lacombe, S., Lancelot, L., Herrenschmidt, J. B., & Sabinot, C. (2014). Dynamiques des habitudes, des pratiques et des savoirs relatifs à l'usage et à la gestion du littoral et de la mer

dans un contexte de pression industrielle sur le milieu et de changements sociaux. Nouméa, Institut de recherche pour le développement et GIE Océanide.

Betzold, C. (2015). Adapting to climate change in small island developing states. *Climatic change*, 133(3), 481-489.

Bloor, G., & Dawson, P. (1994). Understanding professional culture in organizational context. *Organization studies*, 15(2), 275-295.

Bonacich, E. (1973). A theory of middleman minorities. *American sociological review*, 583-594.

Bouard, S. (2013). La ruralité Kanak: À la recherche d'un modèle décolonisé. *Au vent des îles*.

Bouard, S., & Sourisseau, J. M. (2010). Stratégies des ménages kanak: hybridations entre logiques marchandes et non marchandes. *Natures Sciences Sociétés*, 18(3), 266-275.

Bouard, S., Levacher, C., Bencivengo, Y., Decottigny, L., Demmer, C., Le Meur, P. Y., ... & Grochain, S. (2018). PME MINIÈRES EN NOUVELLE-CALÉDONIE: PETITES ET MOYENNES ENTREPRISES MINIÈRES EN NOUVELLE-CALÉDONIE (Doctoral dissertation, CNRT "Nickel et son environnement").

Bouard, S., Sourisseau, J. M., Bellec, S., Hoffer, O., Le Meur, P. Y., & Levacher, C. (2016). Des stratégies de développement local volontaristes et différenciées. *La Nouvelle-Calédonie face à son destin: quel bilan à la veille de la consultation sur la pleine souveraineté?*, 391-447.

Boulay, R. (1990). La Grande Case: célébration de la société kanak»: 102–127. De jade et de nacre. Paris, Ministère des Départements et Territoires d'Outre-mer, Ministère de la Culture, de la Communication, des Grands Travaux et du Bicentenaire et Réunion des musées nationaux.

Bourdieu, P. (1979). Symbolic power. *Critique of anthropology*, 4(13-14), 77-85.

Bourdieu, P. (1980). Le capital social: notes provisoires. *Actes de la Recherche en Sciences Sociales*, 31, 2–3

Bourdieu, P. (1986). 'The forms of capital', in Richardson, J.G. (Ed.): *Handbook for Theory and Research for the Sociology of Education*, pp.241–258, Greenwood Press, Westport, Connecticut.

Bourdieu, P. (2001). *Langage et pouvoir symbolique*, 1 ère éd. 1982, Editions du Seuil, Coll. Points, Paris.

Bourdieu, P. (2011). The forms of capital.(1986). *Cultural theory: An anthology*, 1(81-93), 949.

Buckingham, S., & Dana, L. P. (2005). Focus on regulation theory. *International Journal of Entrepreneurship and Small Business*, 2(2), 178-187.

Buratti, N., Sillig, C., & Albanese, M. (2022). Community enterprise, community entrepreneurship and local development: a literature review on three decades of empirical studies and theorizations. *Entrepreneurship & Regional Development*, 34(5–6), 376–401. <https://doi.org/10.1080/08985626.2022.2047797>

Burt, R. (2012). Structural holes [1992]. *Contemporary Sociological Theory*, 204, 9780429494468-63.

Burt, R. S. (2009). The contingent value of social capital. In *Knowledge and social capital* (pp. 255-286). Routledge.

- Campbell, D. T. (1969). Reforms as experiments. *American psychologist*, 24(4), 409.
- Cantillon, R., [1755] 1931. *Essai sur la nature du commerce en général*, ed. and trans. Henry Higgs. London: Royal Economic Society. The 2010 English translation is available at: [https://mises-media.s3.amazonaws.com/An Essay on Economic Theory_2.pdf](https://mises-media.s3.amazonaws.com/An_Essay_on_Economic_Theory_2.pdf)
- Capistrano, R. C. G., & Charles, A. T. (2012). Indigenous rights and coastal fisheries: a framework of livelihoods, rights and equity. *Ocean & Coastal Management*, 69, 200-209.
- Casson, M. (2021). Historical context of entrepreneurship. In *World encyclopedia of entrepreneurship* (pp. 335-350). Edward Elgar Publishing.
- Christensen, V., Guenette, S., Heymans, J. J., Walters, C. J., Watson, R., Zeller, D., & Pauly, D. (2003). Hundred-year decline of North Atlantic predatory fishes. *Fish and fisheries*, 4(1), 1-24.
- Cisneros-Montemayor, A. M., Pauly, D., Weatherdon, L. V., & Ota, Y. (2016). A global estimate of seafood consumption by coastal indigenous peoples. *PloS one*, 11(12), e0166681.
- Coleman, J. S. (1988). Social capital in the creation of human capital. *American journal of sociology*, 94, S95-S120.
- Cornut, É. (2010). La juridicité de la coutume kanak. *Droit et cultures. Revue internationale interdisciplinaire*, (60), 151-175.
- Couharde, C., & Mathieu, L. (2016). Cadrage macroéconomique et faits stylisés. *La Nouvelle-Calédonie face à son destin*, 69-109.
- Couharde, C., Geronimi, V., & Taranco, A. (2016). *La Nouvelle-Calédonie suit-elle toujours le modèle de l'économie assistée?* (No. hal-01549916).
- Croce, F. (2017). Contextualized indigenous entrepreneurial models: A systematic review of indigenous entrepreneurship literature. *Journal of Management & Organization*, 23(6), 886-906.
- Crozier, M., & Friedberg, E. (1977). *L'acteur et le système: les contraintes de l'action collective* Paris. Éditions du Seuil.
- Curry, G. N. (2005). Doing “business” in Papua New Guinea: The social embeddedness of small business enterprises. *Journal of Small Business & Entrepreneurship*, 18(2), 231-246.
- Dana, L (1997). “Voluntarily Socialist Culture and Small Business in the Kingdom of Lesotho,” *Journal of Small Business Management* 35 (4), October, pp. 83-87.
- Dana, L. P. (1990). Saint Martin/Sint Maarten: a case study of the effects of culture on economic development. *Journal of small business management*, 28(4), 91.
- Dana, L. P. (1995). Entrepreneurship in a remote sub-Arctic community. *Entrepreneurship Theory and practice*, 20(1), 57-72.
- Dana, L. P. (1996). Self-employment in the Canadian Sub-Arctic: an exploratory study. *Canadian Journal of Administrative Sciences/Revue canadienne des sciences de l'administration*, 13(1), 65-77.
- Dana, L. P. (1997). The origins of self-employment in ethno-cultural communities: distinguishing between orthodox entrepreneurship and reactionary enterprise. *Canadian Journal of Administrative Sciences/Revue Canadienne des Sciences de l'Administration*, 14(1), 52-68.

- Dana, L. P. (1997). Voluntarily socialist culture and small business in the Kingdom of Lesotho. *Journal of Small Business Management*, 35(4), 83.
- Dana, L. P. (2007). A humility-based enterprising community: the Amish people in Lancaster County. *Journal of Enterprising Communities: People and Places in the Global Economy*, 1(2), 142-154.
- Dana, L. P. (2007). *International handbook of research on indigenous entrepreneurship*. Edward Elgar Publishing.
- Dana, L. P. (2008). Community-based entrepreneurship in Norway. *The International Journal of Entrepreneurship and Innovation*, 9(2), 77-92.
- Dana, L. P. (2011). Entrepreneurship in Bolivia: an ethnographic enquiry. *International Journal of Business and Emerging Markets*, 3(1), 75-88.
- Dana, L. P. (2015). Indigenous entrepreneurship: An emerging field of research. *International Journal of Business and Globalisation*, 14(2), 158-169.
- Dana, L. P. (2021). Religion as an explanatory variable for entrepreneurship. In *World encyclopedia of entrepreneurship* (pp. 535-552). Edward Elgar Publishing.
- Dana, L. P., & Anderson, R. B. (2014). Mining and communities in the Arctic: lessons from Baker Lake, Canada. *International Journal of Entrepreneurship and Small Business*, 22(3), 343-361.
- Dana, L. P., & Dana, T. E. (2008). Ethnicity and entrepreneurship in Morocco: a photo-ethnographic study. *International Journal of Business and Globalisation*, 2(3), 209-226.
- Dana, L. P., & Dumez, H. (2015). Qualitative research revisited: epistemology of a comprehensive approach. *International Journal of Entrepreneurship and Small Business*, 26(2), 154-170.
- Dana, L. P., & Dumez, H. (2015). Qualitative research revisited: epistemology of a comprehensive approach. *International Journal of Entrepreneurship and Small Business*, 26(2), 154-170.
- Dana, L. P., & Guieu, G. (2014). Co-opetitive entrepreneurship: how to integrate competition in a co-operative context? An empirical study of sami reindeer herders [Emprendimiento cooperativo. ¿Cómo generar un ambiente competitivo en un contexto cooperativo? Una investigación sobre los pastores sami de renos] (No. halshs-01413760).
- Dana, L. P., & Light, I. (2011). Two forms of community entrepreneurship in Finland: Are there differences between Finnish and Sámi reindeer husbandry entrepreneurs?. *Entrepreneurship & Regional Development*, 23(5-6), 331-352.
- Dana, L. P., & Mallet, J. (2014). An unusual empirical pattern in an indigenous setting: cooperative entrepreneurship among Brazil nut (*Bertholletia excelsa*) harvesters. *International Journal of Entrepreneurship and Small Business*, 22(2), 137-158.
- Dana, L. P., & Morris, M. H. (2021). Ethnic minority entrepreneurship. In *World encyclopedia of entrepreneurship* (pp. 251-259). Edward Elgar Publishing.
- David C., Sourrisseau J.M., Gorohouna S., Le Meur P.Y. (2016), De Matignon à la consultation sur l'indépendance, une trajectoire politique et institutionnelle originale, in *La Nouvelle-Calédonie face à son destin*, IAC-KARTHALA, GEMDEV.
- David, C, David, V. (2020). New Caledonia. *Gems of the Pacific*, In press. fhal-02540818

- David, G. (2004). La Gestion des Risques comme Base de la Viabilité des Sociétés de l'Océanie Insulaire (The Risk Management as Bases of the Pacific Islands Societies). *Espaces Tropicaux et Risques: du Local au Global*, 353-64.
- David, G. (2008). La pêche côtière océanienne et son environnement. La dialectique instabilité/stabilité au fil de l'eau. *Journal de la Société des Océanistes*, (126-127), 247-270.
- Davidsson, P., & Honig, B. (2003). The role of social and human capital among nascent entrepreneurs. *Journal of business venturing*, 18(3), 301-331.
- De Clercq, D., Lim, D. S., & Oh, C. H. (2013). Individual-level resources and new business activity: The contingent role of institutional context. *Entrepreneurship Theory and Practice*, 37(2), 303-330.
- Demmer, C. (2009). Secrets et organisation politique kanake* Pour sortir des catégories privé/public. *l'Homme*, (2), 79-104.
- Douglas, B. (1991). Winning and losing? Reflections on the war of 1878–79 in new caledonia. *The Journal of Pacific History*, 26(2), 213-233.
- Eisenhardt, K. M., & Graebner, M. E. (2007). Theory building from cases: Opportunities and challenges. *Academy of management journal*, 50(1), 25-32.
- Elster, J. (1989). Social norms and economic theory. *Journal of economic perspectives*, 3(4), 99-117.
- Eriksson, P., & Kovalainen, A. (2015). *Qualitative methods in business research: A practical guide to social research*. Sage.
- Evans, P. (1996). Government action, social capital and development: reviewing the evidence on synergy. *World development*, 24(6), 1119-1132.
- Faberon, J. Y. (2012). *Des institutions pour un pays: La Nouvelle-Calédonie en devenir*. Presses universitaires d'Aix-Marseille.
- Faberon, J. Y.(2013), *Instability and Stability in New Caledonia*, in Hegarty, D., & Tryon, D. *Politics, development and security in Oceania*. ANU Press.
- Fan, G. H. (2024). Can You Hear Nature Sing? Enacting the Syilx Ethical Practice of Nŋawq̄nwix^w to Reconstruct the Relationships Between Humans and Nature. *Journal of Business Ethics*, 1-20.
- Faugère, E. (2000). Transactions monétaires en pays kanak. *Genèses*, (4), 41-62.
- Faugère, E. (2002). La fabrique identitaire dans les îles Loyauté: Comment peut-on être un colon-Kanak?. *Ethnologie française*, 37(2), 629-635.
- Fehr, E., & Gächter, S. (2000). Cooperation and punishment in public goods experiments. *American Economic Review*, 90(4), 980-994.
- Fellman, K., Kinnunen, J., Lindström, B., & Palmer, R. (2015). Pathways to Successful Entrepreneurship in Small Island Economies. *Entrepreneurship in Small Island States and Territories: The case of Åland*. *Entrepreneurship in Small Island States and Territories*. New York: Routledge, 65-81.
- Felzensztein, C., Gimmon, E., & Deans, K. R. (2018). Coopetition in regional clusters: Keep calm and expect unexpected changes. *Industrial Marketing Management*, 69, 116-124.

- Foley, D., & O'connor, A. J. (2013). Social capital and the networking practices of indigenous entrepreneurs. *Journal of Small Business Management*, 51(2), 276-296.
- Freyss, J. (1995). *Économie assistée et changement social en Nouvelle-Calédonie*. FeniXX.
- Fukuyama, F. (1995). Social capital and the global economy. *Foreign Aff.*, 74, 89.
- Fukuyama, F. (2001). Social capital, civil society and development. *Third world quarterly*, 22(1), 7-20.
- Gagliardi, F. (2008). Institutions and economic change: A critical survey of the new institutional approaches and empirical evidence. *The Journal of Socioeconomics*, 37(1), 416-443.
- Goldin C. Human Capital. In: *Handbook of Cliometrics*. Heidelberg, Germany: Springer Verlag ; 2016.
- Graff, S. (2012). Quand combat et revendication kanak ou politique de l'État français manient indépendance, décolonisation, autodétermination et autochtonie en Nouvelle-Calédonie. *Journal de la Société des Océanistes*, 134, 61-83.
- Graille, C. (1999). Coutume et changement social en Nouvelle-Calédonie. *Journal de la Société des océanistes*, 109(2), 97-119.
- Granata, J., Lasch, F., Le Roy, F., & Dana, L. P. (2018). How do micro-firms manage coopetition? A study of the wine sector in France. *International Small Business Journal*, 36(3), 331-355.
- Granovetter, M. (1983). The strength of weak ties: A network theory revisited. *Sociological theory*, 201-233.
- Granovetter, M. (1985). Economic action and social structure: The problem of embeddedness. *American journal of sociology*, 91(3), 481-510.
- Granovetter, M. (1990). The myth of social network analysis as a special method in the social sciences. *Connections*, 13(1-2), 13-16.
- Granovetter, M. (1992). Economic institutions as social constructions: a framework for analysis. *Acta sociologica*, 35(1), 3-11.
- Granovetter, M. S. (1973). The strength of weak ties. *American journal of sociology*, 78(6), 1360-1380.
- Greve, A., & Salaff, J. W. (2003). Social networks and entrepreneurship. *Entrepreneurship theory and practice*, 28(1), 1-22.
- Groenland, E. (2014). The problem analysis for empirical studies. *International Journal of Business and Globalisation*, 12(3), 249-263.
- Groenland, E. (2014). The problem analysis for empirical studies. *International Journal of Business and Globalisation*, 12(3), 249-263.
- Guiart, J. (1963). *Structure de la chefferie en Mélanésie du Sud*.
- Guyard, S., Apithy, L., Bouard, S., Sourisseau, J. M., Passouant, M., Bosc, P. M., & Bélières, J. F. (2013). *L'agriculture en tribu: Poids et fonctions des activités agricoles et de prélèvement-Enquête IAC*.

- Hagen, K. S. (1962). Biology and ecology of predaceous Coccinellidae. *Annual review of entomology*, 7(1), 289-326.
- Halinen, A., & Törnroos, J. Å. (1998). The role of embeddedness in the evolution of business networks. *Scandinavian journal of management*, 14(3), 187-205.
- Hardin, G. (1968). The tragedy of the commons: the population problem has no technical solution; it requires a fundamental extension in morality. *science*, 162(3859), 1243-1248.
- Hart, B. H. L. (1967). BH Liddell Hart. *Strategy Meridian*, London.
- Henningham, S. (1994). The French administration, the local population and the American presence in New Caledonia, 1943-1944. *Journal de la Societe des Oceanistes*, 98(1), 21-41.
- HERRENSCHMIDT, J. (1999). Le “développement” dans les îles Loyauté, 1990-1994: cinq ans d’assimilation. *La Nouvelle-Calédonie à la croisée des chemins*, Paris, Société des océanistes-Orstom, 177-194.
- Herrenschmidt, J. B. (2004). Territoires coutumiers et projets de développement en Mélanésie du Sud:(Iles Loyauté, Vanuatu, Fidji) (Doctoral dissertation, Paris 4).
- Hilborn, R., Amoroso, R. O., Anderson, C. M., Baum, J. K., Branch, T. A., Costello, C., ... & Ye, Y. (2020). Effective fisheries management instrumental in improving fish stock status. *Proceedings of the National Academy of Sciences*, 117(4), 2218-2224.
- Hindle, K. (2010). How community context affects entrepreneurial process: A diagnostic framework. *Entrepreneurship and regional development*, 22(7-8), 599-647.
- Hindle, K., & Lansdowne, M. (2005). Brave spirits on new paths: toward a globally relevant paradigm of indigenous entrepreneurship research. *Journal of Small Business & Entrepreneurship*, 18(2), 131-141.
- Hindle, K., & Moroz, P. (2010). Indigenous entrepreneurship as a research field: developing a definitional framework from the emerging canon. *International Entrepreneurship and Management Journal*, 6, 357-385.
- Hindle, K., Anderson, R. B., Giberson, R. J., & Kayseas, B. (2005). Relating practice to theory in Indigenous entrepreneurship: a pilot investigation of the Kitsaki partnership portfolio. *American Indian Quarterly*, 1-23.
- Hirst, P., & Zeitlin, J. (1997). Flexible specialization: Theory and evidence in the analysis of industrial change. *Contemporary capitalism: The embeddedness of institutions*, 220-239.
- Hoang, H., & Antoncic, B. (2003). Network-based research in entrepreneurship: A critical review. *Journal of business venturing*, 18(2), 165-187.
- Hoffmann, A., Junge, M., & Malchow-Møller, N. (2015). Running in the family: parental role models in entrepreneurship. *Small Business Economics*, 44, 79-104.
- Hofstede, G. (1980). Culture and organizations. *International studies of management & organization*, 10(4), 15-41.
- Hofstede, G., Neuijen, B., Ohayv, D. D., & Sanders, G. (1990). Measuring organizational cultures: A qualitative and quantitative study across twenty cases. *Administrative science quarterly*, 286-316.

- Horowitz, L. S. (2001). Perceptions of nature and responses to environmental degradation in New Caledonia. *Ethnology*, 237-250.
- Horowitz, L. S. (2004). Toward a viable independence? The Koniambo Project and the political economy of mining in New Caledonia. *The Contemporary Pacific*, 287-319.
- Jack, S. L. (2010). Approaches to studying networks: Implications and outcomes. *Journal of business venturing*, 25(1), 120-137.
- Jack, S. L., & Anderson, A. R. (2002). The effects of embeddedness on the entrepreneurial process. *Journal of business Venturing*, 17(5), 467-487.
- Jack, S. L., & Anderson, A. R. (2002). The effects of embeddedness on the entrepreneurial process. *Journal of business Venturing*, 17(5), 467-487.
- Jack, S. L., Dodd, S. D., & Anderson, A. R. (2004). Social structures and entrepreneurial networks: the strength of strong ties. *The International Journal of Entrepreneurship and Innovation*, 5(2), 107-120.
- Jack, S. L., Dodd, S. D., & Anderson, A. R. (2004). Social structures and entrepreneurial networks: the strength of strong ties. *The International Journal of Entrepreneurship and Innovation*, 5(2), 107-120.
- Jensen, H. E. (1987). The theory of human nature. *Journal of economic issues*, 21(3), 1039-1073.
- Johannes, R. E. (1978). Traditional marine conservation methods in Oceania and their demise. *Annual Review of Ecology and Systematics*, 9(1), 349-364.
- Johannisson, B., Ramírez-Pasillas, M., & Karlsson, G. (2002). The institutional embeddedness of local inter-firm networks: a leverage for business creation. *Entrepreneurship & Regional Development*, 14(4), 297-315.
- Kaufmann, J. C., (2011), *L'entretien compréhensif*, Éditions Armand Colin – (4ème édition : 2016)
- Kayseas, B., Moroz, P.W. and Anderson, R.B. and Dana LP (2015), *Indigenous Rights and Entrepreneurship: Social Capital Formation and Modes of Social Regulation*
- Kilduff, M., Crossland, C., Tsai, W., & Krackhardt, D. (2008). Organizational network perceptions versus reality: A small world after all?. *Organizational Behavior and Human Decision Processes*, 107(1), 15-28.
- Kim, P. H., & Aldrich, H. E. (2005). Social capital and entrepreneurship. *Foundations and Trends® in Entrepreneurship*, 1(2), 55-104.
- Kipuri, N. (2009). Chapter II: culture. In UN, Department of Economic and Social Affairs, Division for Social Policy and Development, Secretariat of the Permanent Forum on Indigenous Issues (ed.), *State of the world's indigenous peoples: ST/ESA/328*, New York: United Nations publication (pp. 51-81).
- Kloosterman, R., & Rath, J. (2001). Immigrant entrepreneurs in advanced economies: mixed embeddedness further explored. *Journal of ethnic and migration studies*, 27(2), 189-201.
- Klyver, K., & Foley, D. (2012). Networking and culture in entrepreneurship. *Entrepreneurship & Regional Development*, 24(7-8), 561-588.

- Klyver, K., & Foley, D. (2012). Networking and culture in entrepreneurship. *Entrepreneurship & Regional Development*, 24(7-8), 561-588.
- Kohler, J.M., (1979), Religions et dynamiques sociale en Nouvelle Calédonie, (fascicule II), Nouméa : OSTROM
- Kohler, J.M., Pillon P., (1982), L'impact de l'Opération Café en milieu mélanésien. Vol.1: Le discours mélanésien. NOUMEA OSTROM et direction territoriale des services ruraux.
- Kor, Y. Y., & Mahoney, J. T. (2004). Edith Penrose's (1959) contributions to the resource-based view of strategic management. *Journal of management studies*, 41(1), 183-191.
- Korsgaard, S., Wigren-Kristoferson, C., Brundin, E., Hellerstedt, K., Alsos, G. A., & Grande, J. (2022). Entrepreneurship and embeddedness: Process, context and theoretical foundations. *Entrepreneurship & Regional Development*, 34(3-4), 210-221.
- Korsgaard, S., Wigren-Kristoferson, C., Brundin, E., Hellerstedt, K., Alsos, G. A., & Grande, J. (2022). Entrepreneurship and embeddedness: Process, context and theoretical foundations. *Entrepreneurship & Regional Development*, 34(3-4), 210-221.
- Korsgaard, S., Wigren-Kristoferson, C., Brundin, E., Hellerstedt, K., Alsos, G. A., & Grande, J. (2022). Entrepreneurship and embeddedness: Process, context and theoretical foundations. *Entrepreneurship & Regional Development*, 34(3-4), 210-221.
- Kwon, S. W., & Adler, P. S. (2014). Social capital: Maturation of a field of research. *Academy of management review*, 39(4), 412-422.
- Kwon, S. W., Heflin, C., & Ruef, M. (2013). Community social capital and entrepreneurship. *American sociological review*, 78(6), 980-1008.
- Lasch, F., Le Roy, F., & Yami, S. (2007). Critical growth factors of ICT start-ups. *Management decision*, 45(1), 62-75.
- Leblic, I. (1999). Efficacité technique et rituelle face aux changements techniques et sociaux: le cas des pêcheurs kanak de Nouvelle-Calédonie. In Colloque CNRS-IFREMER-CCSTI-SOLITO (université de Bretagne Sud) Mutations techniques des pêches maritimes: subir ou agir? Évolution des systèmes techniques et sociaux (pp. 135-164). IFREMER Brest.
- Leblic, I. (2003). Chronologie de la Nouvelle-Calédonie. *Journal de la Société des Océanistes*, (117), 299-312.
- Leblic, I. (2007). Kanak identity, new citizenship building and reconciliation. *Journal de la Société des Océanistes*, (125), 271-282.
- Leblic, I. (2008). Vivre de la mer, vivre avec la terre... en pays kanak: Savoirs et techniques des pêcheurs kanak du sud de la Nouvelle-Calédonie (Vol. 1). Société des océanistes.
- Leblic, I., & Cugola, U. (2018). 2018. La Kanaky Nouvelle-Calédonie a rendez-vous avec l'histoire... Présentation raisonnée du dossier. *Journal de la Société des Océanistes*, 2, 291-308.
- Leenhardt M., (1930). Muséum national d'Histoire naturelle, Paris, 265p. (Travaux et Mémoires de l'Institut d'Ethnologie ; 8).
- Licht, A. N., Goldschmidt, C., & Schwartz, S. H. (2007). Culture rules: The foundations of the rule of law and other norms of governance. *Journal of comparative economics*, 35(4), 659-688.

- Light, I., (2004) "The Ethnic Economy." Ch. 16 in *Handbook of Economic Sociology*, 2nd edition, edited by Neil Smelser and Richard Swedberg. New York: Russell Sage Foundation,.
- Light, I., & Dana, L. P. (2013). Boundaries of social capital in entrepreneurship. *Entrepreneurship theory and practice*, 37(3), 603-624.
- Loubersac, L. (2015). "L'océan porteur d'enjeux de croissance et de défis majeurs dans l'outre-mer français du Pacifique Sud," *Tai Kona*, (12), pp. 24-38. Open access version <https://archimer.ifremer.fr/doc/00255/36615/>
- Loubersac, L., Lacroix, D., & Henocque, Y. (2013). Croissance et société bleues: quels intérêts et perspectives pour la Nouvelle-Calédonie. *Tai Kona*, (5), 12-35.
- Manganda, A. M., Mika, J. P., Jurado, T., & Palmer, F. R. (2023). How indigenous entrepreneurs negotiate cultural and commercial imperatives: insights from Aotearoa New Zealand. *Journal of Enterprising Communities: People and Places in the Global Economy*, 17(6), 1171-1192.
- Manganda, A., Jurado, T., Mika, J., & Palmer, F. (2023). I Flip the Switch. *Indigenous Business and Public Administration*, 2(1), 21-38.
- Markus, H. R., & Kitayama, S. (1994). A collective fear of the collective: Implications for selves and theories of selves. *Personality and social psychology bulletin*, 20(5), 568-579
- Mason, A. M., Dana, L. P., & Anderson, R. B. (2009). A study of enterprise in Rankin Inlet, Nunavut: where subsistence self-employment meets formal entrepreneurship. *International Journal of Entrepreneurship and Small Business*, 7(1), 1-23.
- Mauss, M., (1924), «Essai sur le don. Forme et raison de l'échange dans les sociétés archaïques», article originalement publié dans *l'Année Sociologique*, seconde série, 1923-1924. In *Sociologie et anthropologie*. Paris: Les Presses universitaires de France, 1968, Quatrième édition, 482 pages. Collection: Bibliothèque de sociologie contemporaine.
- Mauss, M., (1924), «Essai sur le don. Forme et raison de l'échange dans les sociétés archaïques», article originalement publié dans *l'Année Sociologique*, seconde série, 1923-1924. In *Sociologie et anthropologie*. Paris: Les Presses universitaires de France, 1968, Quatrième édition, 482 pages. Collection: Bibliothèque de sociologie contemporaine.
- McKeever, E., Anderson, A., & Jack, S. (2014). Entrepreneurship and mutuality: social capital in processes and practices. *Entrepreneurship & Regional Development*, 26(5-6), 453-477.
- Meis Mason, A. H., Dana, L. P., & Anderson, R. B. (2012). Getting ready for oil and gas development in Canada's Northwest Territories: aboriginal entrepreneurship and economic development. *International Journal of Entrepreneurship and Small Business*, 16(3), 242-266.
- Merle, I. (2016). Les Kanak à l'épreuve de la colonisation. *Entre histoire et anthropologie*. *Revue d'Histoire Moderne et Contemporaine*, (1), 195-204.
- Merle, I., & Coquet, M. (2021). The Penal World in the French Empire: A Comparative Study of French Transportation and its Legacy in Guyana and New Caledonia. In *Empires and Colonial Incarceration in the Twentieth Century* (pp. 47-74). Routledge.
- Meyer, W. H. (2012). Indigenous rights, global governance, and state sovereignty. *Human Rights Review*, 13, 327-347.

- Mika, J. P., Felzensztein, C., Tretiakov, A., & Macpherson, W. G. (2024). Indigenous entrepreneurial ecosystems: a comparison of Mapuche entrepreneurship in Chile and Māori entrepreneurship in Aotearoa New Zealand. *Journal of Management & Organization*, 30(1), 40-58.
- Mintzberg, H., & Westley, F. (1992). Cycles of organizational change. *Strategic management journal*, 13(S2), 39-59.
- Missens, R. M., Anderson, R. B., & Dana, L. P. (2014). A study of natural resource use by the Nehiyaw (Cree) First Nation. *International Journal of Entrepreneurship and Small Business*, 21(4), 495-512.
- Moroz, P. W., Kayseas, B., & Anderson, R. B. (2014). Using strategic alliances to facilitate community-based new venture creation. *International Journal of Entrepreneurship and Small Business*, 22(1), 36-49.
- Moroz, P. W., Kayseas, B., & Anderson, R. B. (2014). Using strategic alliances to facilitate community-based new venture creation. *International Journal of Entrepreneurship and Small Business*, 22(1), 36-49.
- Müller-Wille, L., & Hukkinen, J. (1999). Human environmental interactions in Upper Lapland, Finland: Development of participatory research strategies. *Acta Borealia*, 16(2), 43-61.
- Nahapiet, J., & Ghoshal, S. (1998). Social capital, intellectual capital, and the organizational advantage. *Academy of management review*, 23(2), 242-266.
- Nooteboom, B. (2002). *Trust: Forms, foundations, functions, failures and figures*. Edward Elgar Publishing.
- North, D. C. (1991). Towards a theory of institutional change. *Quarterly Review of Economics and Business*, 31(4), 3-12.
- Obrecht, J. J. (2021). Environment for entrepreneurship. In *World encyclopedia of entrepreneurship* (pp. 224-241). Edward Elgar Publishing.
- Obrecht, J.J., and Rahetlah, M., (2014), chapitre 9 , *Entrepreneuriat, développement durable et territoires*, Sous la direction de Raymond GUILLOUZO, Hachette, 2014, 286p.
- Ostrom, E. (1990). *Governing the commons: The evolution of institutions for collective action*. Cambridge university press.
- Ostrom, E. (2000). Collective action and the evolution of social norms. *Journal of economic perspectives*, 14(3), 137-158.
- Ouchi, W. G. (2019). Markets, bureaucracies, and clans. In *Management Control Theory* (pp. 343-356). Routledge.
- Paolo, F.S., Kroodsma, D., Raynor, J., Hochberg, T., Davis, P., Cleary, J., Marsaglia, L., Orofino, S., Thomas, C. and Halpin, P., (2024). Satellite mapping reveals extensive industrial activity at sea. *Nature*, 625(7993), 85-91
- Parsons, T. (1937). The structure of Social Action, 491.
- Penrose, E. T. (2009). *The Theory of the Growth of the Firm*. Oxford university press.
- Penrose, E. T. (2009). *The Theory of the Growth of the Firm*. Oxford university press.
- Peredo, A. M. (2003). Emerging strategies against poverty: The road less traveled. *Journal of Management Inquiry*, 12(2), 155-166.

- Peredo, A. M., & Chrisman, J. J. (2006). Toward a theory of community-based enterprise. *Academy of management Review*, 31(2), 309-328.
- Peredo, A. M., & McLean, M. (2006). Social entrepreneurship: A critical review of the concept. *Journal of world business*, 41(1), 56-65.
- Peredo, A. M., Anderson, R. B., Galbraith, C. S., Honig, B., & Dana, L. P. (2004). Towards a theory of indigenous entrepreneurship. *International Journal of Entrepreneurship and Small Business*, 1(1-2), 1-20.
- Peredo, A. M., Haugh, H. M., & McLean, M. (2018). Common property: Uncommon forms of prosocial organizing. *Journal of Business Venturing*, 33(5), 591-602.
- Petit Skinner, S., 1978. Le rat et le poulpe. *Journal de la Societe des Oceanistes*, 58-9:63-71.
- Polanyi, K. (1957). *The Great Transformation*, 46.
- Popper, K. (1976). The myth of the framework. In *Rational changes in science: Essays on scientific reasoning* (pp. 35-62). Dordrecht: Springer Netherlands.
- Porter, M. E. (1991). Towards a dynamic theory of strategy. *Strategic management journal*, 12(S2), 95-117.
- Putnam, R. D. (2000). Bowling alone: America's declining social capital: Originally published in *Journal of Democracy* 6 (1), 1995. *Culture and Politics: A Reader*, 223-234.
- Ratten, V. (2014). Future research directions for collective entrepreneurship in developing countries: a small and medium-sized enterprise perspective. *International Journal of Entrepreneurship and Small Business*, 22(2), 266-274.
- Redpath, L., & Nielsen, M. O. (1997). A comparison of native culture, non-native culture and new management ideology. *Canadian Journal of Administrative Sciences/Revue Canadienne des Sciences de l'Administration*, 14(3), 327-339.
- Richer De Forges, B., & Pascal, M. (2008). La Nouvelle-Calédonie, un «point chaud» de la biodiversité mondiale gravement menacé par l'exploitation minière.
- Riseth, J. Å. (2003). Sami reindeer management in Norway: Modernization challenges and conflicting strategies. Reflections upon the co-management alternative. *Indigenous Peoples: Resource Management and Global Rights*, Eburon Academic Publishers, Delft, Netherlands, 229-247.
- Sabinot C., Lacombe, S. (2015). La pêche en tribu face à l'industrie minière dans le sud-est de la Nouvelle-Calédonie, Available at : <http://riethno.org/wp-content/uploads/2015/11/9-SABINOT-LACOMBE-Nouvelle-Cale%CC%81donie-pp.120-137.pdf>. (Accessed : April 22, 2018)
- Sand C., Bedford S., (2010), Lapita. Ancêtres océaniens. *Oceanic Ancestors*, Paris, Somogy-Musée du quai Branly, 304p.
- Sand, C. (1998). Archaeological report on localities WKO013A and WKO013B at the site of Lapita (Koné, New Caledonia). *The Journal of the Polynesian Society*, 107(1), 7-33.
- Sand, C., J. Bolé, and A. Ouetcho, (2003), Prehistoric Cultural Evolutions in a Melanesian Archipelago: The New Caledonia Example. *Antiquity* 77(297): 505–519

- Schotter, A. (2001). State-of-nature theory and the rise of social institutions. *The Theory of Market Failure*, 147-177.
- Schwartz, S. H. (1999). A theory of cultural values and some implications for work. *Applied psychology: an international review*, 48(1).
- Shapero, A., & Sokol, L. (1982). *The social dimensions of entrepreneurship*. University of Illinois at Urbana-Champaign's Academy for Entrepreneurial Leadership Historical Research Reference in Entrepreneurship.
- Slotte-Kock, S., & Coviello, N. (2010). Entrepreneurship research on network processes: A review and ways forward. *Entrepreneurship theory and practice*, 34(1), 31-57.
- Smith, A. (1776). 1976. *An Inquiry into the Nature and Causes of the Wealth of Nations*. The Glasgow edition of the works and correspondence of Adam Smith, 2.
- Sourisseau, J. M., Geronimi, V., Blaise, S., Bouard, S., & Zugravu-Soilita, N. (2016). La Nouvelle-Calédonie dans les turbulences du XXI^e siècle. *La Nouvelle-Calédonie face à son destin: quel bilan à la veille de la consultation sur la pleine souveraineté*, 449-484.
- Sourisseau, J. M., Geronimi, V., Blaise, S., Bouard, S., & Zugravu-Soilita, N. (2016). La Nouvelle-Calédonie dans les turbulences du XXI^e siècle. *La Nouvelle-Calédonie face à son destin: quel bilan à la veille de la consultation sur la pleine souveraineté*, 449-484.
- Spigel, B. (2017). The relational organization of entrepreneurial ecosystems. *Entrepreneurship theory and practice*, 41(1), 49-72.
- Stam, E., & Van de Ven, A. (2021). Entrepreneurial ecosystem elements. *Small business economics*, 56(2), 809-832.
- Stevenson, J., & Dodson, J. R. (1995). Palaeoenvironmental evidence for human settlement of New Caledonia. *Archaeology in Oceania*, 30(1), 36-41.
- Stiglitz, J. E. (2015). The origins of inequality, and policies to contain it. *National tax journal*, 68(2), 425-448.
- Teulière-Preston, M-H., (2000), Le droit maritime kanak et ses transformations, In Bensa, A., Isabelle, L. (eds) *En pays kanak. Ethnologie, archéologie, linguistique, histoire de la Nouvelle-Calédonie*, Paris, Editions de la Maison des sciences de l'homme, pp. 129-146.
- Theodoraki, C., Dana, L. P., & Caputo, A. (2022). Building sustainable entrepreneurial ecosystems: A holistic approach. *Journal of Business Research*, 140, 346-360.
- Thurstan, R. H., Brockington, S., & Roberts, C. M. (2010). The effects of 118 years of industrial fishing on UK bottom trawl fisheries. *Nature communications*, 1(1), 15.
- Tjibaou, J. M., & Guiart, J. (1976). Recherche d'identité mélanésienne et société traditionnelle. *Journal de la Société des Océanistes*, 32(53), 281-292.
- TRENDS IN DETECTIONS AND REJECTIONS IN INTERNATIONAL TRADE (fao.org)
- Trépiéd, B. (2010). 'Two Colours, One People'? The Paradoxes of the Multiracial Union Calédonienne in the Commune of Koné (New Caledonia, 1951–1977). *The Journal of Pacific History*, 45(2), 247-264.

- Unger, J. M., Rauch, A., Frese, M., & Rosenbusch, N. (2011). Human capital and entrepreneurial success: A meta-analytical review. *Journal of Business Venturing*, 26(3), 341–358. <https://doi.org/10.1016/j.jbusvent.2009.09.004>
- Uzzi, B. (1997). Towards a network perspective on organizational decline. *International journal of sociology and social policy*, 17(7/8), 111-155.
- Vakkayil, J. (2017). Resistance and integration: Working with capitalism at its fringes. *M@ n@ gement*, (4), 394-417.
- Van de Ven, A. H. (2007). *Engaged scholarship: A guide for organizational and social research*. Oxford University Press, USA.
- Veitayaki, J. (1997). Traditional marine resource management practices used in the Pacific Islands: an agenda for change. *Ocean & Coastal Management*, 37(1), 123-136.
- Verschuren, P., Doorewaard, H., & Mellion, M. J. (2010). *Designing a research project (Vol. 2)*. The Hague: Eleven International Publishing.
- Weber, M. (1958). *The Protestant Ethic and the Spirit of Capitalism: The relationships between religion and the economic and social life in modern culture*. Charles Scribner's Sons..
- Welter, F. (2011). Contextualizing entrepreneurship—conceptual challenges and ways forward. *Entrepreneurship theory and Practice*, 35(1), 165-184.
- Welter, F. (2012). All you need is trust? A critical review of the trust and entrepreneurship literature. *International Small Business Journal*, 30(3), 193-212.
- Welter, F., & Baker, T. (2021). Moving contexts onto new roads: Clues from other disciplines. *Entrepreneurship Theory and Practice*, 45(5), 1154-1175.
- Welter, F., & Baker, T. (2021). Moving contexts onto new roads: Clues from other disciplines. *Entrepreneurship Theory and Practice*, 45(5), 1154-1175.
- Welter, F., & Smallbone, D. (2011). Institutional perspectives on entrepreneurial behavior in challenging environments. *Journal of Small Business Management*, 49(1), 107-125.
- Williamson, O. E. (1985). *firms, markets, relational contracting. The economic institutions of capitalism*.
- Yin, R. K. (2014). *Case study research : design and methods (Fifth edition.)*. SAGE.
- Yin, R. K. (2018). *Case study research and applications (Vol. 6)*. Thousand Oaks, CA: Sage.
- Zukin, S., & DiMaggio, P. (Eds.). (1990). *Structures of capital: The social organization of the economy (Vol. 15)*. CUP Archive.

Annexes:

ANNEXE 1, Quantity of fish delivered to the fish processing unit of Lifou in 2015:

	january	february	march	april	mai	june	july	august	september	october	november	december	Total	moy
1	255,20	60,20	35,50	81,80	210,20	0,00	23,00	134,00	89,50	163,00	192,20	555,80	1800,40	150,03
2	130,05	112,20	210,60	231,90	187,10	74,40	0,00	143,70	0,00	0,00	0,00	0,00	1089,95	90,83
3	153,88	206,00	140,70	0,00	70,00	43,80	48,30	9,95	717,75	581,30	110,30	156,00	2237,98	186,50
4	0,00	16,11	18,37	0,00	0,00	0,00	11,06	0,00	44,32	15,24	24,00	54,33	183,43	15,29
5	275,49	193,00	87,70	0,00	42,60	62,50	26,70	0,00	213,70	0,00	67,70	106,50	1075,89	89,66
6	240,10	99,70	400,30	88,50	157,10	38,90	0,00	0,00	0,00	220,90	290,50	317,60	1853,60	154,47
7	0,00	36,00	30,90	69,63	242,00	142,10	394,70	381,90	905,90	285,30	136,90	73,10	2698,43	224,87
8	0,00	0,00	0,00	0,00	0,00	49,30	48,70	20,50	276,90	505,80	520,10	111,40	1532,70	127,73
9	0,00	0,00	0,00	0,00	0,00	0,00	0,00	30,80	7,50	0,00	104,30	58,30	200,90	16,74
10	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	154,30	127,10	242,80	19,90	544,10	45,34
11	0,00	0,00	0,00	0,00	0,00	0,00	0,00	106,20	292,90	266,20	284,70	74,40	1024,40	85,37
12	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	144,00	0,00	144,00	12,00
13	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	13,60	13,60	1,13
Total	1054,72	723,21	924,07	471,83	909,00	411,00	552,46	827,05	2702,77	2164,84	2117,50	1540,93	14399,38	1199,95

(source: interview with fish processing unit)

ANNEXE 2, Example of customary and subsistence fisher interview:

J: Donc déjà pour commencer rapidement , le mieux c'est un peu de parler sur comment tu vois l'activité de la pêche, combien de fois tu pêches, pourquoi dans quelles occasions

N: Bah je fais la pêche, c'est depuis qu'on a arrêté l'école tu vois, du coup on a commencé à arrêter, on travaille pas du coup on n'a pas de ... Du coup dans les maisons on fait la pêche pour nourrir plutôt qu'utiliser les pièces pour acheter du poisson au marché alors que nous on a la mer juste à côté il faut qu'on profite de la mer. en fait c'est depuis de nos ;.

J: depuis toujours

N: depuis toujours, tu vois après ça se transmet de ...

(quelqu'un demande quelque chose, discussion entre eux en lifou)

J: Et qui s'est qui t'as... c'est ton père qui t'a appris à pêcher?

N: Non s'est juste les, la famille, les garçons .. c'est surtout .. c'est pas vraiment les parents c'est surtout les oncles, enfin s'est comme si on se considère tous les grands frères ; même si ils sont de l'autre maison on a tous la même éducation.. quand on fait le travail pour l'église pour les mariages, la coutume. Et c'est sur tous les événement ou on est obligé de toujours se ...

JM: être ensemble

N: Quand on voit tous les grands quand ils vont à la pêche pour la tribu bah nous en tant que petit on vient aussi. Et de chez eux déjà ils nous apprennent des trucs. Petit à petit quand y en a un qui va se marier qui part déjà avec sa femme. C'est nous qui viennent derrière on vient et ..

JM: Vous transmettez..?

N: Oui voilà au lieu que c'est toujours les vieux .. voilà parce que surtout ici les vieux ils sont plus trop .. c'est surtout maintenant les jeunes qui s'organisent. Et ici à la tribu la plupart les parents ils travaillent, les papa ils n'ont pas le temps d'emmener leurs enfants dans la semaine..

JM Ah oui comme XXXX?

N: Voilà.. c'est toujours nous les grand qui viennent chercher les petits, bah eux les petits ils viennent, ils les laissent ils ont confiance (parlant des parents). Qui fait quand ils laissent leur petit avec nous ils ont confiance ils savent qu'ils reviendront

JM A XXX nom tribu XXX on est 200 à peu près .. avec tous les enfants vous êtes à peu près combien à partir à la pêche ? parce que tout le monde ne pêche pas ..

N: La plupart ils ne pêchent pas. Ya des pêcheurs, ya des chasseurs .. ici on ne fait pas que la pêche .. Tu vois c'est des trucs où nous on arrive à faire .. heu .. Tu vois d'autre personnes qui sont restées trop longtemps à Nouméa ils reviennent ... l'habitude de pêcher .. ils sont plus ...

JM: Ils ont perdu ?

N: Ils ont perdu .. c'est plus l'habitude d'avant ou même .. ce n'est pas trop dans leur ...heu...

JM: Ils sont passés à autre chose?

N: Ils sont trop restés à Nouméa pour travailler... Alors que nous ici on a l'habitude on a la force en nous c'est toujours là .. On se réveille le matin on va aller .. quelqu'un de Nouméa pour rester ici quand on dit "aller on va à la pêche" il est ... sa façon de bouger c'est comme un oignon ... il va être un peu fatigué ..

JM: Toi tu étais parti à Nouméa aussi ? non?

N: Oui moi j'étais partis pour faire l'école

JM: Ok .. et quand tu étais revenu .. pareil? tu étais fatigué ? (rires)

N: Voilà

C'est juste en fait là les deux garçons viennent juste d'arriver cette année. Quoiqu'eux ils sont partis faire l'école longtemps, moi j'étais partis juste pour faire le lycée car ici ils n'avaient pas ma branche. Du coup collège première j'ai fait ici. Ici on faisait les deux en même temps .. quand il y a les long week-end, avec la lune tout ça quand on voit que ya la lune qui commence à se former comme ça ça veut dire que ça monte les marées. Les lunes descendantes il y a des marées .. encore ce sont les vieux qui nous ont dit. Ya pas besoin de regarder la météo pour savoir si c'est mauvais temps demain .. c'est juste grâce au ciel et les étoiles.. Tu vois quand ça commence à être gris ou qu'il y a plus d'étoiles le soir c'est qu'il va pleuvoir le lendemain. C'est surtout la lune que l'on regarde. Quand c'est la lune descendante ça veut dire qu'il ya les marées qui descendent. Ya toujours une marée descendante quand la lune est descendante. et puis chaque poisson a son ...

JM: son moment de sortie

N: Oui voilà on connaît quand on va aller... on sait déjà il ya les saisons des poissons .. Des fois quand on chope des mulets ou ya des carangues ... quand je dis les sortes de poissons qui arrivent après le reste de l'année nous on ne les voit pas sur les squats à nous après ils s'éloignent un peu.

JM : Oui ça fait comme des passages, des migrations ?

N: Voilà c'est le moment ou on tape, mais après le reste de l'année on tape toujours les même sorte de poissons.

JM: Du coup régulièrement pour la maison, toutes les semaines, vous allez pêcher pour manger etc.. Mais ya aussi il y a en plus les pêches pour préparer les coutumes et les kermesses et .. la kermesses c'est juste une fois l'année .. mais ya aussi toutes les autres événements ..

N: Mariages ,

JM: Mariages, batêmes

N: Mariage il y a les saisons, Mariages c'est à partir de juin et c'est juin juillet aout, ya trois mois, et des fois dans un mois il va y avoir deux mariages, ou 1. Ou sinon dans l'année il n'y a que 1 mariage en fonction... Sinon le reste c'est surtout pour les fin d'années c'est surtout pour les événements ici chez nous par exemple ici on est combien, on est 4 garçons chez nous ici à la maison. Ce qui fait quand on va descendre pour la pêche c'est pour nous. Des fois quand on part 4

... c'est des pêches comme ça on se réveille le matin, il y a le beau temps quand on regarde la mer elle est bien calme, on descend en bas à la mer. Quand des fois ya un garçon de l'autre maison et un garçon de l'autre maison, on est 4 des fois quand on descend .. quand on revient on sépare entre nous ..

JM: Vous y allez avec le bateau dans ces cas-là comme on avait fait

N: Non des fois on marche on va aller derrière les falaises, pour les grandes lignes tout ça .. la ligne que j'ai fait là :

(il me montre)

JM: Ah yes

N: Ça c'est les lignes de pêche pour les lignes de fond. Juste pour, là le cocotier regarde la ligne qui part comme ça.. ça c'est les crins c'est les gros crins.. il y a les petits crins exprès pour descendre avec le bateau .. ya les gros crins pour faire de là-haut des falaises quand on lance .. parce que derrière ce sont les fond ou on peut choper.. C'est rare qu'on chope les poissons de là bah, par rapport aux poisson là. Des fois les poissons qu'on trouve c'est surtout dans les coins ou l'homme il n'a pas l'habitude de fréquenter. Les poissons qu'on trouve tu ne peux pas les trouver avec le bateau.

JM: Oui ça fait comme des petits coins.. oui quand je vais au bout là-bas il y a souvent des perroquets

N: Voilà .. des Napoléons tout ça.. Là les Napoléons c'est rare que tu vas les voir en bas .. enfin c'est rare.. tu vas voir ça au bleu derrière les falaises.. c'est là que nous on chope avec des lignes comme ça les grosses lignes .. des 1000. Parce que déjà quand on lance de la falaise on est en hauteur et quand on est en hauteur on prend toujours des bois et quand tu lances la ligne jusqu'au fond et quand tu remontes il faut pas que la ligne elle accroche pas aux parois.. tellement que c'est haut .. tu prends des crochets comme ça et juste la ligne et nous on est au bord .. et puis c'est des 30-40 m de profondeur et puis n'en parlons pas les profondeurs de l'eau .. quand je dis la hauteur ; avec la profondeur de la mer..

Et admettons quand vous aller à la pêche, vous faites une belle pêche, c'est qui les 4,5 premières personnes à qui tu vas donner tu poisson en premier ?

N : Première personnes .. d'abord on donne au pasteur, après on donne au petit chef de la tribu et puis aussi les vieux de la tribu, on donne surtout aux vieux de la tribu. Quand on en attrape beaucoup on ne va pas donner aux maisons où ya beaucoup de jeunes parce qu'eux aussi ils font la pêche pour eux . Ce qui fait que nous on a tous les même pensées quand on attrape beaucoup, le premier truc qu'on va donner c'est au petit chef de la tribu et au pasteur, pour dire que la coutume et puis la religion qui est forte ici chez nous. Parce que en fait c'est les deux personnes qui sont prioritaire. Et puis les vieux, donner à notre grand père; même si ce n'est pas le grand père de la maison c'est notre grand père. Bon on peut aller direct en pensant que ils ont plus les moyens pour aller à la pêche, c'est rare qu'ils mangent du poisson .. donc on leur donne. C'est comme ça pour avoir la bénédiction plus on donne et plus on peut attraper. .. pour nous ici celui qui veut toujours garder chez lui, quand il redescend à la mer il peut pas prendre.. et comme nous on attrape toujours on attrape beaucoup toujours, quand on redonne, on redescend toujours on attrape toujours .. c'est toujours comme ça ..

JM: C'est un cercle .. ?

N: C'est un cercle quoi.. Surtout nous ici c'est les mythes, ça va avec la coutume, les mythes ici il y a beaucoup on travaille avec les requins par exemple .. ce sont les gardiens à nous, comme tu avais parlé de .. protéger les .. bah ici ... les ancêtres tout ça ya déjà le thème de protection de mer sans que les étrangers ils arrivent .. pour nous... ou les "Camaja" (blancs) .. pour nous expliquer "voilà ça c'est interdit" "ça faut pas" ... en fait c'était déjà ancré..

Ici chez nous il y a beaucoup de requins .. Quand tu vois dans le reste du monde il y a de moins en moins de requins.. ..

JM : Oui parce qu'ils les tuent..

N: Voilà, Mais ici nous comme c'est notre Grand père, c'est le mythe de chaque clan ici. Comme ici on vit par rapport à un clan, il y a les clans de la mer et les clans de la terre. Et les clans de la mer ils ont beaucoup de Totems..

JM : Et toi tu es de quel clan?

N: Nous on a les deux clan de la mer, clan de la terre. Ya des gens qui sont surtout à la mer.. qui viennent donner à manger .. pour nous c'est clan de la mer . De la terre quand on fait l'igname, On fait des échanges .. En fait quand tu as parlé du mythique .. Les requins, les baleines par exemple, ce sont des trucs que l'on n'a jamais touchés .. même les vieux à nous ils ont, ce sont des symboles. Et ici la mer ce n'est pas que pour la pêche.. quand tu vas aller faire la terre tu vas regarder les saisons des baleines qui arrivent .. ça annonce pour les gens de la terre pour le nouvel igname. Ici la baleine elle arrive ici au mois d'Aout et .. Juin juillet aout - comme c'est une saison .. Nous on commence à labourer la terre.

JM: Il y a une question par rapport aux règles qui seraient déjà là.. par exemple quand tu parles du requin et des baleines et ce que tu aurais d'autre exemples de règles? .. lié à la conservation

N: Ah oui il y a beaucoup d'exemples surtout le poulpe et le rat tout ça .. Chaque animal a son... nous on a droit de pêcher ... par exemple quand tu .. quand tu vas aller prendre les Bernard Lhermitte .. ça c'est ..chaque poisson ils ont le .. quand tu prends beaucoup d'appâts, il y a les calamars, il y a les seiches pour faire les appâts de ...

JM: Picot ?

N: Voilà .. les picots .. les picots ça s'attrape avec la pâte de poulpe .. Pour attraper les picots ici on prend une seiche pour faire le truc pour attraper les picots, le picot il ne va pas manger .. il ne sait pas c'est quoi. Quand on attrape le poulpe, on enlève bien le noir puis on fait sécher dans les cases. Et avec ça après on fait la pâte et après on peut attraper des ... Comme le poulpe et le rat .. Les bec de canne.. chaque poisson a son .. tu vois les petits.. les petit trucs rond.. ils traînent toujours ..

JM: ah les petits trucs blancs?

N : les petits escargots .. pas les escargots ils ont une petite pince.. Bernard Lhermitte .. ya des gros ya des petits .. c'est en fonction de leur âge .. avec ça on peut attraper ici il vit sur la terre, on peut prendre ça pour faire les appâts pour attraper des becs de canne parce que d'autre poissons ils ont

des préférences pour manger. Ce qui fait que quand on part à la pêche on part avec 3 ou 4 sorte de ... d'appâts .. surtout ici chez nous c'est les sites .. on sait que chaque coin est un nid de .. nid de carangues

JM: Chaque coin est connu ..

Et qu'est-ce qu'ils se passent si des gens d'ailleurs viennent pêcher sur ces coins-là ?

N: Dans ces moments-là Bah on va parler avec eux .. ici la baie, le coin ici chez nous c'est nous avec une autre tribu qui est là et une autre tribu. Avec Mucaweng et Siloam ; des fois quand on se croise on discute un peu, des fois on échange un peu des poissons. "Vous avez attrapé quoi?" Des fois si on trouve d'autres personnes qui sont ici, on va leur dire à eux on va leur interdire de venir ici . En venant ici ils savent pas le coin.. ils savent pas c'est ou ça.. parce que nous on peut pas aller dans les autres coins parce qu'on sait pas c'est quoi .. tu vois peut-être qu'il y a des courants qui sont pas .. chez nous ici on a l'habitude de venir ici parce que c'est chez nous, tu sais on connaît bien les coins.. c'est pas comme d'autres personnes qui vont aller .. qui vont se dire je vais aller là-bas parce je vais essayer de voir c'est comment là-bas dans leur zone. Peut-être qu'il y a de moins en moins de .. Mais nous la plupart des pêches ici c'est pour la coutume. on sait même pas le coin ici on a jamais vendu .. surtout ici chez nous..

Quand il y a d'autres personnes on peut avoir un peu le ton qui monte ; on demande à eux "vous avez pas l'autorisation .. " .. il peut y avoir des conflits ..

JM: oui après ça dégénère ..

N: Voilà .. surtout pour nous parce que nous on part pas dans les autres... on garde comme on a toujours du poisson ici chez nous ..

JM: oui vous respectez le coin ici.

N: oui voilà

JM: Et il y a des pêcheurs de la marina qui viennent ou pas ?

N: Ici ? Non, c'est rare, des fois ils viennent mais nous on sait pas peut être. Des fois on va pas, du lundi jusqu'à dimanche on va pas tout le temps..

JM: oui en même temps vous n'êtes pas là à scruter l'horizon..

N: On voit d'autres bateaux qui viennent ... quand on voit tu sais c'est des petits bateaux, on a jamais vu des gros bateaux qui arrivent ici, les bateaux "alu". Sinon si ya des gros bateaux c'est le bateau du grand chef de Hnathalo . Eux ils ont le droit de eux ils sont .. c'est le grand chef eux ils ont le droit ... quand nous on le voit on ne peut pas .. on peut rien dire ..

JM: Oui ..il y a du respect du fait de sa position..

N: oui voilà

Mais eux ils vont pas .. du jour au lendemain ils vont pas piller tous nos.. c'est juste qu'eux voilà ils arrivent ..

JM: puis eux aussi ils ont un rivage sympa..

N: voilà..

Des fois c'est pas pour la pêche des fois c'est pour les sites. Il y a des personnes qui arrivent en bateau juste pour aller baigner, pour regarder..

JM: Ah oui c'est tellement magnifique!

N: Mais sinon des fois il y a des .. comment on peut dire .. les voiliers , des plaisanciers, eux ils viennent juste pour accoster.

JM: Ah oui parce que les falaises elles sont connues.

N: à part ça bah des fois quand ils viennent ici on dit à eux que si ils ont des déchets .. faut pas les jeter ..

Chaque personne quand ils viennent ici bah ils savent pas, c'est comme toi quand tu arrives. Ya des personnes qui arrivent, ya des étrangers ils arrivent et ils repartent sans savoir ce qu'il y a ..

JM: Ce qu'il se passe et comment ça marche ...

Ouai.. en plus avec les croisières ici qui se développent ...

N: oui voilà

Ici c'est un autre, c'est combat ici chez nous maintenant avec tous l'exemple des grands paquebots qui sont tous là-bas à Easo .. Ici, ils voulaient faire aussi ici mais tous les gens c'est bien on a pas .. tellement que ci .. là-bas chez eux, eux ils commencent à révolter mais en fait c'est un peu tard ..

JM: Il peuvent plus rien faire?.. et oui il est déjà abimé le fond..

N: C'est abimé et puis maintenant le business il est trop .. trop ..

JM Développé ?

N: Il est trop développé. Ici chez nous on n'a pas de ressource comme le tourisme. ça fait que peut être chez eux ils ont laissé mais ici ils vont jamais faire ça ici chez nous .. on a juste, le seul truc qu'on a accepté de laisser venir ici c'est les plaisanciers. Sinon pour faire l'ancre tout ça .. parce qu'on a déjà installé des gros blocs en dessous les.. sous la mer .. au lieu qu'ils viennent jeter leur crochet pour heu..

JM: Ah ça évite d'abimer le fond

N: Voilà c'est ça eux ils arrivent juste à coincer ..

JM: hum .. Ah oui parce que sinon ils se mettent n'importe où et

N: et ils peuvent .. retouchent tous les trucs ..

JM: les patates et tout

N Mais des fois, on ne voit pas mais ya d'autre personnes qui .. d'autre plaisanciers qui lâchent les voilà.. des fois quand ils arrivent à 4 , 5 .; ils remontent bah .. le petit chef il parle à eux .. Après si la petite bande ils suivent ce que nous on fait, le combat... c'est surtout ça aussi le combat des pêcheurs, parce que ya d'autre gens qui ne font pas la pêche ils voient pas le combat

parce que ils ne vont pas tout le temps à la pêche, ils voient toujours

JM: oui ils ne voient pas les menaces ..

N: Oui voilà.. si il y a des espèces qui commencent à partir.. par exemple ici ya des espèces qui commencent à .. parce qu'on voit que la présence humaine, la présence des bateaux ils sont trop ...

JM: ça les dérange..

N: ouai .. et ce qui fait que les vieux il nous disent... ils repart ce qui fait que nous quand on va aller et bah on ne trouve pas .. On cherche des moyens pour quand on va plonger pour essayer de chercher... Peut-être que les poissons qui étaient là qui étaient avec eux avant ils étaient là et depuis..

JM: Et quand vous voyez ça il n'y a jamais des fois où vous vous dites à bah tien du coup on va essayer de régénérer ..? Ce coin il va être tabou à un certain moment oui pas ..

N: Non il n'y a pas encore ça pour l'instant. Tellement que les gens surtout en ce moment. On essaie d'avancer pas trop à la pêche mais c'est surtout chacun chez soi. Beaucoup de gens commencent à laisser la pêche parce que comme nous on se déplace pour aller chercher du travail ou on va aller sur Nouméa pour travailler dans les grandes pêches.

JM: Et on l'avait un peu évoqué quand on discutait, pourquoi aller chercher du travail alors que par exemple on peut pêcher et revendre du poisson à l'UCPM. Vous n'avez jamais pensé à pêcher avec l'UCPM?

N: Non pas trop mais pour moi c'est les gens en plus de .. le nombre de poissons qu'on déjà qu'on pêche aussi pour les coutumes c'est aussi .

JM: C'est déjà beaucoup donc par rapport à toutes les inquiétudes que tu m'as dit on ne préfère pas trop.

N: non mais on peut aller du jour au lendemain ou tu peux partir.. ou même par exemple pour moi ...je suis encore ici un peu chez moi .. j'ai un peu le .. j'ai encore le soutien financièrement.. soutien de la famille. On vit ensemble, ya .. Si ya une personne qui va partir sur Nouméa pour aller travailler ; sinon le reste on est un groupe .. Sinon le reste c'est le respect..

JM: vous échangez et voilà..

N des fois .. Ou bien comme moi je viens de construire ma maison si je veux partir d'ici, je peux .. là je peux dire après que je peux chercher du .. pour moi et pour les personne qui vont rester chez moi après .. ya pour l'instant on fait la pêche que pour nous mais après ... parce que tellement qu'on est en ..tellement qu'on est en groupe tu vois on ne peut pas se manquer de ... on peut aller à la pêche pour changer de nourriture ou aller à la chasse, ou...

JM: c'est plus comme un système ?

N: Un système voilà! je t'ai dit après c'est trop .. après le système c'est trop..

JM: oui vous êtes organisés collectivement...

N: Collectivement.. on n'arrive pas à se ..

JM: c'est suivant vos besoin?

N: Voilà, dès que quelqu'un il commence à sortir du .. il peut changer la façon de .. comment nous on vit, il peut sortir pour créer son petit truc à coté.. s'il veut sortir des bateaux pour faire une grande pêche en bas chez lui .. après c'est à lui.. c'est des problèmes qui arrivent plus tard sur lui c'est à lui ..on peut aller l'aider pour venir... mais on peut faire ici chez nous ..tellement que ... mais ici avec l'impact tout ça à Easo, ça se ressent aussi chez nous .. voilà. Par exemple ya 5 ans on ne voyait pas trop de coraux qui sont mort qui sont.. parce que quand le bateau il repart de Easo il passe par chez nous juste devant.. pour aller à ..

JM: Ah donc il pollue ! ..

N: Ici dans les coins ici ce n'est pas comme à Nouméa où c'est trop pollué ici c'est à Lifou c'est des coin c'est encore des réserves tu vois c'est trop ; comment dire ... sensible tu vois dès qu'il y a un petit truc qui arrive ça change tout d'un coup ..

JM: Oui .. ça perturbe l'écosystème..

N: Tellement que c'est trop ya pas de .. Bah ya 5 ans y'avait pas de bateaux .. surtout ici chez nous et surtout chez eux là-bas à Xepenehe

JM: C'est marrant parce que les pêcheurs de Ouvéa ils ont évoqué ça ils ont dit "oui nous on a fait un choix sur la pêche, on veut pas de bateaux chez nous on veut pas tout ça ; il eut y avoir des impacts trop grands..

N: Ici ils ont raison, avec l'exemple de Easo C'est ... on voit que c'est touristique ..

JM: en plus avec tous les touristes les crèmes solaires et tout..

N: Voilà , et ici quand on compare par rapport à Nouméa ressource minières .. on n'a pas beaucoup de richesse, (...)

JM: C'est sur ya pas pour l'extraction mais..

N: surtout c'est nous c'est les grand politiciens c'est en fonction des gens qui sont placés ils sont haut placés dans la province où .. c'est eux qui doivent lancer .. c'est surtout ici dans la commune de Lifou nous on est dans la province

JM: oui mais quand ils lancent un truc ce n'est pas forcément suivit, regarde le port de Xépénéhé?.. parait qu'il y a des chambres froide et tout..

N: le port voilà ça c'est des projets qui datent .. même des générations des papa ya 15 ans .. ce sont les premiers trucs ou ici aux îles le port de Xépenehe c'est le port ou les grands bateaux arrivaient pour remplir surtout pour nous ici les poissons des îles .. quoi Navimon c'est les bateaux des îles et eux ils sont installés sur Nouméa .. Je ne sais pas pourquoi ils sont là-bas .. alors que c'est des trucs des îles. Ya l'autre là c'était leur rôle de faire .. d'alimenter les chambres froides tout ça ..

nous on ne sait pas ça vient d'où le poisson, il va aller où .. alors c'est des trucs d'autre poissons.. des îles. Pour eux peut être remplir ici ça ne gagne pas trop ... peut être ou je sais pas ... je sais pas c'est quoi .. Là ils descendent toujours sur Nouméa, la consommation .. le nombre de demandes..

JM: quand tu dis que c'est à la province de mettre les trucs en place je me dis.. si on impose aux gens ou si on développe et que les gens ils ne font pas partie d'un processus de dire ce dont ils ont besoin, ce dont ils ont peur.

N: Nan c'est, pour nous ici ya pas de .. y'avait ya quoi 10 -15 ans les associations ici à la commune. y'avait 3 bateaux en bas .. "3 alus".. le départ des bateaux c'était des associations de pêche de XXX. Ils allaient à la pêche les vieux, pour remplir, pour vendre.. Mais depuis les projets non aboutis ... tout ça

JM: Hum..

N: Ya pas qu'ici sur XXXX, ya dans ..

JM: toutes les autres tribus ?

N: dans d'autres tribus qui sont au bord de mer c'est des aides.. ceux qui sont à Hnacaom ils ne sont pas au bord de mer.. ça c'est les aides je crois c'est de la province ça ..Après c'est des coins où.. ils avaient lancé au bout un moment en pensant qu'avec la vente (...) ça allait quand même .. un peu de sauver chaque famille .. enfin eux

JM: rapporter un peu de pièces..?

N: enfin construire des maisons avec ça .. payer le loyer de... payer l'école .. l'école des enfants .. surtout ça ... pas le loyer .. parce qu'ici on ne paye rien on paye juste le courant ..

JM: Ouai .. et l'eau?

N : avec l'eau, l'eau sinon au début ils pensaient qu'avec la pêche, avec les trucs d'associations ça allait commencer à ...les garçons ici bah du coup ..

JM: et pourquoi ça n'a pas pris ? .. pourquoi les projets ils n'ont pas aboutis ?

N: Bah après c'est chacun a son .. après c'est les papa aussi.. c'est peut-être que eux ils sont partis d'ici pour aller sur Nouméa .. Parce que depuis qu'ils ont ouvert l'association beaucoup de gens qui étaient dedans ils sont sur Nouméa.

JM: ah Donc ils sont loin ...

N: avec l'attrait de la grande ville .. Ici ya de moins en moins de jeunes.. quand ici c'est surtout quand nous on se rassemble ici avec les autres jeunes des autres tribus on croit que c'est toute une .. mais en fait ya pas beaucoup de jeunes; d'autres jeunes ils partent pour Nouméa. En fait la majorité des jeunes sont sur Nouméa. Et avec les bateaux que eux ils ont suivi du coup c'est nous qui ont pris le relais, au lieu de faire ça pour l'association on a fait à notre façon

JM: à votre manière ...

N: C'est avec ces bateaux qu'on a repris pour heu ..

JM: faire la pêche coutumière .. ?

N: voilà ! .. On n'allait pas demander à la personne pour faire la pêche, on prend son bateau ... son bien matériel c'est comme si .. On s'était dit ça voilà ..

JM: Oui c'est pour la tribu

N: ils savent que quand ils vont retourner avec le poisson c'est pas que...

JM: Oui en fait c'est.. le coin il est un peu à tout le monde, le bateau aussi .. le poisson il est redistribué. Je pense fin a vu tous thèmes

N: oui voilà si t'as des questions.. si j'ai oublié

JM non c'était très clair .. en plus tu m'as dit plein d'information et ..

N: Surtout quand t'as dit au niveau traditionnel parler des moyens de pêche comme le poulpe et le rat, .. je sais pas ..

JM: Des trucs des anciens ..

N: des anciens .. on ne sait pas peut être le rat c'est des histoires des histoires des vieux de la terre et puis après qu'ils font en fonction de la mer. Faut faire attention aussi comment on fait les pêche, les saisons, dans l'année on ne va pas tout le temps aller à la pêche. Moi avant hier j'avais chopé la gratte ..

JM.. Ahhh avant hier?

N: oui .. c'était quand, jeudi, non mercredi, .. jeudi, jeudi c'est le moment ou en ce moment on fait pas trop la pêche, c'est le moment où il y a les algues qui poussent en bas à la mer .. là c'est en fonction des .. tu vois les flamboyants ..

JM : Oui

N: Les flamboyants tout ça quand ils fleurissent.. et bien en bas à la mer ya les algues aussi qui fleurissent ce qui fait que quand tu manges du poisson tu ne peux pas tout le temps toute l'année manger du poisson..

JM: Ah oui sinon tu chopes la gratte

N: Voilà, c'est pour ça pour nous un peu la gratte ça nous fait arrêter un peu le ..

JM: ça te fait quel effet ? quand tu chope ça

N: Bah déjà t'as la diarrhée t'as envie de vomir, t'as mal au ventre toutes tes articulations elles sont .. on dirait que tu es devenu un mort vivant .. c'est ça

JM : ça te casse quoi ..

N: pendant une semaine .. tu peux plus bouger voilà..

JM: ok .. ok oui vaut mieux éviter demander du poisson alors .. (rire)

N: je te dis c'est des moments ou des moments comme ça ou des périodes où on fait cassement pas la pêche ..comme ça c'est des moments où on ne fait pas la pêche et bien d'autres poissons peuvent... ils ont le temps de se ..

JM: de se régénérer..

N: de se régénérer, de grandir .. et comme ça nous l'année prochaine on refait encore et encore.

JM: oui parce que ce n'est pas toute l'année qu'il y a la gratte ..

N: Voilà..

ANNEXE 3, Example, professional fisher interview:

I : Oui bah quand on .. déjà le vieux les papa et tout ça eux ils faisaient déjà la pêche, quand on était gamin là bah ils nous emmenaient en bas à la mer. Commençait à éclairer avec les torches mais c'est fait avec les .. comment qu'on appelle là .. les cocotiers..

JM: Ah oui bon m'a expliqué une technique avec le coco pour ne pas que la flamme elle s'éteigne ..

I: Voilà ...et puis s'était à marée basse voilà.. on ramassait les petits poissons à marée basse .. les popinets, les langoustes ..surtout pour la maison, manger et ...puis vendre un peu et voilà..

Après on a commencé ils ont commencé à acheter du matériel comme le masque .. tuba .. les fusils sous-marins .. les torches .. plonger dans le lagon..

J: Et vous aviez quel âge quand vous avez commencé à plonger?

I: Heu .. on avait .. 10 - 11 ans .. mais bien avant on allait accompagner les vieux c'est eux qui faisaient la pêche mais nous on les regardait faire la pêche tout ça là..

J: ok

I: On a commencé à piquer les poissons là-haut dans le lagon .. après on a grandi un peu .. on a commencé à .. ils nous ont emmenés derrière à l'extérieur commencé à piquer les gros .. les langoustes .. et après on a commencé à vendre les langoustes .. après c'est là que j'ai choisi de faire un coup le projet de pêche là ... voilà quand.. nous on a passé notre vie à faire ça le lagon et puis à l'extérieur du récif..

J: Vous avez déjà eu d'autre travaux à coté?..

I: Pour les coutumes? pour la coutume?

J: Oui non mais je veux dire à part la pêche .. vous êtes à fond dans la pêche..

I: Non non on fait le champs aussi, le champs les ignames ..

J: Et donc du coup vous faites la pêche un peu en pro et un peu pour la coutume ..

I: Voilà.. mais comment dire pro c'est pour voilà .. les petites pièces à la maison .. c'est beaucoup plus pour la coutume aussi parce que quand on a des travaux coutumiers pour les deuils ou les mariages et tout ça faut voir pour ..

J: Et je peux te demander quel âge tu as?

I: J'ai 36 ! ..

J: ok! et tu t'es lancé dans la pêche, le projet, à quel âge?

I: Le projet c'était là il y a un an!

J: Ok .. et depuis toujours tu vis de la pêche et du champs

I: Voilà, la pêche le champs la chasse .. un peu au champ , et biquettes ..

J: Roussette?

I: les Roussette! (rires)

oui .. bah quand j'ai sorti le bateau bah avec la crise en ce moment c'est un peu dur bah de payer les traites du bateau et en même temps avoir un peu de pièce pour la maison..

J: C'est ça la question que j'allais poser tout à l'heure parce qu'avec les hydrocarbures justement tu peux pas pêcher là maintenant?

I: Nan là ça fait un mois déjà ya le bateau ya l'herbe qui pousse en dessous (rire)

J: mais du coup ça fait un mois .. et t'as combien de traites par mois ?..

I: J'ai 66000CFP et quelques .. ok !

j'ai 26000CFP pour Quality boats et 36000CFP et quelque avec l'ADIE

J: Et ce n'est pas avec la province ?

I: Oui non j'ai demandé avant une aide à la province .. ils m'ont demandé pour faire un apport mais ça y est ils ont déjà voté ya déjà l'argent mais comme ils ont trainé un peu .. pour l'apport bah ils ont annulé mon dossier .. mais normalement c'était déjà voté ils ne peuvent pas ..

J: ahh non..

I: ça fait que j'ai fait le santal .. j'ai fait le santal j'ai sorti le bateau pour.. la pêche.. ça marche bien la pêche .. mais voilà, le problème c'est la mer en ce moment ..

J: Ouai avec les hydrocarbures .. ! déjà avant c'était juste la météo !

I: Bah oui la météo en ce moment faut dire dans l'année on ne sort pas tout le temps faut dire dans l'année c'est une trentaine de fois .. pas plus

Peut-être une fois dans le mois .. des fois il y a trois quatre jours dans le mois ou c'est calme .. bah là on peut..

J: Seulement?!

I: Oui rire .. Ici plus de 15 - 20 nœuds on ne peut pas sortir ... c'est toujours 10 nœuds, 8 nœuds ..

J: mais est-ce que c'est à cause du type de bateau et moteur? parce que peut entrer avec un autre type ?

I: oui voilà mon bateau il est trop petit pour aller loin loin .. quoi

J: hum par temps forts..

I: Moi c'est plutôt pour la pêche .. côtière .. moi c'est langoustes .. un peu de vivaneau .. mais sinon pêcher au large là ou ya les monts au larges .. vers Jokin .. faut vraiment attendre 4 nœuds.. ou

calme plat pendant 3 jours... mais je ne peux pas faire comme les autres pêcheurs là eux ils ont des gros bateaux ils peuvent aller à 15 nœuds .. ils peuvent ..

J: On pourrait se dire même que vu que la météo elle est super capricieuse .. bah peut être faudrait des bateaux qui puissent tenir ;..

I: Voilà ...

J: Et du coup .. vous faites la pêche pour un peu payer les traites etc. . et puis un peu pour la maison .. et pour les coutumes ... ?

I: Le bateau je l'utilise surtout pour payer les traites mais sinon pour la maison ou pour la coutume tout ça je vais avec la voiture .. en bas au rivage ou lâcher le filet ou plonger

J: ok!..

Mais c'est intéressant car j'ai eu un travail en province nord qui est sur la pêche aussi .. mais du coup le .. la .. la géographie en province nord ce n'est pas du tout la même avec le lagon et tout ..

I: là-bas c'est des grands lagons ce qui fait qu'ils ont beaucoup de poissons dans le lagon comme le bec de canne ils peuvent .. même 15 nœuds, 20 nœuds .. ils peuvent aller ... avec un bateau pour aller ..

J: Mais vous comment vous faites du coup comme vous dites je lâche le filet le soir à pied..

I: Ahh heu .. le filet c'est la senne.. tu lâches .. sinon après le filet tu as l'éperviers ou tu lances..

J: Oui c'est complètement différent .. donc vous vous faites la senne comme ça le soir ?

I: Le soir ou la journée .. mais voilà c'est .. pêché plus pour la coutume que pour la maison .. pour la maison c'est pour manger un peu.. après on distribue .. comme moi je ne vais pas tout seul .. ya des cousins des autres familles qui viennent et qui m'accompagnent ce qui fait quand je sors à la pêche je nourris là la maison mais je nourris aussi la famille à côté-là qui vient avec moi. Des fois c'est une grande sœur .. un grand oncle..

J: Et si jamais vous avez des problèmes pour payer le bateau eux ils peuvent vous aider comme ça ..

I: Comment ?

J: Si vous avez des problèmes pour payer les traites comme ça ils peuvent vous aider non?

I: Oui.. bah on va à la chasse, on vend des biquettes .. ou on va à pied faire les langoustes là on vend.. Voilà l'autre problème c'est mon oreille là j'ai percé mon tympan ..

J: À cause de la plongée?

I: Ce qui fait que là je suis un peu emmerdé avec tout ça ...

J: ah.. Les hydrocarbures .. et le tympan maintenant ..

I: Voilà voilà voilà ...

J: Normalement devait y avoir une réunion aujourd'hui mais .. (sur le problème de la marée noire)

I: Ben ya pas .. j'ai été en bas et ..

J: C'est la semaine prochaine .. ?

I: J'étais à une heure et demie, personne .. parti à deux heure et demie en bas .. personne ..

J: Oui ils ont dit que c'est la semaine prochaine, j'étais venue exprès ..

I: ah ouai ! .. et puis nous on n'est pas ... Ici t'as le clan de la terre .. surtout pour les ignames , t'as le clan de la mer .. Le clan de la mer c'est plutôt vers en bas à Siloam tout ça .. Siloam ... Unete... C'est eux les pêcheurs pour la chefferie tout ça ..

J: C'est fou parce que Unete ce n'est pas trop loin de la baie de santal ..

I: hum-hum

J: ce n'est pas très loin de Easo?

I: hum-hum

J: Et leur territoire de pêche ce n'est pas là où va le bateau .. ?

I: Ah non eu c'est plus au nord..

J: Ah ok ..

I: Le bateau c'est plutôt les gens de Xepenehe là eux avec les petites barques.. mais maintenant les gens de Xepenehe ils vont aussi en bas au nord ..

J: Ah oui on m'a dit que ça avait un peu impacté.. et donc du coup .. depuis toujours vous vivez de la pêche vous dites et là vous avez investi dans un bateau mais avant du coup vous faisiez la pêche avec une plate?

I: Oui on avait une tite plate avant avec eux .. comment on appel. le grand chef là .. lui qui est en bas .. bah on allait on était petit on avait 15 ans 17 ans .. on allait avec la plate c'était valable! et puis faut dire qu'avant il y avait beaucoup de langoustes .. beaucoup de poisson c'est plus comme maintenant on voit qu'il y a du changement .. ya beaucoup trop de pêcheurs.. t'as des pêcheurs aussi des autres endroit et on ne sait pas qui c'est .. de Wé ou de Mou tout ça il viennent ici en bateau pour pêcher ici chez nous..

J: A ouai donc il y a un impact sur la ressource que vous voyez vous..

I: Voilà .. moi je vois que ce n'est pas comme avant.. avant on ramassait beaucoup de langoustes maintenant faut plonger des kilomètres pour heu.. faut aller de plus en plus loin ce n'est pas ..

J: Et ya une question aussi .. c'est quand vous faites la pêche pour la maison et puis vous cernez un banc de poisson et vous en avez plus .. c'est qui les premières personnes à qui vous allez distribuer du poisson?

I: Bah des fois c'est le gardien de la route là qui est en bas à Lucila, bah comme c'est lui qui a la clef de la chaîne bah voilà on pense un peu à lui on donne du poisson là-haut.. ou des fois le frère à mon père lui qui est sur la route .. ou des vieux qui se promènent sur la route là ils arrivent du champs.. on s'arrête et on donne du poisson .. quand ya beaucoup beaucoup!

J: ouai !.. et sinon c'est la famille en premier?

I: Sinon c'est la famille .. ceux qui viennent avec moi

J: oui bah oui .. et si ya des problèmes mécaniques .. vous allez voir qui ici ? vous savez faire ?

I: Pour le bateau?

J: Oui

I: Voilà l'autre problème aussi là je faisais venir le mécano là de Nouméa à chaque fois ça me coûtait 80000 pour la révision je payais le billet aussi du bonhomme .. (rire)

J: (hii (rire)

I: Pour les 200h (de rodage)

J: Mais vous êtes pêcheur pro?

I: Oui après j'ai fait la formation du moteur, après maintenance..

J: Et ya pas un truc entre les pêcheurs pro pour faire venir un mécanicien pour tout le monde ?

I: Si si ça y est là on a .. ya une association en bas pour les pêcheurs ; bah on vient juste de faire là ya 2, 2-3 mois .. là ils ont changé l'ancien bureau c'est un nouveau bureau .. voilà là maintenant c'est un peu plus facile .. mais voilà moi je préfère avoir bien fait mon.. au moins t'es sûr que quand tu pars à la mer t'es sûr de bien revenir ..

§

J: hum

I: On a un peu peur de laisser les autres gens toucher le moteur

J: ouai! Donc du coup vous avez fait une formation aussi vous-même ? ..

I: Voilà.. Pour la maintenance au moins.. faut pas .. après si ya des petites panne t'es obligé d'attendre le mécano ou attendre que l'association elle fait venir le mécano pour tout le monde..

J: Et heu ya des mécanos sur l'île non?

I: Oui ! ya un à Chaput là ..

J: ah oui je vais allez les voir

I: Bah je crois ya que eux seulement, ya un cousin de Muchaweng aussi mais lui il travaille à Nouméa ..

J: Hum..

Hey hum si jamais .. quand vous voulez vendre le poisson vous le vendez où?

I: hum.. bah voilà quand yen a beaucoup beaucoup .. quand on attrape beaucoup avec le bateau bah on préfère donner à la poissonnerie parce qu'ils prennent tout !

J: à l'UCPM?

I: Voilà à l'UCPM

J: Ok donc du coup vous pêchez du poisson pélagique ?

I: Heu

J: Du vivaneau, du thon.. ?

I: oui des thazards, du mahi-mahi.. des langoustes..

J: ok! .. Parce que j'ai entendu qu'à Xepenehe ils ont ouvert le .. l'endroit où ils achètent le bec de canne, le poisson du récif...

I: Ouai ouai ouai ouai Non mais là il est toujours fermé là ! ..

J: Parait qu'ils achètent ! ..

I: hummm j'ai pas vu encore ... j'allais cherchais la glace ya un moment mais après même pas ayé un mois ça y est la glace

J: Ahh mais c'est marrant hier on m'a dit ..

I: Ah mais peut être ça y est peut-être que c'est ouvert ! ..

J: Ah peut être qu'il n'y a pas eu l'information entre ; les pêcheurs ...

I: Non mais sinon ils auraient .. ils nous auraient donné un coup de fil pour prévenir .. oui c'est ouvert à Xépénéhé ..

Parce qu'on a Alex normalement ..

J: Parce que j'ai vu Henri Hier c'est lui qui m'a dit c'est ouvert à Xepenehe ..

I: Ah c'est lui qui t'a dit c'est ouvert à Xépénéhé?

J: Que c'est lui qui vérifiait le poisson ..

I: Ah mais c'est bon .. ça veut dire que c'est ouvert !

J: C'est pour ça je dis ..

I: Ah c'est ça c'est lui qui t'a dit ça veut dire c'est bon .. bah voilà ..

J: ça veut dire faut emmener du poisson là-bas..

I: Ah bah voilà ..

Le poisson lagonnaire .. donc perroquet tout ça ..

*J: Alors perroquets ils prennent moins ils prennent plus bossus ; bec de canne ; ..
hum ok*

I: Ahhh

J: oui il m'a dit perroquet, loche .. (hésitante)

I: pas trop hein?..

J: à cause de la gratte ..

I: Au début il disait voilà faut emmener le poisson, ils conditionnent ils te donnent juste le reçu et puis voilà tu vas te faire payer en bas à la poissonnerie .. mais après tout .. le chargement .. tout amener en bas ..c'est eux ..

Toi tu arrives juste avec ton bateau et c'est eux qui font le ..

J: c'est un peu l'avantage qui est présenté aux pêcheurs .. c'est de se dire ..

I: De se dire .. Ah bah tu vois au lieu de .. arriver .. rincer le bateau, remettre le poisson dans la glacière et aller jusqu'à Wé hey bien eux ils font tout à côté .. toi tu rentres tu baigne, repos et le lendemain tu vas chercher les sous.

J: hum .. nan puis je vois dans le nord il n'y a pas de poissonnerie qui récupère le poisson donc c'est .. tu glaces .. tu appelles le colporteur ..

I: Ouai parce que ya beaucoup de pêcheurs Kanak .. bah je crois qu'ils ont dû faire ça pour tous les pêcheurs côtiers

*J: Mais ce qui est intéressant c'est que vous êtes pêcheur pro et vous n'étiez pas au courant .. !
Parce que si; vous pêcher des bec de cannes, des .. ya des dawas par ici?*

I: Oui ya des dawas mais c'est à la seine et piquer au fusil ! ..

J: oui

I: nan mais ya beaucoup de poissons..

Oui bah moi j'ai commencé petit à la pêche .. j'ai arrêté l'école à 14 ans en 4ème .. mais voilà la situation ici dans la famille là c'était difficile ça fait que j'ai largué l'école pour aller plonger .. en fait le prof il m'a dit .. j'étais fatigué de .. je revenais de la pêche le soir et partait à l'école .. puis je dormais un peu sur la table et lui il me regarde comme ça dans les cahiers tu vois "hey!" il m'a dit.. "hey c'est pas en allant à la pêche puis la chasse que tu vas gagner ta vie!" .. j'ai sorti le sac à dos, nettoyé mes affaires et rentré à la maison .. c'est de là que j'ai commencé la pêche.

J'ai commencé à pied, et puis après voilà une petite plate pour aller à la pêche pour payer aussi les études de mes sœurs là puis mes frères.. maintenant ils sont tous à Nouméa là ils travaillent.. Aider un peu les parents à la maison là .. un peu de pièces.. Après voilà, avec le temps on a réussi à faire un petit projet mais même là c'est dur quand même de payer .. c'est 66000CFP déjà.. quand c'est bloqué la mer t'es là faut aller chercher les 66000 où ? là quand c'est bloqué la mer?

JM: Mais quand c'est bloqué la mer, tes frères et tes sœurs à Nouméa ils ne peuvent pas t'aider ?

I: Ah non moi je demande pas d'aides..

JM: Sans demander .. je ne sais pas, si tu les as aidés pour leurs études ?

I: Ah non je ne demande pas moi ..

JM: Ah je ne sais pas .. je pose juste cette question, je n'ai pas de frères et sœurs, je ne sais pas.

I: Non moi je n'ai jamais demandé comme ça .. c'est rare.. quand je demande c'est quand j'ai vraiment besoin. Mais .. Sinon je chasse les roussettes j'envoie à mon frère .. il envoie les sous.. Sinon les biquettes.

JM : Oui c'est ce qu'on me disait à Lifou tout est à portée de main faut se bouger!

I : Sinon les champs ; avec ma femme les patates tout ça on vend un peu..

JM: Oui ça fait différentes activités pour aider quand la météo n'est pas bonne.

I: Oui voilà .. Sinon on a le Nakamal, ça c'est pour le petit pain le matin (rire)

JM : Et le Nakamal les racines vous les prenez d'où.?

I : à Nouméa mais c'est cher les racines de Kava en ce moment. Avant c'était 15000 .. 20000 après c'est monté 30 et maintenant c'est cher!...

Là ils m'ont envoyé mon machin d'impôts là .. j'en ai pour 800000 balles !

JM: D'impôts ?

I: d'impôts .. pour l'export de Santal ..

Après ils m'ont bloqué l'export .. là ils m'ont bloqué l'export de Santal ce qui fait qu'ils m'ont cloué un pied là.. Maintenant la mer .. on peut plus aller à la pêche (marée noire) ils m'ont cloué l'autre pied!

JM: Ah oui!

I: On arrive plus à s'en sortir là ..On sait plus comment ..

JM: Et vous n'avez jamais pensé à faire les biches de mer?

I: Les biches de mer? .. Bah le problème avec moi c'est que je n'ai jamais appris à ..

JM: à savoir lesquelles?

I: Si ! je vois ce qu'il faut prendre mais le problème c'est que je ne sais pas comment on fait pour conditionner .

JM: Ahh.. Je crois que le colporteur aide .. le sel..

I: Oui bah le sel tout ça voilà les fûts .. ça fait un oncle il m'a dit qu'il allait descendre pour faire montrer mais voilà .. il faudrait que je trouve quelqu'un .. quelqu'un qui fait. Bah j'ai été aller voir le gars de Tingueting là .. il ne veut pas il veut garder pour lui le..

JM: Ah oui !

I: Ah oui les mecs ils sont ..

JM: Ah .. alors que bon .. Nan je ne suis pas forcément pour la pêche aux biche parce que c'est un animal qui filtre .. enfin moi je ne suis pas pêcheur je ne suis pas d'ici je n'ai de leçon à donner à personnes .. Là avec la marée noire..

I: oui il y en a qui flottent ..

*JM: Oui ils sont morts à cause de ça .. mais parce que ça filtre .. mais leur .. les gros ils sembleraient qu'ils résistent. En tout cas c'est un animal que je respecte ..
Je pose juste la question, dans le nord quand certain pêcheur ..des fois quand ils n'ont plus de glace et pas de colporteur pour le poisson il n'y a que ça qui leur reste.*

I: Bah nous on a la glace ici c'est gratuit .. ils nous donnent rapidement la glace .; faut fournir le poisson après chez eux. Si tu ne fournis pas tu payes la glace ..

JM: Et c'est combien un sac de glace ?

I: C'est 500FPC ...

JM : Et vous en avez pour combien de temps avec le traites du bateau?

I: Jusqu'à l'année prochaine ..

JM : Ah c'est bon !

I: Bah j'ai payé la plus grosse partie 5 000 000 et quelque. Quand j'aurais gagné les sous du Santal je paierais une partie. Voici comme voilà aussi au Vanuatu on a des containers de Santal qui sont bloqué là.. si le container il était parti là..

JM: Ah vous ne pouvez pas être payé ..

I: ça a été saisis .. par la douane .. Parce que ceux qui sont partis pour faire le business ils n'étaient pas clair sur la marchandise .. ce qui fait que là ils vont passer au tribunal .. et là ça a ralenti aussi ... ce qui fait que moi j'ai compté aussi sur ça là pour payer les traites du bateau. Donc là ya pas autrement c'est la pêche .. mais c'est calme. déjà là ce n'est pas tous les jours et maintenant c'est le carburant qui ..

JM: Oui les hydrocarbures qui se déversent.. C'est dommage que je reparte demain car j'aurais bien aimé assister à cette réunion ..

I: Bah j'ai parlé avec un Tonton là.. il a dit pour ceux qui sont au fond, pour les hydrocarbures au fond et bien il faut 300 et quelque années .. pour que ça .. il a parlé de ça et il a parlé de la peinture aussi qui est sur la coque du bateau ..

JM: C'est toxique .. et ils ne comptent pas couper le bateau et l'enlever

femme derrière : "ayé c'est trop tard c'est foutu la mer".. je crois que même on ne peut plus baigner là du côté .. il y a interdiction de baignade et tout je crois que c'est dû à ça aussi ? .. ils ont chopé des boutons à cause c'est choquant! .. Ici il n'y a pas beaucoup d'usine ici et on est pénalisé à cause de ça .. qu'est-ce qu'il faut faire ? On va manger des boites !

I: Le pire c'est qu'on se nourrit de tous les petits poissons là-bas .. chaque famille ils vont .. et ya pas que ça aussi chaque fin d'année on fait les médicaments pour la purge .. et on fait avec l'eau de mer .. bah va essayer de boire l'eau en bas .. et le Grand père qui était venu il a vu carrément les murènes se sauver sur la plage et aller dans les brousses les grosses murènes là

JM: Quand ça ?

I: Bah ya 3 semaines un mois de ça ..

JM: Ah oui !

I : Les murènes qui se barrent d'en bas et qui montent sur la plage qui montent là-haut dans les arbres ...

JM: Ah oui d'accord !...

*I: Ce qui fait que voilà aussi on a un peu peur de tout ça
Là je ne sors pas, je ne sais pas comment je vais faire en ce moment-là..*

JM: Et hum .. oui et puis pêcher autre part après ce sont des coûts.

I: Déjà pour chaque sortie faut compter 20 000 balles pour le bateau. Heureusement que la glace est gratuite. Alors on ne peut pas, pour la pêche faut que tu ramènes au moins 100kg ..

JM : Pour ramener 100kg en une journée c'est bon ? ou vous restez une nuit en mer?

I: 100 kg c'est bon .. c'est déjà le maximum c'est bon .. Si tu fais 50 kg ça va encore .. c'est juste ..

JM: Mais on rentre dans le frais ?

I : Voilà

JM: Et vous pêchez avec d'autre pêcheurs ?

*I: Bah je vais beaucoup avec les petits papas là les petits cousins.. On est 3 et si on va aux langoustes on est 5. Mais nous voilà c'est plutôt langouste les pêches côtières là. Là je n'ai pas loin de 300 kg de langoustes .. Je crois que c'est ..
Voilà si c'était si c'était ouvert la mer ça y est 350 kg j'ai payé les traites du bateaux.*

JM: Et vous ne pouvez pas pêcher sur des endroits qui ne sont pas "attaqués"

I: Bah là c'est toute la .. le bord jusqu'à Jokin, ils en ont même retrouvé au nord vers la Grande baie vers Unete.

femme : même sur la grande terre..

JM: Ah oui j'ai vu à Ponérihen ..

I: Là où ça a été bien touché c'est Maré, Mu et Yaté

JM: Je pose la question car jours-ci vu des pêcheurs sortir aller aux langoustes..

I: ah faut faire attention.. On ne sait pas trop comment .. Pour manger

Vaut mieux attendre les résultats d'analyse c'est dans 2/ 3 semaines ? Après voilà .. on ne sait pas trop comment ..

Bah je suis parti à la mairie aussi là .. pour aller voir le secrétaire du maire .. bah il n'était pas là .. ils m'ont donné le numéro je pourrais l'appeler mais ça ne sert à rien.. on dirait qu'on n'est pas .. prit au sérieux .. c'est parce qu'eux (soufflement) ils touchent leur paie à la fin du mois.. c'est sûr! ..ils vont au magasin .. ils achètent du poisson qui arrivent d'ailleurs .. ou de la viande .. mais nous là .. on vit de la mer, on vit de la terre ...

femme I: et vous vous étudiez justement ça ? les différents types de pêche traditionnelles et moderne..

JM: Oui et les différentes visions par rapport à la pêche comme cette idée de patrimoine ..

I: déjà il y a des endroits qui sont en surpêche .. les langoustes on trouve plus comme avant ..

femme: même la pêche quand il va c'est rare qu'il attrape beaucoup maintenant. Les bonne pêche qu'il fait dans une année c'est quoi .. une ou 3 fois par ans hein ? Hein l'année dernière c'est plus comme avant ...

JM : Et pour vous une bonne pêche pour vous c'est quoi ?

I: Une bonne pêche pour moi c'est surtout les langoustes, c'est une glacière comme ça pleine avec une glacière comme ça ..

JM : En une journée?

I: Une soirée même pas des fois on part à 7h00, on plonge à 7h00 du soir on remonte à minuit ça y est

JM: Je pose la question car je voyais là j'étais à Canala y'avait pas de boulette et ils avaient une commande de 150 kg et ils mettaient 3j voir 4j à le faire.

I: Ah nous c'est de 7h à minuit on emplit les glacières! Mais ça c'était avant ! Maintenant voilà... On marche toute la nuit pour le fond de la glacière .. ce n'est pas .. c'est plus comme avant, t'es obligé d'aller de plus en plus loin là où les bonhommes ils ne vont pas.. des fois on est découragé parce qu'on arrive ya déjà deux trois bateaux..

Femme I : surtout là on est triste, on est découragé, parce que d'habitude ya tout le temps du poisson pour manger .. là on fait quoi là on va au magasin pour acheter une boîte de sardine! Obligé de manger une boîte de sardines.. mais maintenant heu au magasin ya plus de boîte de sardine parce que les gens ils mangent plus les poissons de là-bas ..

I: Ils sont tous après les sardines ..

FI: du coup rupture dis stock en bas de boîte de sardine!

JM: soupir Aïe Aïe Aïe..

FI: oui là c'est vraiment ... Nous chaque semaine peut-être on mange deux fois, trois fois poisson ..

I: 3 fois 4 fois, 4 fois par semaine

FI: Là on est vraiment pénalisés. C'est pour ça des fois on sait plus qui il faut ..

I: Mais ce n'est pas des fois c'est en ce moment.. Ça fait deux mois que l'on tourne en rond là ..

FI: Même on est en colère avec les gens de la mairie de la province et tout là .. pour eux c'est comme si ce n'est rien ..

I: Non pour eux ce n'est pas rien .. pour eux, là là, .. Ils vont débloquent des sous là, tu vois

FI Mais c'est pour eux quoi .. c'est pour leur poche..

I: Mais là les sous quand ça va arriver c'est la province tout ça c'est la mairie qui va gérer ça, mais nous les petits pêcheurs les gens qui .. tu crois qu'ils vont nous donner des sous pour heu ..

JM: Pour compenser ..

FI : Hum

Non on te parle de ça parce que on est vraiment là c'est clair

I: On est arrivé à un niveau, c'est vraiment ...

FI: Un niveau ! .. là t'es venue pour autre chose mais on te parle de ça parce que ça nous a vraiment impacté on est bien touché là .. nous on est une famille qui mange tout le temps du poisson là on mange plus de poisson..

I : comme je disais tout à l'heure-là je faisais santal, ils ont bloqué l'export.. là je faisais le projet de bateau, il y a le pétrole, le mazout qui arrive, on est bloqué non seulement ça mais ils ont bloqué aussi l'allocation des gosses soi-disant que je touche 4 millions par mois parce que la case de l'entreprise elle, elle remplit des papiers mais il a des cases qui ..

JM : Ah .. je vois ... et puis si un mois t'as déclaré pour du santal ils ont pris pour tous les mois ..!

I: Bah pour toute l'année ! Voilà alors que les 4 millions et quelque j'avais déjà mis sur .. j'ai sorti mon bateau avec !

JM: Oui ils ont déjà disparu..

I: après ils vont ressortir le machin d'impôt là 800 000 tu regardes pour l'Etat ya juste 25000 mais le reste c'est la province, la commune, la mairie les tas de bordel. Mais c'est encore nous les Kanak qui est en train de .. tu vois un peu .. on sait pas comment ..

JM: Oui ça fait une déconnection..

*I: on fait comment pour revenir en arrière ? faut arrêter les projets tout ça .. quand tu penses que t'es en train d'avancer mais ils sont en train de te pomper .. voilà
Faut revenir au mode ancien là .. lampe les torches aller en bas là .. parce que les pêche comme ça on est en train de ramasser. En fait on sait plus on est ou avec tout ça ..
Oui ya .. ya déjà le carburant .. le poisson il se fait rare .. ya pas que moi qui dit hein ! ya les autres pêcheurs là eux qui vont plus loin que moi ..*

JM: Tout le monde pêche trop?

I: Et ils vont de plus en plus loin.. alors maintenant ya des bateaux aussi d'ailleurs ils viennent pêcher chez nous on sait même pas.. J'en ai croisé deux trois au large là du récif Jouan en bas là ..

JM: Ah oui

*I: Oui des gros bateaux on sait même pas d'où ils viennent ..
On sait pas trop les bateaux ils viennent d'où?.. J'ai signalé au mec de la poissonnerie : je lui ai dit, à chaque fois que je vois le bateau là-bas je lui ai dit "Ya un bateau bleu là-bas " le mec il dit "mais non mais c'est pas le Munun?" J'ai dit "non ça ressemble pas à le .. c'est comme un bateau de marchandise.."*

JM: Vous ne pouvez pas prendre une photo?

*I: Ah je n'ai pas ...je n'avais pas .. Et à chaque fois que j'arrive pour aller dessus ils repartent.. et c'est toujours au-dessus là entre Jokin et récif Jouan ..
Et je suis sûr ! je suis sûr! nous on ne voit pas mais il doit y avoir des bateau qui pêchent chez nous .. des bateaux d'ailleurs ..*

JM: Mais à Pouebo c'est ce que les gens disent aussi, ils surveillent la nuit ; ils disent "on voit plus de lumière que de gens qu'il y a ici et de gens qui sont sortis"

*I : C'est ces bateaux là et c'est pas des petits bateaux c'est des bateaux qui vont d'ici jusqu'à la voiture là-bas..
Et il me dit "c'est pas le Navimon ?" je dis "non le Navimon il est Rouge .. la couleur des bateaux de Navimon .. "
"C'est pas le Munun?" "Non le Munun je connais le bateau et celui-là je n'ai jamais vu"*

JM: Mais ya deux semaine j'étais à Belep ils avaient arrêté deux Blue-boats...

I: Oui mais ça c'est Belep .. peut-être ils peuvent venir jusqu'à là on ne sait pas ..

JM : Les Blue-Boats ils descendent jusqu'à côte Est ! .

I: Ah bah voilà.. c'est peut-être ces même bateaux que j'ai vu là ..

Après ya aussi .. c'est bien aussi d'aller voir Unete là-bas c'est les clans de la mer qui font la pêche à la tortue.. mais ce n'est pas tout le temps les tortues.. c'est une fois tous les 20 ans ..

JM: une fois tous les 20 ans!

I: Pour le mariage du fils du grand chef..

JM: Dans le Nord ils reportent plus de tortues pêchées.

I: Nous c'est un clan qui pêche là-haut pour emmener à la chefferie les tortues et le pire c'est que quand ils amènent la tortue à la chefferie il y a un mec qui tue; tu vois, qui découpe et puis la tête ça part dans un sac avec un autre chef de clan il va l'emmener à un autre clan qui va l'emmener à un autre clan .. jusqu'à en bas à Xépénéhé jusqu'à je ne sais plus où.

Et puis nous notre clan à nous c'est voilà on a pas le droit de regarder quand on tue .. voilà nous c'est juste manger ..

JM : D'accord .. Oui chacun a ..

I: Chacun a son rôle, nous on mange ..

JM: Ah et je peux te poser une question ? On m'a dit pour m'expliquer la structure on m'a dit que ce n'était pas hiérarchique la structure des clans ? et que c'était plus chacun a son rôle. est-ce que tu vois cela avec une hiérarchie ?

I: oui il y a une hiérarchie. Déjà notre chemin ici .. le chef à la maison c'est moi. Je suis le chef pour mes deux frères. Si il y a la coutume dans le clan en bas, bah les deux.. le dernier frère il va aller voir le deuxième il va faire la coutume et les deux ils vont rassembler leur heu .. on appelle ça : les sous les matous les ignames, après ils emmènent ici après je fais la coutume à les deux, merci et tout. Après je pars, j'emmène à la maison qui est en face là après de là on attend les frères de celui qui est en face ils arrivent ya .. ya tout un .. déjà dans la maison d'à côté ya un chef à eux c'est l'ainé, toujours l'ainé. Après voilà de là on part en bas voir le nôtre chef, chef de clan. Et voilà la travail se termine en bas. Et après on attend le porte-parole et après c'est à lui de faire le travail. Quand on arrive à la chefferie nous après on parle plus, c'est lui qui parle pour nous et des fois pour le respect il nous demande quand ya les .. la coutume qui arrive il nous remercie, il nous propose ... mais c'est à lui le travail. Et voilà dans la coutume normalement - ce n'est pas normalement - le clan Issamacho on est le père de la chefferie. Celui qui garde la sagesse, tous les... Quand ya les problèmes à la chefferie ils n'arrivent pas à régler bah ils viennent voir le clan pour aller régler le problème en bas et quand il y a des ignames qui arrivent à la chefferie qu'il y a beaucoup de nourriture bah la chefferie elle envoie .. il emmène tout le .. les ignames le surplus quand il y a trop .

JM: OK

I: Enfin on a une part nous dans le .. après quand ça arrive à la .. en bas chez notre chef, chef de clan après ça part aussi chez nos frères dans les autres tribus car on a des gens là-bas dans les autres tribus qu'on a mis pour garder nos terrains, ou quand il y a un mariage là-bas nous on a une maison là-bas dans cette tribu-là. ou on doit rester on va pas rester chez n'importe qui, bas c'est cette maison là que nous après avec le clan on amène les ignames on partage .. enfin c'est tout un ..

JM: Oui oui Ah oui donc si c'est quand même hiérarchique..

I: oui ici c'est hiérarchique les ...

JM: Et hum la dernière question que je voudrais poser c'est est ce que tu penses qu'il y a des choses qu'ils auraient dû mettre en place pour aider les pêcheurs professionnels qu'ils n'ont pas fait .. la province ? un truc qui te viendrait en tête où tu te dis ..je comprends pas pourquoi ils ne font pas ça ..

I: Bah heu .. oui ils devraient .. je sais pas la Province subventionner des structure métalliques pour les bateaux tu vois, ou des pièces pour les bateaux .. des truc comme ça ..

JM: Ah oui .. plus sur l'accompagnement..

I: et puis je sais pas débloquer des fonds pour quand il arrive des trucs comme ça quand le mec il peut pas aller à la pêche et il a des traites à payer.. des trucs comme ça là.. oui Aider le temps que ça revient à la normale.

JM: Il y a toute cette discussion au niveau de la confédération des pêcheurs sur le statut du pêcheur, et hum le côté assurance, le côté retraite, tout ça ..

I: Hum la retraite ici chez nous c'est déjà pas beaucoup..

JM: Et vous en tant que vous avez une patente du coup.. vous devez payer le RUAAM?

I: non je ne crois pas

JM: Ah ok

I : parce que j'ai des charges et tout..

JM: Ah c'est bon vous reportez

I: oui

JM: Au début je ne posais pas la question, puis en comprenant comme c'était compliqué maintenant

I: On paye juste la patente par an aux iles c'est 15000

JM: Ah aux iles vous payer la patente ?

I: Oui la patente, ya l'impôt aussi .. en impôts j'avais payé c'était 20000

JM: Ah oui quand même ..

I: Voilà Oui c'est un peu .. je commençais à regretter d'avoir fait mon projet de bateau j'aurais dû rester dans mon petit ..

JM : Faut pas regretter .. là c'est un mauvais moment en ce moment..

I: Avant quand y'avait pas le bateau je gagnais beaucoup j'allais avec les cousins en bas là on faisait 2 bassines la soirée, on a chacun 80 ou 100000 balles la soirée c'est bon.

JM: Mais là une fois que les traites sont finies c'est tranquille vous avez le bateau..

I: oui voilà !.. c'est juste qu'on traverse un petit moment mais voilà on a un peu peur parce que comme c'est bloqué en bas on sait pas quand on va repêcher et puis voilà il faut payer par mois : tous les 30 du mois il faut que je paye.

JM: Hum, hum

I: Déjà ya aussi l'aide au carburant les mecs ils ne sont toujours pas remboursés.

JM: Vous avez fait pour l'année dernière

I: moi j'ai pas fait cette année par contre tous les copains ils ont fait .. De l'année dernière normalement ils devaient me payer là mais..

Plein de trucs qui .. je sais pas c'est les finances en ce moment c'est dur de trouver de l'argent ..

JM: Hum en plus avec la mer bloquée..

I: Voilà .. ce qui fait que on est à fond dans les plantations de patates, planter les patates.. aller au champs là ..

JM: Vous vendez à l'UCPA?

I: Voilà .. UCPA ou les marchés.. parce que UCPA aussi les prix.. laisse tomber

JM: Et justement vous pensez quoi des prix de l'UCPA ?

I: C'est nul.. déjà y'avait les ignames, normalement ils prennent les ignames. Ils prennent ils prennent .. Je suis parti avec une benne ils ont dit "Non! yen a trop ! "

C'est pas comme la poissonnerie, la poissonnerie tant que t'en a ils prennent ils prennent mais l'UCPA non.

JM: Et le prix du poisson vous pensez quoi ça va ?

I: oui ça va .. mais tu gagnes plus quand tu vends .. Moi ce que je fais quand j'attrape beaucoup beaucoup je vends en bas à la poissonnerie quand j'attrape pas beaucoup et je préfère vendre aux particuliers, j'élève un peu le prix.

JM: et la dernière fois que j'étais venue ils commençaient à faire quelque chose au marché de Wé, je n'ai pas pu voir là si c'était tenu ou non.. il y a une petite poissonnerie au marché de Wé ou pas?

I: Ah j'ai pas .. j'ai pas .. j'ai toujours vendu en bas à la poissonnerie .. quelque fois aux particuliers comme ça quand ya pas beaucoup, par exemple 40, 50 kg bah je préfère voir comme ça avec les particuliers je gagne beaucoup tous les poissons je vends à 1200 ou 1500CFP des fois. Tandis qu'à la poissonnerie c'est chaque pièce a son prix, ya pas le plus cher c'est le vivaneau, avec les langoustes. 1200CFP vivaneau et puis langouste 2800 .. après le reste des poissons c'est pas.. Si tu le vends comme ça bah voilà, la langouste tu vends à 3000 3500 la fin d'année comme ça

tu peux monter à 5000. là tu gagnes Mais là je vais me ruiner ! Je peux te dire les langoustes .. en plus c'est le moment où on doit se faire des sous.

JM: ça va que vous êtes honnêtes de ne pas pêcher les langoustes!

I: Non mais c'est suivi tu as tout un .. tu vends tes langoustes il y a ton nom et tout donc tu imagines si le client il tombe malade à l'hôtel ils savent et les langoustes ça vient de.. après c'est mauvaise réputation pour le pêcheur ils vont plus jamais acheter des .. alors vaut mieux être honnête.

*I: c'est clair, mais là t'imagines si tu vends une langouste l'autre il meurt ..
Et maintenant voilà il faut attendre et on va voir comment ça va évoluer..*

JM: En tout cas je reviens en qu'en février j'espère que la vague elle sera passée.

I: Là c'est quoi c'est dans deux semaines qu'on aura les résultats des analyses. Et puis voilà j'ai fait ce que je peux faire .. vendre les patates et les roussettes avec les crabes les trucs comme ça, cochon sauvage..

JM: Hum.. vivre de la terre ..

I: Hum le container il est damé de santal .. je sais pas quand ça va comment .. débloquer ..

JM : Mais même ça ils vous l'achètent pas assez cher les chinois .. les biches de mer ils les achètent pas assez cher, le santal pas assez cher..

I: À Maré c'est 600 francs le kilo et avec les chinois on peut monter à 5000 6000 8000 c'est tout un truc.. voilà ..

JM: En tout cas merci bcp .

I : Ici là c'est quand on s'élève un peu ils taxent... ta ta ta ta ta (comme coup de fusil)

JM: Ah ça c'est pareil partout .. pour vivre heureux vivons cachés (rires)

I: voilà ... quand tu regardes les autres petites familles à côté là ils ont leur petit champ ; petite case ; petite maison simple, ya pas de ... Voilà ils vivent juste des trucs qu'ils plantent à côté, ils vont au rivage ils font quelque langoustes, ya pas de payer le bateau, l'essence ni quoi que ce soit. Là eux au moins ils gagnent.. Moi je gagnais plus avant quand y'avait pas le bateau et voilà .. c'était sûr, cash net, tu payes juste quoi 800 ou 1000 balles de piles c'est tout !

Mais c'est vrai qu'il y a un gros changement là depuis ..c'est (soupir) ... Il y a 10 ans de ça ça allait encore on faisait des bonnes pêches.. en 10 ans là là j'ai bien vu que ça... ça a bien diminué la ressource en bas.. alors avec le truc qui est arrivé on sait plus trop ...Pareil pour les roussettes. Les roussettes avant tu restais ici à la maison ils passaient là.. maintenant faut aller chercher loin là-bas les passages .. Le soir on chassait partout maintenant ça fait deux trois ans là c'est plus ... c'est plus ça quoi .. les roussettes ils passent plus ci ..

Les crabes de cocotier bientôt aussi fin décembre - début janvier ils vont commencer à aller à la mer ... pour lâcher les œufs.. ils vont lâcher les œufs et ils vont se nourrir des petits crabes qui sont en bord de mer puis du sel qui est collé sur les cailloux... Eux ils font ça et après ils vont ils rentrent sous terre .. alors on sait pas si ça va être comment quand ils vont descendre en mer .. ils vont mourir ou ils vont?

JM: hum..

I: Parce que les crabes de cocotiers c'est chaque fin d'année ils descendent à la mer les petits les gros tout!.. les femelles avec les œufs.. beaucoup de femelles avec les œufs .. ils descendent pour aller lâcher les œufs en bas en mer.. Alors avec le truc qui se passe là on sait pas..

JM: Ou même les œufs .. parce qu'encore les femelles elles sont adultes elles peuvent peut-être résister mais la membrane d'un œuf..

I: Oui mais ils mangent .. ils mangent aussi en bord de mer ..

JM: Hum hum

I: Ce que j'ai entendu c'est que .. au lieu de laisser flotter le truc ils ont mis un produit pour le .. pour le couler ..

JM: Ah oui ..

*I: Bah voilà nous on est toujours en train d'attendre les analyses là .. C'est valable d'aller aussi à Unete ya aussi là bah à Wedjournel ya un clan qui fait des nasses eux aussi ils vivent de ça avec les poissons .. Mais avec les problèmes qui se passent même les traditions et tout elles vont en prendre un coup
Et c'est bon ?*

JM: Oui c'est bon ..

I: Je vais aller .. et je vais revenir .. tu bois Kava ?

JM: Oui merci...

ANNEXE 4, Coding in relation to concepts and research questions:

Research questions		Type of feedback	Color code	definitions
1	1 Entrepreneurship ecosystem		souligné	Actors present (like provinces, groups or associations, impacting on the activity)
2	2 Social Capital	i		information flow ?
		ii		assistance and mutual help
		iii	souligné	family / clan
		iv		associations and events
2	3 Cultural capital	i		values
			souligné	customary duties and activities also there are duties in professional fishing : fill documentation, sell their catch to UCPM where do I compare the duties ?
		ii		myths and emblems & interdicts
		iii		hierarchy
		iv		different perceptions of the institution
		v		perception of maritime territory
		vi		traditional knowledge (&savoirs ecosystemic) vs technical knowledge
		vii		Sharing
		viii	souligné	Pluriactivity
2	4 Objectives	i		profit vs pantry
		ii	souligné	modernisation vs innovation
		iii		Push / Pull necessity vs opportunity
2	5 Methods	i		learning and training
		ii		bait, species and volumes
		iii		fishing team
		iv		technic/ technology/material
		v		Frequency of fishing trips, and what impact on the performance
		vi		Areas of fishing
	6 societal Changes			Concerns about resources and sustainability
			souligné	concern about evolution and loss of traditions
2	7 Business model	i		fixed cost
		ii		variable costs
		iii	souligné	outputs & Prices
1 and 3	8 reflexion of fishermen on opt in opt out			comments from fishers on the trade off between the two types of fishing practice, comment on the strategies / program implemented
1 and 3	9 reflexion of the State on opt in opt out			comments from civil workers on the trade off between the two types of fishing practice & comment on the strategies / program implemented
3	10 Overlap / mixed embeddedness		souligné	How fishers manage the two activity when they are involved in customary and commercial fishing. If they do just one why ?

ANNEXE 5, Observations on ecosystems using Spiegel (2017):

Type of attribute	Attribute	Description (from Spiegel 2017)	Professional artisanal fishing ecosystem	subsistence and customary fishing ecosystem
Cultural	Supportive culture	Cultural attitudes which support and normalize entrepreneurial activities, risk taking, and innovation.	- mixed feelings in the attitude related to commercial coastal fishing - difficulties with the rhythm associated	- cultural attitude attached to the place as part of the identity and home of spirits. Vision supporting exchanges looking at the shore as a pantry
	Histories of entrepreneurship	Prominent local example of successful entrepreneurial ventures.	- short of roles model in individual commercial fishing development.	- histories of special customary ceremonies or great catch.
Social	Worker talent	Presence of skilled workers who are willing to work at startups.	- activity mainly individual. The Province supporting training of fishers in troll fishing and deep sea fishing activity with skilled fishers	- In each tribe near the shore the know how is passed from one generation to the other, "brothers" helping eachothers and fishing in groups.
	Investment capital	Availability of investment capital from family and friends, angel investors, and venture capitalists.	- access to capital from the Province and micro credit agencies. Long and administrative.	- equipment simple (ex: torch, palms, hooks fishing line) or made from available resources (ex: baits).
	Networks	Presence of social networks that connect entrepreneurs, advisors, investors, and workers and that allow the free flow of knowledge and skills	- network sparse made of few people disseminated among tribes	- families and clan's networks
	Mentors and role models	Local successful entrepreneurs and business people who provide advice for younger entrepreneurs	- first generation of commercial coastal fishers in this area, examples from Mare Island	- brothers and elders, stories
Material	Policy and governance	State-run programs or regulations that either support entrepreneurship through direct funding or remove barriers to new venture creation.	- start up support program from the Province once people make a demand to initiate a project	- customary organisation: participation based on habitus and social enforcement.
	Universities	Universities and other higher education institutions which both train new entrepreneurs and produce new knowledge spillovers	- Trainings with <i>Ecole des métiers de la mer</i> EMM	- learning practising in family with brothers
	Support services	Firms and organizations that provide ancillary services to new ventures, for example, patent lawyers, incubators, or accountancies.	- advices and support from microcredit agencies, eg: ADIE - possibilities to invest/ contract a credit with banks	- tribe's organisation, with sometimes an association supporting fishing
	Physical infrastructure	Availability of sufficient office space, telecommunication facilities, and transportation infrastructure to enable venture creation and growth.	- Infrastructure to help access to the sea: Marina and port in Wé, boats launching ramps - infrastructures put in place to transform and to commercialise, eg: fish conditioning unit	- "tribal access", ramps funded by the Province when the access is possible
	Open markets	Presence of sufficient local opportunities to enable venture creation and unimpeded access to global markets	- fish conditioning unit - hotels, snacks, restaurants - individuals	- traditional customary exchanges - providing kin's network